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FINAL EVALUATION OF

STRENGTHENING HEALTH DELIVERY SYSTEMS

Project (698-0398)

Contract No. PDC-1406-I-16-4068-00
Work Order #16

Submitted to:

USAID/REDSO/WCA

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By:

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Lastly, a special note of thanks goes to Dr. James Shepperd of the Health Office, Technical Resources Division, in the Bureau for Africa of AID/Washington, for all the assistance and information he provided throughout the evaluation process.

ACRONYM LIST

AID	Agency for International Development
APHA	American Public Health Association
AR	Applied Research
ASCON	Administrative Staff College of Nigeria
BOM	Bureau Organisation et Methode
BU	Boston University
CCCD	Controlling Communicable Childhood Diseases
CDC	Centers for Disease Control
CESSI	Centre d'Enseignement Superior Soins Infirmiers
CHW	Community Health Workers
CM	Certified Midwife
CNA	Chief Nursing Administrator
CUC	Cuttington University College
CUSS	University Center for Health Sciences
DTA	Demonstration and Training Areas
EDT	Epidemiologic Demonstration and Training
ENAM	Ecole Nationale d'Administration et Magistrature
EOPS	End of Project Status
EPI	Expanded Program of Immunization
ESAMI	East and Southern Africa Management Institute
GIMPA	Ghana Institute of Public Administration
IBRD	International Bank for Reconstruction and Development
IDRC	International Development Research Centre
INRSP	National Institute for Public Health Research
INSP	National Institute of Public Health
ISTI	International Science and Technology Institute, Inc.
ISTM	Institut des Sciences et Techniques Medicales
LPN	Licensed Practical Nurse
MHC	Maternal and Child Health
MOH	Ministry of Health
MOPH	Ministry of Public Health
NCT	Network Consultant Trainer
OCEAC	Organization of Coordination for the Fight Against Endemic Diseases of Central Africa
OCCGE	Organization for Coordination and Cooperation in the Fight Against Major Endemic Diseases
PAID	Pan African Institute of Development
PCC	Project Coordinating Committee
PHC	Primary Health Care
PRC	Project Review Committee
PRICOR	Primary Health Care Operations Research Projec
REDSO	Regional Economic Development Services Office
RTC	Regional Training Center
SHDS	Strengthening Health Delivery Systems Project
TBA	Traditional Birth Attendant
TCDC	Technical Cooperation among Developing Countries
TDR	Tropical Disease Research
TNIMA	Tubman National Institute of Medical Arts
TOT	Training of Trainers
UNDP	United Nations Development Program
UNICEF	United Nations Children's Emergency Fund

1. INTRODUCTION AND BACKGROUND

1.1 Project Background

The Strengthening Health Delivery Systems Project (SHDS) was a ten year regional project designed to collaborate with the ministries of health in twenty West and Central African countries to strengthen health delivery systems for primary care. The project was created following the completion of the smallpox eradication campaign, which was conducted jointly in those countries by the World Health Organization (WHO) and the Centers for Disease Control (CDC), contracted by the Agency for International Development (AID). WHO and AID wished to continue a collaborative effort with the twenty countries of the region, to develop the least costly approach to meeting minimum health needs of the populations of these countries through a unified, integrated concept and coordinated effort to achieve:

- expansion of health service delivery into rural areas;
- reorientation of health manpower training toward that objective;
- improvement and modernization of health planning and management capabilities within ministries of health;
- improvement in epidemiological, demographic, manpower, and comparative cost data collection and analysis; and
- more equitable distribution of primary health services.

A strategy for achieving these objectives was adopted at a conference in Brazzaville in February 1973, attended by representatives of AID, WHO, FAC, UNICEF, UNDP, the IBRD, certain of the participating African states, and the two Central and West African subregional organizations, the Organization of Coordination for the Fight Against Endemic Diseases of Central Africa (OCEAC) and the Organization for Coordination and Cooperation in the Fight Against Major Endemic Diseases (OCCGE).

This strategy formed the basis of an agreement signed on April 19, 1975, between AID and WHO/AFRO, to create the SHDS project. The first phase, 1975-1977, was a feasibility and design period, and the work was carried out by Boston University (BU), through a subcontract with the American Public Health Association (APHA). Phase Two, 1978-82, and Phase Three, 1983-86, were both implementation periods. WHO/AFRO administered the program, and the implementation activities were carried out by Boston University through a

contract with AID. During Phase Two, management/monitoring was performed by AID/Washington. During Phase Three, the management/monitoring function was shifted to AID/REDSO in Abidjan, Ivory Coast.

The following four objectives of the SHDS project have formed the basis for all project activities:

1. "To develop health management training competencies for producing primary health care managers at peripheral, district and regional levels;"

2. "To increase the skills and improve the utilization of health personnel providing general services at the supervisory and local levels;"

3. "To improve regional and national disease surveillance and health/demographic data systems and to integrate these systems into national health delivery systems;" and

4. "To develop training, service and research demonstration models for local health services delivery through applied research."

The SHDS project was evaluated in 1980, 1982, and 1985. There was an audit in 1984 performed by the AID regional inspector general's office. This current evaluation covers primarily the final phase from 1983-1986.

1.2 Evaluation Approach

1.2.1 The Report

This evaluation report assesses the activities undertaken during Phase 3 of the project, and measures the extent to which the End of Project Status goals (EOPS) have been accomplished. In addition, the project's over-all achievements are assessed, in terms of the SHDS strategy, the effect on institution building, training accomplishments, strengthening of technical cooperation among developing countries (TCDC), and the project's contribution to the effectiveness of the countries' delivery of primary health services. Recommendations regarding future strategies for health manpower development in the region are offered.

Note: All of the SHDS project objectives, subobjectives and end of project status indicators (EOPS) will be quoted verbatim from SHDS project documents and will appear in quotation marks.

1.2.2 The Evaluation Team

The evaluation team was comprised of five American consultants provided by International Science and Technology Institute, Inc., (ISTI), a Washington, D.C. based consulting firm, and two African consultants provided by WHO/AFRO.

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1.2.3 Evaluation Methodology

Two members of the REDSO staff, including the SHDS project officer, accompanied team members during country visits and were a resource to the team throughout the evaluation. In addition, other members of the AID/REDSO and AID/Washington staff were interviewed. The entire team visited the headquarters of WHO/AFRO in Brazzaville. Briefings were held with present and former members of the Boston University staff in Boston and in Abidjan. Documents and background papers in the SHDS and REDSO libraries were reviewed. Quantitative data were provided by the SHDS computerized information system in Abidjan.

Eight out of the twenty countries in the project were chosen by AID/REDSO as a representative sample to be visited by the evaluation team. The countries were chosen according to how much they were perceived to have benefited from the SHDS Project. Senegal and Nigeria were judged to have benefited the most; Togo, Cameroon, Congo and Sierra Leone, moderately; and Niger and Guinea, among the least. The entire team visited Nigeria and Senegal, and smaller groups of two to three members visited the other countries. Approximately four working days were spent in each country.

The country visits were coordinated by the WHO representative in the country and the USAID mission. In each country, interviews were conducted with ministry of health officials, representatives of institutions involved in SHDS activities, as large a sample of former SHDS workshop participants as possible, the WHO representative, the USAID health officer and other relevant individuals involved in health and training activities in the country.

Interview questions were based on:

- End of Project Status indicators (EOPS) established at the outset as targets of project achievements;

- Scope of Work prepared by AID/REDSO, Abidjan;

- Questions regarding results of each objective developed by AID/REDSO and sent to USAID Missions and WHO representatives in the countries visited;

1.2.4 Constraints to the Evaluation

In carrying out the evaluation, the team encountered several constraints that are listed here so that the material contained in this report can be understood in its proper context.

Time: The collection of data, country visits, interviews, and document review were all carried out within a five-week period. The draft report presented to the Project Review Committee was written, translated and typed in 10 days immediately following the team's return from the country visits. This is to be contrasted with the 1982 evaluation for which six months were devoted to the collection and analysis of data for the report.

Sources of Information: The availability of knowledgeable sources of information was a serious problem.

WHO/AFRO headquarters in Brazzaville was reorganized two years ago, resulting in personnel changes; and all WHO country representatives have been changed within the past year. At WHO/AFRO headquarters, the team encountered only two people who had had a substantial involvement with the SHDS program, and saw no one who had been involved in the management and administration of the program for longer than the past six months. In very few countries visited, did the WHO representative have any detailed knowledge of the SHDS project or activities.

In practically all of the USAID missions visited, health officers and program officers were either new and therefore had little acquaintance with SHDS, or had been in the mission for two to three years but were not particularly knowledgeable about the project.

Although four of the seven evaluators were briefed by SHDS project staff from Boston University, in Boston, and the whole team had a one-hour briefing from another Boston University SHDS staff member in Abidjan, there was no Boston University SHDS staff member included on the evaluation team as an information source, which exacerbated the problems the team had in obtaining information, interpreting it accurately, and putting it in its proper context.

Lists of participants, workshops conducted, and other data obtained from the computerized information system at the SHDS/BU Abidjan office do not contain the total numbers of

participants or workshops, sometimes count the same participant more than once, and contain certain inaccuracies about the time and place of workshops held.

Efforts were made in each country to contact as many SHDS workshop participants as possible in order to assess the benefits of the training programs and the extent to which the participants were able to apply their new knowledge and skills to their work assignments. Although there were a few attempts during the project to contact former participants through written surveys, this effort represented the first large scale effort to follow up with participants. Many were in new work assignments and could not be located. Others were in training programs outside the country. Of those who could be located, most were based in the interior of the countries visited, and due to lack of time and difficulties of transportation, could not be interviewed. Therefore, the majority of interviews conducted were with participants in the capital cities, working at the central level of their governments. The team interviewed more than 100 former participants which is more than 5% of the participants.

1.3 SHDS Project Strategy

The SHDS project strategy employed over ten years can be characterized as a regional effort to promote and contribute to the development of self reliant primary health care delivery systems in West and Central Africa. The project constituted one of AID's largest and most complex health projects in Africa, and represented the closest approach to a long-range strategy in health development that AID has undertaken in Africa. One of the great merits of the SHDS experience was that it demonstrated a willingness on the part of AID to participate in a regional effort in which WHO/AFRO and representatives of member states had an active role in decision making. The SHDS project served as a catalyst and facilitator in promoting regional cooperation in primary health care development. It was a strategy whose effects are much more indirect and difficult to measure than those of other strategies that AID supports.

While WHO/AFRO's long-range strategy is to strengthen institutions for implementation of primary health care systems, SHDS' particular role was to be a catalyst in the training of human resources at all levels of the health care system to promote primary health care approaches.

The key elements of the SHDS strategy which were utilized to promote regional self reliance included the following:

1.3.1 Project Review Committee

SHDS created and utilized a Project Review Committee for governance of project activities. This Committee was comprised of a representative from each of the twenty participating countries, WHO/AFRO and AID, and met every two years to review and approve project objectives, implementation plans and budgets. In alternate years, the Project Coordinating Committee provided continuity in oversight of implementation activities.

1.3.2 Training Pedagogy

In all of its training activities, SHDS employed a competency-based, adult experiential learning model, in which responsibility for learning rests with the student, all students are considered teachers of one another, and the participants work to solve real problems.

1.3.3 Training of Trainers Approach

Throughout the SHDS project, the training of trainers approach was used, at regional, national and local levels in order to create an African training capability to carry out manpower development activities in the future. Some senior consultants from the region were used from the beginning as consultants to develop and implement training activities. Gradually as more people were trained as trainers, a greater self-sufficiency was achieved at regional and national levels.

1.3.4 Networks

In activities carried out under all four objectives of the SHDS project, regional networks were created and developed to promote the widest possible use of trained manpower and sharing of resources and information.

(1) Objective I: A network of training institutions was strengthened, enabling the institutions to carry out TOT workshops, training and continuing education activities in management at regional, national and district levels. In addition, a network of individual consultant trainers was developed to provide technical assistance and facilitate health management training activities throughout the region.

(2) Objective II: Various network activities were carried out under this objective. SHDS provided assistance to the West African College of Nursing (WACN), a relatively young professional agency operating within the West African Health Community (WAHC). WACN's particular goals include improvement of nursing education at basic and post basic levels and improvement of health care within the community. SHDS provided assistance to WACN in developing a regional continuing education program, and

in providing curriculum development workshops focused on reformulation of post basic curricula toward primary health care objectives.

Another network activity under this objective involved training workshops for faculty members from regional post basic nursing schools in Dakar, Senegal and Yaounde, Cameroon. These workshops trained faculty members as consultants who then provided technical assistance to directors of basic schools of nursing in the region.

(3) Objective III: Through a series of three biennial disease surveillance conferences, attended by approximately 70 participants, and focusing on various aspects of disease surveillance and control of communicable diseases, SHDS developed an informal regional network of epidemiologists to promote the exchange of health information and ideas regarding targeted diseases of the Expanded Program of Immunization, malaria, diarrheal diseases, infant and maternal mortality and yellow fever.

(4) Objective IV: SHDS provided TOT workshops and training activities in applied research methodology, both regionally and nationally, and subsequently provided grant money to researchers for studies related to specific primary health care problems. This resulted in the creation of a network of PHC-oriented applied researchers. SHDS also carried out two applied research conferences, attended by researchers from the region, contributing further to the development of the applied research network.

1.3.5 Training Guides

A Training of Trainers Guide for Village Health Workers, written by SHDS staff and consultants, has been used extensively in the region, and is now in its 17th printing. A Trainer's Guide on Health Management was prepared under SHDS and published by WHO/AFRO in 1985. An applied research course manual, entitled Health Services Research Course: How to Develop Proposals and Design Research to Solve Priority Health Problems, and a trainer's manual, Course Guide for Administrators and Trainers were written by SHDS staff and consultants. These manuals have met with almost universal approval, and have been adopted by WHO/AFRO as the official approach to research training in Africa. WHO/Geneva is involved in worldwide distribution of the manuals. A manual was also developed in French for an introductory course in epidemiology, entitled Cours d'Initiation aux Methodes Epidemiologiques. Each of these manuals was co-authored by African and US-based writers.

1.3.6 Local Materials Development Capacity

SHDS assisted the Lome Regional Training Center in

developing a capacity to produce and distribute training materials locally through the installation and training in the use of computers and printing equipment. The Training of Trainers Guide for Village Health Workers was printed in Lome in 1983 -- a 600 page document, produced in both French (400 copies) and English (200 copies).

1.3.7 Strategy Implementation

It was through these six essential elements that SHDS carried out its regional strategy to develop and promote self reliance in health manpower development in West and Central Africa. SHDS started each of its training efforts with TOT courses on a regional level that were attended by participants from all twenty countries in the region. These were then followed by national level TOT courses, initiated jointly through the particular ministry of health and SHDS. At the national workshops, those from the particular country who had participated in the regional TOT acted as apprentice-trainers in order to gain additional skills. Subsequent national and district workshops were often carried out, thus allowing a national cadre of trainers to be formed. This process had varying degrees of success, depending on the conditions present in the particular country. Senegal represents the best example of maximum utilization of training resources available through SHDS. Senegal succeeded in participating actively in workshops and other activities under all four objectives, and created national level training cadres who now carry on workshops in health management, PHC nursing, disease surveillance, and applied research.

There was great variation in the extent to which different countries in the region benefited from the SHDS project. All countries were given the opportunity to send participants to regional workshops conducted by SHDS. All twenty countries took advantage of this opportunity, some, substantially more than others. The second form of participation, mentioned above, was the opportunity to conduct national level workshops within countries. This was largely dependent on initiatives taken by officials of the particular countries or institutions to request a workshop from SHDS and WHO/AFRO. A third way to participate was through the designation by WHO/AFRO of the use of a particular institution located in the country, such as occurred with the health management network institutions. Such a designation did not automatically guarantee participation of nationals in programs carried out in these institutions, but rather depended on initiative taken by officials within the particular country.

Other factors which affected participation on the part of certain countries were:

- political problems such as changes of government, and civil strife;
- frequent changes in personnel within ministries of health;
- lack of information about SHDS activities;
- lack of participation by WHO/AFRO country representatives and/or USAID mission personnel;
- presence of bilateral health programs focusing on primary health care, funded by AID or other donors.

1.4 Project Management and Administration

The SHDS Project was administered under the terms of the grant agreement from AID to WHO/AFRO, and an AID direct contract to Boston University. The project was governed by the Project Review Committee which, as described earlier, was comprised of representatives of the twenty participating countries, AID, WHO/AFRO and SHDS/BU. AID's management and monitoring responsibilities were carried out by REDSO/WCA in Abidjan.

WHO/AFRO had primary responsibility for the administration of the project. Boston University, through its AID contract, was responsible for the execution of the program activities. BU carried out its responsibilities through a project office located in Abidjan where the Project Director, with the support of three program consultants, provided the leadership for program direction and activities. They received technical and administrative support from a project home office located at Boston University.

In attempting to review the overall management and administrative functioning of the SHDS project, it became clear that there were a number of questions regarding financial management of the project. However, given time constraints, a responsible, thorough assessment of the implementation of management and administrative responsibilities on the part of the various organizations involved (SHDS/BU, WHO/AFRO, AID/REDSO) could not be satisfactorily accomplished, especially given that the information provided was insufficient.

1.4.1 Recommendation

It is strongly recommended that a management and cost audit be undertaken by the cognizant U.S. Government audit agency, preferably by AID's own Audit Division. A proper in-depth assessment of management and cost issues is particularly important given the ten year period in which this project existed, and the complexities of communication, coordination and oversight inherent in the management structure. It will also be instructive to AID as it considers the most appropriate management and contractual mechanism to utilize in carrying out its future regional health strategy for Africa.

2. OVERALL SHDS PROJECT ACHIEVEMENTS

2.1 Project Review Committee

One of the most impressive achievements of the SHDS Project was the creation and functioning of the Project Review Committee (PRC) and its subcommittee, the Project Coordinating Committee (PCC). As indicated earlier, the PRC was responsible for approving project objectives, strategies, implementation plans and budgets; and the PCC, for approving annual work plans and progress reports. Apparently unique among AID regional projects, the PRC brought together representatives of the twenty countries in a forum that not only facilitated effective debate and approval of project objectives and activities, but also contributed to regional communication, cooperation and sharing of resources and ideas essential to the successful implementation of primary health care strategies in participating countries.

A problem in the functioning of the PRC and PCC was a lack of continuity in the participation of some of the countries. These countries did not always send the same representative to the meetings, and in some instances, three or more individuals from different divisions within a ministry of health were PRC representatives from a particular country during the life of the project. This meant that no one person or office was the reservoir of SHDS information for that country, thereby diminishing, to some extent, the likelihood of that country being able to benefit from SHDS activities.

2.2 Institutionalization

Through SHDS' role as a catalyst and facilitator in training of human resources at all levels of the health care system, the project contributed significantly to strengthening regional and national institutions involved in primary health care. This was done in both direct and indirect ways.

Through long-term direct involvement in several regional institutions, SHDS contributed to health manpower development and other institution building aspects of these organizations. At the Regional Training Centers in Lome and Lagos, SHDS developed and conducted numerous training of trainer courses in several PHC subjects, resulting in the development of highly trained faculties of the two institutions and in the institutional capacity to carry out TOT workshops and other training activities. SHDS assistance to the Lome RTC in the development of a materials production capability was another institution building contribution.

In the two CESSIs and at Cuttington University College, SHDS played a key role in the successful reformulation of curricula toward PHC at all three institutions. In addition, SHDS scholarships allowed 7 faculty members from these institutions to obtain master's degrees. All but one are now back teaching at these schools or at basic schools of nursing in the region.

Through SHDS involvement in the development of the health management training network, four institutions have a well developed capability to carry out TOT programs in health management training. In addition, health management training programs have been introduced and pedagogical approaches were revised in those institutions that previously had not used the adult learning approach. It should be pointed out that when brought into the network, these institutions were management training institutions which had not previously been involved in health activities. It was only through the SHDS involvement that these institutions acquired the health management training capacity.

SHDS was also involved indirectly in institution building through the training of approximately 2400 Africans from Sub-Saharan Africa (about 2000 of whom were from the 20 SHDS countries), in regional, national and district level workshops, all of which focused on the implementation of primary health care strategies: health management, nursing care, disease surveillance, epidemiology, and applied research.

2.3 Technical Cooperation among Developing Countries (TCDC)

Perhaps the most effective means of institutionalization, and certainly one of the project's greatest accomplishments was the development of a reservoir of experienced African consultants to work on health training issues in the region. From the beginning of Phase 2, a few key African consultants played a major role in developing the training strategy, planning training activities, writing the necessary materials, and conducting training. Nonetheless, during that period the vast majority of consultants were American. As time went on, with the assistance of the senior African consultants, and with the urging of the Project Review Committee to make greater use of local human resources, increasingly greater numbers of consultants were from the region. Technical cooperation among developing countries accelerated to the extent that for the overall project, 62%

These numbers are based on the SHDS information system and may be under-stated.

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of all consultants used were Africans from the SHDS countries, and 68% were from Sub-Saharan Africa (215 out of a total of 314 consultants).

During Phase 3, most of the technical assistance was provided by individuals from the region. These consultants now continue to function independently of SHDS, contributing to training and institution building in countries throughout Africa, and constitute an extremely important resource for the continent.

2.4 Training

The pedagogical approach employed by SHDS in all its workshops has been one of the project's greatest achievements. The introduction of competency-based training and the use of the adult experiential learning model in which responsibility for learning rests with the student, all students are considered teachers of one another, and participants work to solve real problems was effective in workshops and nursing school curricula, and was introduced by participants into other training programs not supported by SHDS. For most participants, this was a new way to learn and it was enthusiastically received, resulting in the acquisition of new training and implementation skills and a new approach to problem solving to take home to their countries.

Certain training problems were noted in assessing the implementation of the workshops.

(1) Selection

Participants chosen by national health ministries were not always the most appropriate for the workshops. This was due, in some instances, to a lateness in notification about the workshop, resulting in the choice of someone who was free to travel rather than a person who was suited to the workshop objectives; in other instances, it was due to the selection process used by the particular ministry; and in still other cases, the problem lay in a misinterpretation of the workshop's objectives.

(2) Utilization of participants' new skills

In some cases, the newly acquired skills gained in the workshop were not utilized by the participant in his/her work assignment upon return. This was due, in some instances, to the selection of participants as noted above; in others, it was due to a lack of planning on the part of the participant's employer about how best to take advantage of the person's skills. Some participants returned to an environment that was not receptive to new concepts learned in a workshop.

(3) Lack of followup

It appears that in the vast majority of cases, no followup was conducted with participants to determine how effectively they were able to implement their newly acquired skills in their work assignments in order to provide them with constructive support and to evaluate the effects of the training.

2.5 Contribution to the Implementation of Primary Health Care Strategies in the Region

There are four important achievements of the SHDS Project related to the effective implementation of primary health care strategies in the region. The first was the contribution the SHDS Project made in a number of countries to creating awareness about the importance of a primary health care orientation. When the SHDS Project began, few states in the region had PHC policies. Today, most of the twenty countries have such policies and are making some progress in their implementation. SHDS activities played a significant role, including the workshops in which thousands of Africans were trained, the reformulation of curricula in post-basic nursing schools, the distribution of training manuals, and the applied research courses.

A second contribution of SHDS was the success in providing health practitioners and supervisors in the region with the technical and managerial skills necessary to implement primary health care strategies. A third and very important contribution was the training in applied research, the support given to research studies, and the dissemination of research findings.

Finally, by involving people from government ministries in addition to the ministry of health in working on health care issues, the SHDS project was able to play an important role in implementing a multi-sectoral approach, one of the tenets of the primary health care strategy. This contribution was made primarily through health management and intersectoral workshops, and through the applied research training activities.

2.6 Modus Operandi of the SHDS Project

The flexibility of the project to respond to opportunities as they arose and the ability of the SHDS/BU project staff to act quickly to respond to needs and proposals of countries and institutions in the region allowed the project to accomplish a great deal. Given this flexibility, SHDS was able not only to begin project activities, provide resources or materials or consultant assistance quickly, but also was able to stop implementation of an activity when it appeared in certain situations that the ingredients necessary for

successful completion of the activity were not present. This element of flexibility was an extremely important advantage in a project involving 20 countries, where political conditions can change quickly, and where personnel changes can dramatically affect project under-takings. SHDS' operational flexibility allowed them to make maximum use of their resources. This is a particular advan-tage of a regional project.

The ability to respond quickly, which was beneficial in terms of project accomplishments, ironically created problems in communication and coordination among SHDS, WHO/AFRO and AID/REDSO. The capacity to act quickly sometimes conflicted with the operational mechanisms of WHO/AFRO and AID/REDSO, which required more time for internal deliberation or processing in order to make or implement decisions. This was especially true at WHO/AFRO where SHDS was only one of many responsibilities that the coordinators for each of the project objectives had in their headquarters' assignments. It also appears that required notification to, and approval by AID/REDSO of changes in implementation activities, or shifting of money within the budget line items, could not always be accomplished before the new activities were undertaken or old activities stopped.

Communication and coordination were recurring problems at all levels throughout the implementation phases of the SHDS project. Such problems occurred at the participant level (lack of followup); at the ministry level (lack of information and continuity); at the level of WHO country representatives and USAID mission personnel (lack of information and/or involvement); and at the management level with SHDS, WHO/AFRO and AID/REDSO (in the planning, implementation and approval stages). These are always difficult issues in development programs, and particularly so in regional efforts with so many organizations involved. These two issues must be addressed effectively in the future to strengthen health manpower development efforts in the region.

2.7 Indirect Benefits of the SHDS Project

There are many examples of spin-offs of SHDS activities throughout the region. A small sample of those identified as having been directly influenced by SHDS are cited. Numerous activities begun under SHDS sponsorship have proliferated and continued under other auspices. For example, management training workshops, financed by other donors, either through WHO/AFRO or bilateral projects, have been given in several countries, including Burkina Faso and Senegal. The pedagogical approach introduced by SHDS has been integrated into training institutions in Congo. Health management training has been introduced into public administration training institutions in Nigeria and Ghana.

Applied research has been integrated into medical and nursing school curricula in Togo and Cameroon, among others. The training of village health workers in Mauritania and The Gambia was an outgrowth of SHDS training of trainers.

It is apparent that there have also been many indirect benefits from the SHDS project that were not foreseen at the beginning of the project. The Campaign Against Childhood Communicable Diseases (CCCD), which is being implemented by the Center for Disease Control, had at least a portion of its roots in the Objective III activities of SHDS during the second phase of the project, 1978-82. Subsequently, CDC ended its participation with SHDS, and began the CCCD program, taking the bulk of disease surveillance and vaccination activities with it.

Reports indicate that CCCD projects in a number of countries are utilizing SHDS trained individuals in their project implementation activities. SHDS evaluation visits to a number of countries occurred during the launching of the Expanded Program of Immunization (EPI), and key figures in EPI in these countries had participated in SHDS TOT workshops, and in some cases had been the individuals responsible for organizing national level SHDS TOT workshops in their countries.

The Primary Health Care Operations Research Project (PRICOR) and the Columbia University, Center for Population and Family Health operations research project, while not derivatives of the SHDS project, are working effectively with researchers trained in the applied research workshops, to fund subsequent research studies. Without the reservoir of trained researchers created by SHDS, these projects would have a substantially smaller field of potential grant recipients with whom to work. Furthermore, two former SHDS staff members are now on the staffs of these two projects and bring with them the knowledge of the SHDS research training activities.

The computer capacity at the Lome Regional Training Center, which was developed with the assistance of SHDS to allow the Center to produce training materials, has enabled the Center to improve its program planning and budgeting capability.

2.8 Recommendations for a Future AID-Financed Health Manpower Development Strategy

It is clear that the SHDS Project played a very important catalytic and "seeding" role in regional health manpower development and in strengthening the health infrastructure essential to the success and sustainability of child survival activities and other primary health care strategies.

It is critical that AID and WHO/AFRO continue to support health training activities in the African region that take advantage of the accomplishments and the lessons learned in the SHDS Project.

2.8.1 Scope and Time

One of SHDS greatest strengths was its regional focus, allowing it to share human and institutional resources within the region, thus minimizing the need for technical assistance from outside the region. In addition, communication channels were developed among networks of institutions and individuals involved in similar activities, enhancing the effectiveness of the training. Another strength was the relatively long life of the project, enabling SHDS to develop, test, modify, implement, and institutionalize effective training strategies.

It is recommended that a follow-on AID-financed health program should continue to be regional in nature, and serve the entire Sub-Saharan region, i.e. the member countries of WHO/AFRO. Over 300 Africans from East and Southern Africa have already participated in SHDS, and the health training resources and institutions are fewer in Southern Africa than in the west and central regions. The project should be planned for a minimum of five years, with the option of a five year continuation.

2.8.2 Focus

The SHDS approach was to strengthen the health infrastructure by developing a local training capacity. These efforts were an important step in the development of self reliant health systems in Africa. With the exception of the health information system in Sierra Leone, staff and consultant efforts were all concentrated on training. A common approach was developed and there was critical interaction and mutual support among the various training activities. The results were very significant; however, a lot of work still needs to be done to institutionalize a training capacity in the region. Therefore, the focus of a new project should be strictly on health manpower development activities that support the organization, management and delivery of primary health care services. Through a continued use of TOT workshops and the adult learning pedagogy, both short and long-term training activities for planners, managers, clinicians, technicians, and supervisors in health and other concerned sectors should be carried out. A special effort should be made to meet the continuing education needs of health workers.

This kind of regional program would be a complementary and extremely necessary partner activity to AID's child survival activities, and if implemented in a coordinated way, would go a long way toward ensuring the long-term success of child survival efforts.

In order to maximize the cost effectiveness of training activities, a set of selection criteria should be developed by WHO/AFRO, approved by the PRC, and uniformly applied by the ministries of health in the choice of participants in the future. A contract should be developed between WHO/AFRO, the particular ministry of health and the participant as to the purpose of the training, and the intended way in which the participant will apply his/her new skills to the work assignment. To the extent possible, participants should be followed up in order to gather feedback for improving the training. In addition, there should be a system by which constructive criticism is provided to former participants to assist them in applying their skills, and to gather information on their continuing education needs for future workshops.

2.8.3 Major Areas of Support

(1) Institutional strengthening

Institutional strengthening should be emphasized through the continuation of TOT workshops in health management, PHC nursing, disease surveillance, epidemiology and applied research. For institutions with a "critical mass" of trainers, complementary inputs to strengthen the institutions should be funded in response to proposals from these institutions. Particular attention should be given to strengthening the basic schools of nursing, expansion of the network of health management training institutions, and increased support to institutions with a health services research capability. A major focus of institutional development should be the introduction of health management and supervision, applied research, and appropriate clinical skills for child survival into all health manpower training institutions, including nursing and medical schools.

(2) Technical cooperation among developing countries

Technical cooperation among developing countries should be promoted through the maintenance of, and continual training of a reservoir of African consultants to be used for project and non-project technical assistance in countries of the region. The present resource of over 200 African consultants should be the nucleus of follow-on activities. This represents an opportunity to foster the eventual self-sufficiency of individual African consultants and institu-

tions providing consultant services. Such individuals and institutions should be encouraged to provide services nationally or internationally, and to charge the full cost of providing these services.

(3) Intra-regional communication

Intra-regional communication relevant to manpower development should be promoted through conferences, journals, and other suitable mechanisms. This would continue the important steps taken in network development under the SHDS project and would foster regional cooperation and self reliance.

2.8.4 Governance

Given the great steps taken in regional cooperation through the creation and functioning of the Project Review Committee in the SHDS Project, this mechanism should continue to function in a follow-on project. Approval of overall program plans, strategies, budgets and implementation activities should rest with the participating countries through the Project Review Committee and the Project Coordinating Committee.

For greater communication and coordination, it is recommended that a specific office in each ministry of health be designated as the focal point for all project activities in the country. The director of this office should be the regular representative to the PRC, should approve all project related activities, supervise the selection of participants for workshops, and be the reservoir of all project information for the country. This was already done in certain countries and facilitated participating in SHDS activities.

2.8.5 Funding

All donors providing major support in the health sector within the region should be involved to the extent possible. Their financial participation should be solicited and they should be members of the Project Review Committee.

2.8.6 Implementation

The project should be designed with the flexibility to utilize resources most effectively in order to maximize results in the region. This is important given the frequent changes in conditions in African countries. The project should be able to respond quickly to needs and requests for support according to established criteria, and be able to introduce and discontinue support as situations change.

2.8.7 Administration and Management

WHO/AFRO should have the responsibility for the administration of the project, with responsibility for execution of the project contracted by AID to an independent organization that would maintain a small project secretariat. The secretariat would use individuals from the region to the greatest extent possible, only going outside the region for technical assistance impossible to find within the region. The project should utilize the already existing reservoir of over 200 African consultants as the nucleus of the project's technical assistance effort.

The organization which holds the contract should have no independent health manpower development strategy to promote in order to be able to collaborate fully with the participating countries, WHO/AFRO and AID in developing the program. The organization should function largely as a coordinating body, drawing on local African resources for technical assistance. The organization should also have the financial and program management capacity, responsiveness and flexibility to carry out the program efficiently and effectively.

2.8.8 Coordination and Communication

Responsibility for project administration within WHO/AFRO should be delegated to a single coordinating office which has no other responsibilities. There should be a coordinator in each of the WHO/AFRO sub-regional offices, with decision making authority for the countries of the particular sub-region. The project secretariat should have coordinators in Brazzaville, near WHO/AFRO, and in Abidjan and Nairobi to facilitate communication with the two AID/REDSO offices. A health officer at each of the AID/REDSO offices should be charged with responsibility for project coordination, input and monitoring.

The project secretariat, WHO/AFRO and the AID/REDSO offices should develop a strategy for ensuring that project activities are well publicized and coordinated with other regional and bilateral activities.

2.8.9 Interim Support

A last recommendation concerns the potential hiatus in regional health manpower activities until such time as the next AID-financed program is ready for implementation. Among the twenty member countries of the region, there is a very strong interest in continuing a similar activity. Indeed, there is serious concern regarding the possibility of such a hiatus and the resultant loss of momentum. It is therefore recommended that AID provide some interim financial and technical support, in the most appropriate manner,

to allow current health manpower development activities to be continued at a minimal level until the follow-on project is ready for implementation. At the very least, AID, in collaboration with WHO/AFRO, should facilitate the continued production and distribution of training materials that were produced by SHDS. In addition, an inventory of training resources, including institutions and consultants in the region, should be assembled and distributed to member countries and major donors.

3. OBJECTIVE I: MANAGEMENT TRAINING

Objective: "To improve regional and national health planning and management in the 20 country area."

Subobjective 1: "To develop health management training competencies for producing primary health care managers at peripheral, district and regional levels."

Subobjective 2: "To identify and apply appropriate strategies to solve intra and inter-organizational problems affecting the implementation of primary health care."

3.1 Background

Objective I was retained as formulated for the original. implementation phase of the SHDS project. The End of Project Status indicators (EOPS) and strategies planned for attaining each of the subobjectives during Phase 3 grew directly out of activities that began in Phase 2. The development of a network of training institutions was planned in response to a new WHO/AFRO strategy in health management development. At the beginning of Phase 2, SHDS was mandated to work with a single WHO supported regional training center in Dakar. The Dakar center was subsequently phased out in favor of a new concept of identifying and supporting a network of institutions throughout the African region that were capable of providing health management training. In 1980 SHDS was invited by WHO/AFRO to participate in a conference in Arusha at which the creation of the network concept was proposed.

SHDS role was defined as supporting the functions of the network in the following ways:

- prepare consultant trainers in health management;
- offer the countries of the region consultants in health management;
- train managers at all levels in ministries of health and health related sectors;
- prepare guides and materials for health management training.

The first TOT workshop for training consulants was held in 1982 and included representatives from a number of the network institutions. Subsequently SHDS and WHO/AFRO

collaboratively developed the Phase 3 strategy for continued strengthening of network institutions planned to achieve subobjective 1 (EOPS A and B).

The strategy during Phase 3 for achieving subobjective 2 (EOPS C and D) was a direct outgrowth of Phase 2 activities. During the latter part of Phase 2 (1980-81) SHDS supported three top level inter-country intersectoral workshops in which 17 countries participated. As a followup of those seminars, several countries requested assistance from SHDS to carry out health management training in their respective countries. Two national seminars were planned just prior to the end of Phase 2, and the plan of action for Phase 3 was to continue to strengthen national capacities in health management training.

3.2 Achievements

(1) EOPS A: "TOT programs in health management development have been established in at least four network institutions."

Approach: The SHDS project supported the training of a number of individuals from network institutions who then established training of trainers (TOT) programs in their respective institutions.

Four network institutions within the SHDS twenty country catchment area have clearly developed an institutional capability to carry out TOT programs in health management training: the Ecole Nationale d'Administration et Magistrature (ENAM), Brazzaville, Congo; the Institute of Public Administration (GIMPA), Achimota, Ghana. In each of these institutions, in addition to having carried out TOT workshops, training programs in health management have been introduced. Pedagogical approaches were revised in those institutions that previously had not used the adult learning approach.

There are network institutions outside of the SHDS catchment area that developed the capacity in TOT and health management training, such as the Institut des Sciences et Techniques Medicales (ISTM), National University of Zaire, Kinshasa Zaire; and the East and Southern Africa Management Institute (ESAMI), Arusha, Tanzania. Several institutions that are not formally recognized as part of the network have

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Of the four, only IPA and GIMPA were on the original list of network institutions. The RTC/Lome was not considered a network institution until 1985. ENAM has never formally been added, although it became a de facto member when the head of the Department of Management of INSSEJAG, a sister institute within the University, became the director of ENAM.

also carried out TOT seminars in health management training with SHDS support, including the Bureau Organisation et Methode (BOM), Office of the Presidency, Dakar, Senega, the Pan African Institute of Development (PAID) Buea, Camerron, and the Ecole Nationale de la Santa Publique, Ouagadougou, Burkina Faso. The Administrative Staff College of Nigeria (ASCON) which is also not part of the network, has the capability but has not yet conducted a course. (ASCON was the site used for a TOT seminar in 1984 but the institution was not involved.)

(2) EOPS B: "Six to ten network consultant trainers are available to serve as senior consultants to WHO/AFRO network institutions and ministries of health in further development of health management training programs."

Approach: Four TOT seminars were held in both French and English to train network consultant trainers (NCTs): Experiential Learning (1982); Functions and Problems in Primary Health Care Management (1984); Applied Research in Health Management (1984); and Evaluation of Health Management Training Programs (1985). In addition the training included working as an apprentice facilitator in collaboration with a senior consultant in order to gain the necessary practical experience.

Altogether, Francophone participants attended at least one seminar, of whom half were Francophone and half Anglophone. Five individuals (2 Francophone and 3 Anglophone) attended all four of the TOT seminars for NCTs and had extensive experience during Phase 3 in planning, coordinating and evaluating workshops in health management training and carrying out other related consultations for WHO/AFRO. In addition, another six individuals, who attended at least 2 of the TOT seminars, and have had apprentice training experience, have officially carried out consultations as network consultant trainers. Two others have been trained as NCTs but have not yet had the opportunity to carry out a consultation. Thirty-two (32) consultations in health management training were carried out by NCTs during Phase 3.

Network consultant trainers collaborated with the development of two training guides. A guide for organizing health management training courses was published by WHO/AFRO in English and in French in November 1985. A compendium of case studies was completed in December 1986. A third, a

trainers guide for organizing top level intersectoral management training workshops on primary health care, was prepared by the SHDS Assistant Director and is only available in English in mimeographed form.

(3) EOPS C: "A continuing education program in health management has been institutionalized in three countries."

Approach: In response to national requests for assistance in training in health management, national level seminars were organized. In some countries these were intersectoral; in others, the participants were primarily from the health sector. In some countries, national level seminars were followed by training of trainers workshops and by seminars in health management for regional level personnel.

Four countries have institutionalized a continuing education program in health management. In Senegal, the Bureau d'Organisation et Methode, initially with the assistance of senior consultants, carried out three series of intersectoral management training seminars at the national, regional and district levels. Two staff members of the Institute of Public Administration in Nigeria, who are NCTs, coordinated a national level intersectoral seminar, a TOT, and one seminar at state level. Other requests for state level seminars were received but could not be financed by SHDS because of limited funds. The Ministry of Health in Burkina Faso, with support from the Ecole Nationale de la Sante Publique and technical assistance from network consultant trainers, has carried out a sector specific seminar at national level, a TOT (funded by another donor), and a regional health management seminar. In Congo, the Ecole Nationale d'Administration et Magistrature, with the assistance of three national NCTs, facilitated a national level seminar for the Ministry of Health and Social Affairs and a TOT for teachers of health and social affairs courses in various institutions in Congo.

In addition to the four countries that can be considered to have institutionalized the capacity for training in health management development, three other countries have taken steps toward this end. In Cameroon, at the request of the Minister of Health, two NCTs from the Division de la Reforme Administrative, carried out research on national needs within the Ministry in the area of health management, and planned a series of activities. Unfortunately the program was postponed because of internal political reasons. Gabon, with the assistance of a senior consultant, an NCT, and local facilitators from the Institut National de Gestion, conducted one national level workshop and planned other activities that could not be supported by SHDS because funds had already been programmed in other ways. The Ministry of

Health in Chad requested support for a top level workshop in primary health care management but it came too late to be considered for funding.

(4) EOPS D: "A nucleus of intersectoral management terms has been established in three countries participating in the health management development continuing education program."

The initial strategy agreed upon to achieve this EOPS was to utilize an African training institution to develop and organize national primary health care team management courses. Subsequently, at the request of WHO/AFRO, and with the agreement of USAID, the focus of this activity was changed, and plans were made for a fourth regional top level intersectoral meeting workshop similar to those held during Phase 2 of the project. The workshop was to be hosted by the Ministry of Health in Congo and organized under the technical and administrative supervision of ENAM. Because of changes that occurred within the ministry of health, the workshop never took place.

3.3 Observations

The strategy of strengthening the capacity of a number of specific institutions to deliver TOT programs in health management development was not introduced until the 1984 Project Implementation Plan. Thus the experience is limited and therefore conclusions are preliminary. Several institutions have demonstrated the capacity to carry out both TOT and health management training programs. However, given the short time and the relatively limited resources, the SHDS project was only able to provide a few of the requisite inputs.

There were a number of constraints impeding institutionalization. In the first place, the project was only able to support one aspect of institutional strengthening, the training of a limited number of individuals; very few institutions developed a critical mass of fully trained trainers. Only one or two of the institutions were able to obtain essential complementary inputs such as the capability to reproduce training materials and the building of a library of resource materials. Secondly, many of the concepts introduced by SHDS were new to collaborating institutions. Most are institutes of public administration and several had not previously been involved in the health sector. Moreover, the pedagogical approach was, for many, a dramatic departure from the traditional classroom lectures offered. Task analyses, the formulation of learning objectives, and the role of the teacher as facilitator required a reorientation for most of these institutions and individuals involved. Thirdly, the role of WHO supported institutions was in the process of being redefined during

Phase 3, creating uncertainty regarding their role in health management training efforts. Changes of key personnel resulted in strengthening of some institutions and weakening of others. Finally, the network concept itself was never defined or formalized.

Despite the fact that a number of network and non-network institutions have a well developed capacity for health management training, none of them is maximally utilized by the country in which it is situated. The degree to which it is utilized depends in part on the personal reputations, contacts, and other posts held by the staff, as well as the relationship of the institution with the ministry of health and other key bureaus within government. However, frequently neither the ministry of health nor the donors, in particular USAID, is aware of the extent of the resources or the sophistication of the capacity of the local institution so that internal or donor financed projects with training components go outside the country for technical assistance. Use of a local institution is mutually beneficial. On one hand, it helps to strengthen further the capacity of the institution. On the other, it increases the potential for relevance of the training and reduces costs.

The health management training seminars and workshops were all short, mostly two weeks. The modules were organized by learning objectives. The classroom experience was oriented toward the identification and analysis of practical problems experienced by the participants and assisting them with learning how to look for solutions. The trainers were not teachers; they were learners and facilitators. The NCTs were able to introduce aspects of the approach into curricula in their own institutions, and, in some cases, other institutions such as medical schools, when they enjoyed a joint post. However, in the short time available, the project was not able to support the development of a systematic capability among NCTs to provide technical assistance with the formulation and reformulation of health management curricula.

The experiential learning approach appears to have resulted in participants learning to identify and solve problems and to communicate more effectively. For most of the participants, the approach was new; they were initially reticent but ultimately found it stimulating. The major changes in management style that reportedly resulted from the management training were the ability to plan, organize and evaluate, to analyse and define tasks, to delegate responsibility, and to involve subordinates in the decision making process. However, there has not been any evaluation of the performance of participants.

In general, candidates for the seminars were well selected; most of those who attended TOT workshops had teaching responsibilities, and most of those who participated in management training courses were in supervisory positions. However, one of the major constraints was that because only a limited amount of training was carried out, most of the participants returned to their posts to work with others who had not experienced the training. This made the job of introducing new management techniques more difficult.

The program of developing network consultant trainers (NCTs) which began in Phase 2 with the first TOT for NCTs, continued into Phase 3. Altogether, only 5 of the NCTs attended all four of the training workshops. It was recognized by the senior consultants facilitating the first workshop that some of those attending did not have the essential motivation or orientation and they were not invited to subsequent sessions. Others were not released by their institutions or were no longer in the same posts. In the second and third workshops new participants were invited who had not attended the previous ones. No continuing education was introduced during the project for network consultant trainers.

It is essential for trainers to have sufficient apprenticeship training opportunities soon after their initial training to reinforce their ability to facilitate workshops themselves. The opportunities for both apprenticeship and consulting experience were relatively limited during Phase 3, partly because of the relatively small number of activities and partly because there was no mechanism for communicating either the requests for or the availability of facilitators.

At least 7 of the NCTs have the capacity and experience to produce training materials. Several have participated in the development of the training manual and case studies compendium. However, with the exception of the RTC/Lome, none of the institutions has sufficient resources to enable them to produce any but the most rudimentary materials in their own institutions. This is essential to enable NCTs to adapt training materials to specific training needs, to pass on the capability to others, and to ensure self-sufficiency within the institutions.

Three elements are essential to institutionalizing health management training at national level. First, there has to be strong and active support within the highest level of the ministry of health; secondly, there has to be an institution with the capability of carrying out the training that has credibility within the ministry. Finally, the institution must train and provide continuing education for a critical mass of trainers within the Ministry who can carry on the training. None of the countries has yet fully instituted the final step.

As in other aspects of the strategy for Objective I, with the minimal resources available from SHDS, only a beginning was made in institutionalizing health management training in individual countries. However, in several countries, SHDS supported initial activities that were complemented by activities supported nationally or by other donors and facilitated with the assistance of NCTs. The capability to carry on health management training clearly exists in four countries. These countries have had significant experience in carrying out health management training at national and regional levels but none has yet introduced the activity at the peripheral level.

One of the major constraints in implementation of national management training was that limited resources restricted the number of seminars to one per year per country. This reduced the potential effectiveness of the seminars for several reasons. With the long time between workshops, there was a diminution of enthusiasm and motivation. In some countries, because of the rapid turnover of personnel, by the time followup seminars were organized there was no longer a critical mass of individuals who had participated initially.

The objective of the effort was to insure that all parties concerned with the implementation of primary health care, both within the ministries of health and other concerned sectors, were conversant with the same language and had the tools to work together to seek solutions to problems that impede the implementation of primary health care. One of the primary benefits of the seminars has been the personal contacts established between individuals. In some countries, the approach appears to have facilitated the implementation of multi-sectoral collaboration, as evidenced by EPI efforts.

3.4 Conclusions

The achievements of the SHDS Project in Objective 1 were very significant. With the exception of the last EOPS, the project accomplished everything that was planned for Phase 3. SHDS was a catalyst in facilitating the introduction of concepts of health management and the capacity for carrying out effective training. In addition, a number of complementary activities, financed by other means, applied the approach developed by SHDS, thus increasing the benefits of the project in ways that cannot be measured. Nonetheless, it is clear that the time was too short and the resources too limited to have done more than lay groundwork for continued activities in the future.

One of the great successes of SHDS was to have been a catalyst in strengthening technical cooperation among developing countries (TCDC) in the region. With support

from the SHDS project, a number of extremely qualified individuals were identified from the outset (during Phase 2) who played the major role in developing and carrying out training of trainers courses in health management. During Phase 3, the network of consultant trainers was developed and the foundation was laid for an expanded program of TCDC.

The educational strategy was effective. The adult learning approach was adapted to health management training. A number of individuals were trained as trainers to use this approach and several training guides were developed. The concept of introducing the training activities through national institutions was a positive step in increasing the potential for continuing activities initiated with project support. Nonetheless, a relatively small number of institutions were involved, a limited number of trainers have thus far been trained, and few of the institutions have a critical mass of trainers. Although a fair number of workshops were held given the resources available, only a tiny proportion of the target group was reached. Thus only the first steps were taken and the implementation of health management training is still in a nascent stage.

3.5 Recommendations

1. Institutions with the capacity for health management training should be strengthened.

   - A critical mass of trainers should be trained in each institution.

   - Periodic inter-country continuing education seminars should be available to the trainers, providing an opportunity to exchange experiences, to reinforce skills, and to learn new techniques and information.

   - Each institution should have the capacity to produce and publish materials for their own needs and to distribute them at the full cost, as requested.

   - Each institution should have a library of resource materials.

   - To the extent possible, physical plants should be renovated to create an environment that is conducive to working.

   - In order to insure the continuation of activities after donor support ends, each institution should have the flexibility to provide services nationally or internationally and to charge the full cost of providing those services.

- Individual trainers should be given the flexibility to respond to requests that they receive as individuals, rather than as members of their respective institutions. Each institution should develop established terms for these consultancies (which may include a financial return to the institution).

- These institutions should provide technical assistance to health manpower training institutions, including medical and nursing schools, to facilitate the introduction of health management modules for all cadres.

2. A formal coordinating mechanism should be established to coordinate the network of health management training institutions.

   - Any institution that intends to develop or that has the capacity to provide health management training should be eligible to join the network.

   - The network should have well established lines of communication, for example, inter-institutional continuing education training programs, exchanges of curricula and personnel, a network newsletter or journal, etc.

   - Requests for technical assistance from network institutions and the recruitment of appropriate network consultants should be coordinated through the mechanism that is established.

   - The coordinating office should act to promote network institutions to ensure that national governments and international agencies and donors are aware of the strengths of these institutions and utilize them for training whenever appropriate.

3. The network of network consultant trainers should be strengthened.

   - All efforts should be made to utilize human resources available in the region before requesting assistance from elsewhere.

   - The number of network consultant trainers should be increased as, at present, the number is too small and not sufficiently distributed geographically or linguistically to meet the needs of the region.

   - All network consultant trainers should have opportunities for continuing education to reinforce their skills, especially evaluation skills, and to learn new skills.

- In addition to the skills included in past seminars (experiential learning, functions and problems in primary health care management, applied research in health management and evaluation of health management training programs), network consultant trainers should learn the necessary skills to enable them to provide technical assistance with curriculum development and reformulation in all levels of health training institutions.

- A mechanism needs to be established to coordinate apprenticeship opportunities for consultants in training and to coordinate consultancies for the network consultant trainers.

4. National programs of health management training should be strengthened.

- Inter-country intersectoral top level seminars should continue with a greater emphasis on the involvement of high level technicians. The technicians should prepare specific plans of actions for their own countries prior to a meeting of the ministers.

- The institutions involved in facilitating national training programs should be within the ministries of health or have a very close relationship and credibility.

- There should be an individual within the ministry of health responsible for coordinating management training. Ministry of health personnel must be trained as facilitators.

- National workshops must be given in relatively rapid succession to develop a critical mass of individuals at all levels who can establish a national network of key people who have had the same training and can communicate fully.

- Training at the periphery should be emphasized, especially the training of multi-sectoral teams. Involvement of the population in the planning and management of health services is critical.

- The orientation of national seminars toward the solution of concrete management problems should continue. The workshops should be followed up by visits to participants in the field to assist them with the implementation of their respective plans for action, and for evaluation.

4. OBJECTIVE II: REGIONAL TRAINING CENTERS AND NURSING EDUCATION

Activities in Phase 3 focused on the further development of regional training centers and nursing education, involving most of the same institutions and areas of emphasis as in Phase 2. The major foci were: (1) post-basic and basic nursing education -- curriculum reformulation, evaluation, and the development of field practice sites; (2) continuing education for nurses; (3) Anglophone/Francophone nursing cooperation; and (4) training trainers of community health workers and related teaching materials production.

Three post-basic nursing institutions, with regional training responsibilities, were involved: two Francophone -- CESSI/Dakar and CESSI/Yaounde, and one Anglophone -- Cuttington University College in Liberia. Several basic nursing schools in the region benefited from SHDS supported activities. The regional West African College of Nursing became a primary focus of Phase 3 activities because of its potential to coordinate continuing education and technical assistance for improvement of basic schools of nursing. SHDS support for training trainers of CHWs in the Lagos and Lome WHO/AFRO supported regional training centers was phased out during Phase 3; however, considerable resources were put into the Lome center to develop a capability to produce training materials.

Objective II was divided into 6 separate activity areas. Although the same objective applied to each of the components, there were different subobjectives and EOPS. Each of the 6 activity areas will be discussed separately: (1) the regional training centers, Lome and Lagos; (2) CESSI, Dakar and Yaounde; (3) Anglophone Nursing/West African College of Nursing; (4) Anglophone Nursing/Cuttington University College; (5) Anglophone Nursing/Basic schools of nursing; and (6) Anglophone/Francophone collaboration.

4.1 Objective II: Regional Training Centers (RTC), Lome and Lagos

Objective II: "To increase skills and improve the utilization of health personnel providing generalized services at the supervisory and local levels."

Subobjective 1: "To upgrade the capability of health personnel in designing, teaching and evaluating training programs for PHC systems."

Subobjective 2: "To establish regional capability for production of training materials for PHC delivery systems."

4.1.1 Background

The WHO/AFRO supported regional training centers (RTCs) in Lome (Francophone) and Lagos (Anglophone) train health personnel from the African region. During Phase 2, SHDS collaborated with the two centers to promote the integration of a primary health care orientation into the courses offered by the centers. The major emphasis of SHDS activities was the development and implementation of a 3 month course for training trainers of community health workers (CHWs) to be given at both regional training centers. A task analysis was carried out and a course developed that was based on skills that CHWs need to carry out their tasks. Training materials were produced and trainers from each of the SHDS countries were trained in the two regional training centers. Seven countries carried out followup TOT/CHW courses nationally with outreach support from the RTCs.

The activities planned for Phase 3 were designed to strengthen the capability of the regional training centers to support a regional program for training trainers of CHWs. This effort had three major areas of focus: (1) the redesign of existing training materials and the preparation of new materials; (2) an intensified training of trainers program including the development of an apprentice program in which individuals who had taken the TOT course would collaborate as facilitators/apprentices in the teaching of TOT courses; and (3) consultation to assist with the implementation of national TOT/CHW programs.

4.1.2 Achievements

The underlying goal was to establish TCDC training teams available for development of training materials and national level PHC programs. The goal was not fully realized, although the potential exists, because in fact, activities under SHDS auspices stopped in 1985 when funds for the apprentice-trainer and national TOT programs were reprogrammed for other activities.

EOPS E: "A regional capability has been institutionalized in each training center to provide formal on-the-job apprentice training to produce PHC training program designers, implementors and evaluators."

EOPS E has been largely accomplished. A regional capability has been institutionalized in each regional training center to provide formal on-the-job apprentice training to produce PHC training implementors. According to the centers and to apprentice trainee reports, the design and evaluation capabilities were less well developed in the apprentices than the implementation skills.

EOPS F: "RTCs have established and evaluated procedures for producing training materials."

EOPS F has been partially accomplished. The Lome center has established a capacity, if not a procedure, for producing training materials. There is no formal procedure or program for evaluation of training materials other than adjustments made based on trainer and participant evaluations. Because of internal problems at the Lagos RTC, SHDS did not provide resources for this activity at that center.

EOPS G: "RTC staff is capable of using word processing on computers to produce training materials."

EOPS G has been accomplished at Lome. The RTC staff is capable of using word processing to produce training materials, although this capacity is currently being used primarily for center administration and the management of its training program. Because of internal problems at the Lagos RTC, SHDS did not provide resources for this activity at that center.

EOPS H: "Six national training of trainers programs in PHC have been established."

EOPS H was partially accomplished. Six national training-of-trainers programs in PHC have not been established under project or center auspices. There are TOT participants in each of the SHDS countries, but they are not grouped or supported by their ministries to carry out training programs. In Phase 2, seven countries had at least one in-country followup TOT/CHW course (i.e., Mauritania, Senegal, Guinea, Mali, Gabon, Gambia, and Ghana). Funds for this activity were reprogrammed during Phase 3 due to the difficulties in generating country requests.

EOPS I: "RTC consultant capability has been established for outreach to all 20 national programs for training in PHC."

EOPS I has been achieved to the extent the RTC consultant capability has been established for outreach to all 20 national programs for training in PHC, but the capacity has not been utilized due to lack of awareness or requests from national ministries of health.

4.1.3 Observations

Both RTCs have institutionalized regional training programs. The 3 month TOT/CHW course developed during Phase 2 is offered twice yearly at both RTCs. At the Lagos RTC, the course was modified in 1983 and titled "Systematic Course Design, Community Mobilization and Management for Trainers of PHC Workers". In the period 1983-85, 98 Africans

attended the course, of whom 9% were from Nigeria, 32% from other SHDS countries, and 57% from other Anglophone African countries. At the time of the team's visit there were 18 participants in this course. In addition, there were 21 participants in a 10 week course on environmental health and malaria control techniques for mid-level health personnel (of whom only 6 were Nigerian).

Between 1983-1985 there were 70 participants in the TOT/CHW course given in the Lome center, of whom 7% were Tongolese, 73% were from other SHDS countries, and 19% from non-SHDS countries. Additional courses run by the Lome center in 1986 were refresher courses for health education and sanitary inspectors, and courses on community health and training technicians for maintenance and repair of medical equipment.

TOT/CHW Participants

1983-85

Total	Lagos (Anglophone) n = 98		Lome (Francophone) n = 70	
	No.	%	No.	%
National	9	9%	5	7%
Other-SHDS	31	32%	51	73%
Non-SHDS	56	57%	13	19%

Both RTCs are in the process of working out their roles vis-a-vis WHO/AFRO expectations and their relation to their respective host countries. There were discussions of a plan for the Lome center to become the Centre Regional Africain du Developpement des Personnel de Sante with bilingual capabilities. The former administrator of the Lagos RTC was recently transferred to the Lome RTC by WHO/AFRO to facilitate the transition. The Director of the center expressed some concern about the certainty and progress on this plan which he hoped could be resolved at the next WHO/AFRO executive committee meeting scheduled for Bamako in September, 1987. The decision will have important implications for staffing, training policy and programs at the center.

The Lagos center has been working closely with the University of Lagos Institute of Child Health and Primary Care for several years. Currently the center, the Institute, and the

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Note: Of the 20 SHDS countries, 5 are Anglophone, and 15 are Francophone.

Ministry of Health are discussing the future relationship of the center to WHO/AFRO, the MOH, and the University. In the meantime, the Lagos center continues with a WHO director and a Francophone administrative officer, who replaced the administrator sent to Lome. The MOH is responsible for maintenance of the facility and had been constructing a classroom and dormitory complex with a capacity for over 100 students. However, all progress on the building stopped with internal political events in late 1983 and the subsequent disappearance of the contractor who, reportedly, had been paid in advance. This has created an additional hardship in a location where logistic constraints are well known.

The only activities supported directly by SHDS in the two RTCs during Phase 3 were in the areas of training material production capacity and the apprentice trainer program. There were no country TOT followup programs by center staff. Two consultants were sent to the Lome center to develop the site and staff capabilities in word processing. The eight-module trainign set and the trainer's guide to its uses, prepared under SHDS auspices during Phase 2, were published by the Lome center in 1983 as a package for use by TOT/CHW course participants. Although these were not widely distributed, apparently in part due to the absence of WHO/AFRO efforts in this regard, they have been used in Zaire and Niger with some adaptation.

At the time of the final evaluation, the two Wang computers, with several software packages, were being fully utilized for a wide range of purposes at the Lome center. Several of the training modules had been entered onto diskettes. There were files for personnel, financial management, administration, transportation, scholarships, correspondence, and bibliographic information. The two principal users of the Wangs had given training to two others in the office. There have been delays in printing texts because of difficulties in obtaining the Gestetner off-set plaques. Stencils are used to print texts because this process is less expensive than photocopying. While there is a Wang distributor in Lome, its technical services are very limited and the plaques must be ordered from Paris or Abidjan.

The introduction of computer capabilities into the Lome center and the ability of the staff to make effective use of them represents a very positive effect of the SHDS project. The staff have managed to teach themselves a great deal about the program capabilities of the Wang, although they request additional training that is not available in Lome. The installation of a laser printer would greatly enhance the center's production capability. The center could accomplish much more than it already has with continued support for training, equipment, and the development of a bilingual capability.

The apprentice trainer program involved identifying previous TOT/CHW participants from both centers and requesting their return to participate as facilitators in a TOT/CHW course. Despite some problems in obtaining country releases, 10 people participated in the Lome apprentice program and 3 in the Lagos program during Phase 3 before the program was terminated in 1985. The Lome center sent out questionnaires to followup participants in the apprentice programs. Nine responses were received: eight indicated that the course had been useful (one expressed no opinion); six had been involved in PHC training at some point after their return; only five were still involved with training health workers. The Lome center's conclusion was that the program could be considered useful even if the multiplier effect did not appear to have been produced, and that it was probable the impact would have been greater if national decision makers had better utilized these individuals. The Lagos staff said that they would like to do a similar followup of participants. They were disappointed that the program had been discontinued as it had also benefited the center's training staff.

This illustrates an issue which was consistently raised by those involved in training in the SHDS project, that of selection and utilization of participants. The problem of selecting participants who need and are likely to use their training as intended is complicated by many factors, such as lack of clear communication of criteria and expectations to the countries, reluctance of countries to have selection procedures or criteria imposed, poor planning or insufficient time so that whoever is available or expendable for that period of time is chosen. This diminishes the likelihood that there will be any noticeable impact of the training effort. The Lome center introduced a screening mechanism to be administered by WHO country representatives to course applicants but encountered problems, such as refusal of countries to allow its use and the need to change the test yearly. Lack of staff and financial resources to follow up participants hampers evaluation and revision of the training program. In the case of the TOT/CHW and apprentice trainers, it frequently means that they do not have the required support to implement their training. Many countries have sufficient numbers of CHW trainers trained, but they are scattered so that the "critical mass" necessary to carry out a program is not attained.

One advantage that the Lagos center has in its TOT program is the existence of a functioning primary health care system and village area accessible for field practice. The director and the chief facilitator in charge of the training program are both very interested in the village health workers trained by the participants and would like to evaluate the training and provide some supervision and support for their work, should resources be made available

by WHO/AFRO, MOH, or SHDS follow-on activities. The disadvantages and difficulties of working in Lagos were voiced by most WHO/AFRO, USAID, and SHDS-related people. However, the center is functioning as an Anglophone training center and is interested in helping to meet the demand for TOT and village health worker training created by the Nigerian MOH's increased PHC efforts.

Several countries in the SHDS catchment area had major political and economic problems. Togo closed its basic school of nursing for three years due to financial constraints and just reopened it in late 1986. During the closure, some instructors were posted to the Lome center and the family health center next to it, allowing them to participate in and facilitate some of the training activities, thus providing them with continuing education in primary health care. The Lome center has been active in all dimensions of SHDS activities, has a competent and dedicated staff, and is located in a benign development environment. It has demonstrated its ability to respond to needs articulated in the region.

4.1.4 Recommendations for Regional Training Centers, Lome and Lagos

(1) SHDS played an important role in institutional development by strengthening the capabilities of WHO/AFRO supported regional training centers. WHO/AFRO has been increasingly limited in this effort by budgetary considerations. AID should provide assistance to build upon those capabilities reinforced during the SHDS project.

(2) Priority should be given to strengthening the training and materials production capabilities of the Lome center, including further training for the staff, AID should especially encourage the bilingual orientation of the center, both in terms of human resources and materials production.

(3) Regional and bilateral utilization of training capacity should be encouraged by stimulating AFRO/RTC efforts to make their capabilities known (e.g., to CCCD projects with large and similar training needs).

(4) The RTC/Lagos classroom-dormitory complex should be completed to expand training capacity to meet Nigerian and regional Anglophone PHC training needs.

(5) RTC efforts to followup trainees should be supported as well as the development of better selection methods.

(6) The libraries of both RTCs should be expanded with appropriate training materials, journals, and books.

4.2 Objective II: CESSI, Dakar and Yaounde

Objective II: "To increase skills and improve the utilization of health personnel providing generalized services at the supervisory and local levels."

Subobjective 1: "To reformulate the CESSI curriculum in order to strengthen the program's ability to train nurses and midwives for assuming effective roles in PHC. (YAOUNDE)"

Subobjective 2: "To continue the process of implementing the reformulated curriculum utilizing a variety of teaching strategies. (DAKAR)"

Subobjective 3: "To develop an ongoinbg systematic evaluation for the reformulated curriculum, the course content, the field experiences, and the teaching methods. (DAKAR)"

Subobjective 4: "To develop programs of continuing education, followup, and evaluation of CESSI graduates in order to respond better to nursing service needs of the participating countries. (YAOUNDE AND DAKAR)"

Subobjective 5: "To continue to prepare nationals to assume responsibility of the total CESSI program. (YAOUNDE AND DAKAR)"

4.2.1 Background

The CESSIs are government institutions, established with the collaboration of WHO, that train nurses and nurse/midwives, who already have a basic nursing education, in education and administration. The primary goals of SHDS support during Phase 2 were to: reformulate the curricula and make them more relevant to the primary health care approach; utilize the outreach potential of the CESSI programs to improve the training at basic schools of nursing in the region; develop appropriate programs of continuing education; and to nationalize the staffs of the CESSIs.

The subobjectives for the CESSI programs during Phase 2 were common to both institutions. However, at the recommendation of the PCC, the subobjectives for Phase 3 were made specific

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CESSI (Centre d'Enseignement Superieur Soins Infirmiers)--Post Basic Nursing Education Center

to each of the institutions, reflecting differences between them at the time. The orientation remained the promotion of institutional capability in both CESSIs.

4.2.2 Achievements: CESSI/Dakar

EOPS J: "CESSI staff has institutionalized the process of curriculum reformulation."

CESSI/Dakar staff completed the process of curriculum evaluation and reformulation in Phase 2 and participated in the evaluation of the reformulated curriculum in Phase 3. To continue this process will require no further financial support. Two members of staff have performed consultations to other countries (see EOPS M). Most of the conditions of "institutionalization" have been met.

EOPS K: "Field practice sites have been established."

There are opportunities for relevant field experience in teaching institutions and in communities in Senegal in conjunction with each module of the course. Initially, field practice sites were identified in four neighboring countries to give non Senegalese students more relevant experience. However, the problems of arranging and supervising this program led to its cancellation. Thus, field experience is institutionalized, although the field practice site pilot effort in neighboring countries is no longer operative.

EOPS L: "Number of faculty at master's level has increased in each CESSI."

In Phase 3, two Senegalese returned with master's degrees. One joined the CESSI faculty, and the other was posted to a basic nursing institution. Six of the seven staff now have master's degrees. No further SHDS fellowships were awarded.

EOPS M: "Consultative outreach program for PHC curriculum and continuing education is operative."

The consultative outreach program for PHC curriculum and continuing education is potentially operative. The staff are trained and eager, and two members have performed consultations to other countries. Funds were reprogrammed before additional requests and followup could be undertaken. If the 1987 budget request to WHO/AFRO is granted, CESSI will hold a 3 day continuing education workshop on teaching methodology for nursing and midwifery instructors.

EOPS N: "Anglophone and Francophone nurses have initiated a collaborative relationship to define common approaches to the promotion of the nursing role in PHC and to identify the means of implementing those approaches."

This is identical to EOPS U (See Sec. 4.6.).

4.2.3 Observations: CESSI/Dakar

The CESSI teaching staff is entirely Senegalese. Six of the seven have master's degrees. Of the three SHDS-supported master's fellowships, one person is currently on the CESSI faculty, and the other two are heading the teaching programs in the two basic and assistant nursing schools. The ratio of faculty to students is high: in 1986 there were 23 and 26 students respectively in each of the two classes with seven faculty. Five of the faculty members each take primary responsibility for one of the five modules (orientation, nursing care, administration, teaching and research). The total number of CESSI graduates as of 1986 is 360, of whom 106 are Senegalese.

As of February 1986, the Senegalese graduates were distributed as follows; with at least seventy percent in positions for which their training was intended.

Institutions de formation (teaching institutions)	31%
Supervision des SSP (PHC)	19%
Hopitaux (hospitals)	11%
Ministere_de Santa (MOH)	9%
Prive (private, mostly industrial/pharmaceutical)	8%
En formation (on study leave)	5%
Administrateurs civil (civil administrators)	5%
Provisoirement sans affectation (temporarily unemployed)	3%
Hors du pays (out of country)	3%
Decedes (deceased)	3%

The attempt to develop field practice sites in other countries in order to provide CESSI students with an opportunity to practice in their own countries during their field postings, was halted during this phase of the SHDS project due to the difficulties in arranging and supervising these experiences. As a result, most practice teaching now takes place in three Senegalese training institutions, thus limiting the number of individual teaching opportunities but providing team teaching experience.

Each instructor arranges field observation and practice experiences in settings appropriate to his area of instruction. In the evaluation of his module, one of the instructors made the following statement about field practice. "The success of field practice in rural areas relies on numerous travels to collect data and to carry out supervision and evaluation tasks. Unfortunately the

logistical means are barely available in several regions." Neither class was posted to the field at the time of the team's visit.

An extensive evaluation process was carried out during Phase 3 in an attempt to assess the results of the curriculum reformulation completed in Phase 2. The first class to complete the reformulated curriculum finished in 1983, with the two preceding classes considered "transitional" between the old and new curricula. An evaluation team was assembled under SHDS auspices, consisting of the SHDS nursing consultant and two short-term consultants, one the Directrice of CESSI/Yaounde at that time. The team did the preparation in May and the analysis in December of 1985, with CESSI staff participating as requested and as schedules permitted. A questionnaire was adapted from one used for the Cuttington (CUC) follow-up and evaluation. These were sent to all graduates of the period 1980-84, and 64 of the 111 were eventually returned. Questionnaires were also prepared and sent to employers of these graduates; 34 responses were received. In addition, faculty members evaluated their own areas of teaching responsibilities, faculty and student interviews were carried out, and an evaluation of teaching and logistical material was prepared by a staff member.

At the time of the SHDS final evaluation, the final report of the CESSI/Dakar evaluation was being completed in Boston. Because the questionnaire did not ask the respondents to indicate years of participation or completion of the CESSI program the CESSI staff was concerned about relating responses to changes in the curriculum. This would be critical to analyzing the adequacy of the new curriculum in preparing graduates for their present jobs. The SHDS nursing consultant believes there are enough corroborating data to make the linkage. The CESSI staff who had participated in the adaptation of the questionnaire originally developed for CUC graduates, and in the analysis, also felt there were problems in translation, appropriateness of the questionnaire to CESSI conditions, and interpretation. They had communicated this to the SHDS nursing consultant, and they believed these problems would be addressed in the final report.

The evaluation team had the opportunity to observe a graduate of the new curriculum in her role as regional supervisor of primary health care overseeing a training program for the heads of health centers and supervising a village health worker. She maintained that the research component of her CESSI course had developed her problem solving abilities although she had not as yet had the opportunity to do any systematic applied research. She plans to begin work in this area following the training of the rest of her health team scheduled for later this year.

One of the Phase 3 activities which was highly acclaimed by both CESSI faculties was the consultative outreach program. Workshops were held during the vacation periods of 1983 and 1984 in Dakar and Yaounde, respectively, which brought both faculties together to learn the process of consulting with basic schools of nursing on curriculum development. The second workshop built upon the first, and brought together heads of basic schools of nursing to present problems for small groups of faculty to work on. As a result of this contact and preparation, two teams made up of one faculty member from each CESSI performed consultations in 1985 to two countries, Gabon and Congo, at the countries' request, to assist with integration of PHC into training programs and to upgrade teaching methodology. Funds for this activity were reprogrammed before other requests could be acted upon, and no further followup or evaluation has been done. In most of the advanced training institutions and ministries of health visited by the final evaluation team, there was an expressed need to improve basic schools of nursing. The CESSI teachers who participated in the consultative outreach workshops are eager to be resources in this effort.

The CESSI/Dakar staff were very appreciative of the SHDS efforts, opportunities, and materials provided during the project, and expressed regrets that it was coming to an end. They acknowledged the contribution made to staff development and curriculum strengthening, with only a few reservations about the scheduling and French language skill of some of the consultants. They recommended follow-on activities in continuing education for CESSI graduates, strengthening basic schools of nursing curricula and teaching, strengthening faculty research capabilities, and providing library and teaching materials. CESSI/Dakar submitted a request to WHO/AFRO for financing in 1987 a continuing education workshop on teaching methodology for nursing and midwifery tutors.

4.2.4 Achievements: CESSI/Yaounde

EOPS J: "CESSI staff has institutionalized the process of curriculum reformulation."

Curriculum planning and reformulation activities have been a major focus of many faculty members throughout Phase 2 and 3. Acceptance of the 1983 reformulated curriculum was tabled by the university, but parts of the new curriculum have been incorporated into the present curriculum and into a proposed B.Sc. program now being considered by the university.

EOPS K: "Field practice sites have been established."

The field practice site developed specifically by a faculty member during Phase 2 is no longer being used, in part

because she is currently on study leave. However, field practice experiences include one month postings in each year to areas outside Yaounde along with medical students.

EOPS L: "Number of faculty at master's level has been increased in each CESSI."

Two master's degree fellows returned to the faculty at the beginning of Phase 3, joining the one who completed his studies during Phase 2. At present, of the seven full time faculty members, one has a Ph.D. and four have master's degrees. Another faculty member is currently on study leave completing doctoral studies in the U.S. under different auspices. The two remaining faculty members were planning to pursue master's degrees, but SHDS fellowship funds were no longer available.

EOPS M: "Consultative outreach program for PHC curriculum and continuing education is operative."

Consultative outreach program for PHC curriculum is operative, with two members of faculty having done consultations to four Cameroonian schools of nursing in 1986, and two having done consultations in Gabon and Congo in 1985. There are no formal continuing education activities at this time.

EOPS N: "Anglophone and Francophone nurses have initiated a collaborative relationship to define common approaches to the promotion of the nursing role in PHC and to identify the means of implementing those approaches."

This is identical to EOPS U. (See Sec. 4.6). Of note is the unique capacity and example that the CESSI/Yaounde provides with its bilingual capacity and the range of educational experiences of the faculty.

4.2.5 Observations: CESSI/Yaounde

The CESSI was created within the University Center for Health Sciences (CUSS) in 1972, by agreement with WHO, to be a regional center for advanced nursing training, primarily in teaching and administration. As of 1984, 291 nurses had completed the two year program, receiving a "diplome de technicien superieur." The current classes are 30 students each, of which Cameroonians compose 57% and 70%, the latter due to the fact that two students from other countries failed to arrive for the course and were replaced by Cameroonians who could be contacted at short notice.

The present faculty is entirely Cameroonian. There are currently 7 full time faculty members, assisted by 12 part time lecture5rs. Of the full time staff, one has a Ph.D., and four have master's degrees. The other two were in line

to go for further education but no fellowship funds were available. As this CESSI is part of the university, there is pressure to attain advanced degrees to increase acceptability and credibility of the nursing department. One faculty member, currently pursuing her doctorate in the U.S., has authored a book on health education and co-authored a book on community health nursing. These are available in both French and English, and one was published with USAID assistance.

Until several months ago, the present Directrice was the chief nursing officer in the MOH. In that role she had been involved in discussions and committees dealing with CESSI programs and plans. Her predecessor left in early 1986 to become WHO consultant to a B.Sc. nursing program in the Congo, shortly after her participation in the evaluation of CESSI/Dakar. A WHO team evaluated the CESSI/Yaounde earlier this year but their report had not yet reached the CESSI.

The CESSI/Yaounde curriculum was reformulated during Phase 2 following an evaluation by questionnaire to former CESSI students and their employers, and faculty visits to four other countries. The reformulation was done with the assistance of a long-term consultant, previously with a Harvard/CUSS project, who joined the CESSI faculty from 1981-1983, under SHDS auspices. The University did not act to approve this curriculum, but PHC components of the revised curriculum were integrated into the teaching program.

Late in 1985, a nursing consultant, provided to CUSS under another program, worked with the faculty to review the curriculum and made recommendations. This effort and the earlier SHDS supported effort provided the basis for a commission, appointed by the university, to study the feasibility of introducing a 3 year B.Sc. program into the CESSI program, an idea raised in the previous studies. Four of the present faculty members were on the commission, which concluded that the CESSI program should be raised to a 3 year B.Sc. program "at least for Cameroonian purposes" and "with due respect for University of Yaounde academic entry requirements." Several issues will need to be resolved as the proposal makes its way through academic and government channels, among them Cameroon's needs, regional obligations, university requirements, and faculty strength.

Even if the B.Sc. proposal is accepted, the faculty proposes to continue the present two year program in tandem, sharing teaching resources. This would enable the CESSI to fulfill a continuing commitment to other Francophone countries in the region that have lower entry level requirements for the three year program. The CESSI faculty believes there is a

future need to introduce two other programs: a generic B.Sc. in nursing a one-year course for present CESSI graduates who previously completed the two-year advanced nursing diploma, enabling them to obtain a B.Sc.

The field practice site mentioned in a previous evaluation is not currently in use, but all courses provide field practice experience health team approach and PHC field experience are combined in a one month posting to areas outside Yaounde with first year CESSI students joining four year medical students and second year students joining fifth year students, respectively.

All faculty members participated in the SHDS sponsored consultative outreach workshops with CESSI/Dakar in 1983 and 1984. Two teamed with Dakar counterparts to perform consultations in Gabon and Congo in 1985. In addition, under MOH auspices two of the staff visited four basic schools of nursing in Cameroon in early 1986 to evaluate teaching methodologies. The basic nursing school curriculum was revised with MOH coordination.

A newsletter was begun with SHDS funds in 1984 as part of the continuing education effort and as a collaborative project of the two CESSIs. The week prior to the evaluation team visit, the faculty had discussed the desirability of resuming the newsletter of which there had only been three issues. Yaounde staff had produced the issues with limited participation by Dakar. Support for resumption of the newsletter was given by Dakar faculty at evaluation team interviews as a forum for cooperation and exchange of ideas, as well as a means of providing continuing education for all CESSI faculty and graduates.

The last issue of the newsletter contained summaries of some of the CESSI student research projects. Many of these project reports are printed and bound in the CESSI library. They had been used as case studies in the research source at one time, but time consumed with translation made this difficult. Virtually none of the journals in the library was more recent than 1983, the date of departure of the long-term SHDS consultant. There have been no renewals due to budget constraints and foreign exchange accessibility, according to faculty. This deprived highly trained faculty of an important resource for continuing education.

This institution is in a unique situation with relation to nursing education and Anglophone/Francophone collaboration. Three members of the present faculty did their undergraduate nursing degrees at the University of Ibadan in Nigeria and graduate degrees in the U.S. Most of the Francophone faculty understand written and spoken English to a considerable extent. Because of the language and training backgrounds of the faculty, there is a blend of French,

English, and American influences in nursing. As noted elsewhere, much of the regional collaboration in nursing has been possible because Francophones have learned English. Another positive attribute of this program is its close cooperation and shared learning experiences with the medical school, which counteracts the tendency to isolate nursing and reinforces the health team approach to health care delivery.

There were significant differences in the situations and the process of curriculum reformulation at the two CESSIs. CESSI/Yaounde had a full time SHDS nursing consultant whereas Dakar had intermittent consultant input. The Yaounde institution is within the university system, so it did not have the authority to implement changes without seeking university approval.

4.2.6 Recommendations

(1) Support (a) evaluation and followup of Gabon and Congo consultations as a means of improving basic schools of nursing, and (b) consultative outreach to requesting countries.

(2) Resume a newsletter, on an annual rather than quarterly basis, as a means of providing continuing education for CESSI graduates, establishing an information network, encouraging interfaculty cooperation, and acknowledging research projects of faculty and students.

(3) Promote faculty exchange to encourage cooperation and support, cross-fertilization and regional relevance. (If a Yaounde 3 year program is approved, it is suggested that one Dakar faculty member be posted to Yaounde to augment the faculty.)

(4) Support the development of libraries, including updated PHC-relevant materials, health and nursing journals, in both French and English in the case of Yaounde.

(5) Utilize Yaounde's bilingual capability/compatibility for Anglophone/Francophone collaborative workshops.

4.3 Objective II: Anglophone Nursing/West African College of Nursing (WACN)

Objective II: "To increase skills and improve the utilization of health personnel providing generalized services at the supervisory and local levels."

Subobjective 1: "To collaborate with basic schools of nursing, WACN and AFRO in planning organizational capability for a system of formal and continuing education programs in primary health care in the region."

4.3.1 Background

During Phase 2 SHDS responded to the general need to develop and implement a continuing education program for graduates of the basic schools of nursing from Liberia, Sierra Leone, and The Gambia. The purpose of the program was to prepare these nurses to assume leadership roles in teaching, supervision, and administration, with emphasis on primary health care.

By the end of 1982 it was recognized that the most appropriate institution for coordinating the continuing education program was the West African College of Nursing (WACN), in collaboration with WHO/AFRO. It was agreed that SHDS would support the development of a capability within WACN to plan and manage continuing education programs for nurses from all five of the member countries of WACN: Liberia, Nigeria, Ghana, Sierra Leone, and the Gambia.

The West African College of Nursing (WACN) was inaugurated in April 1981 as one of the three professional agencies operating within the West African Health Community. The West African Health Community is an organization of five English speaking West African countries (i.e. The Gambia, Ghana, Liberia, Nigeria and Sierra Leone) whose main functions are to foster and promote health manpower development through educational and training programs and to improve health services by pooling the resources of the participating countries.

WACN is made up of five national chapters, one in each of the member countries. WACN has a governing council which is responsible for the management of the entire business of the College. The heads of national Nursing Boards, responsible for examinations and licensure, are members of the governing council.

4.3.2 Achievements

EOPS 0: "A regional program of continuing education for basic schools of nursing in the Anglophone region has been established in collaboration with WHO/AFRO and WACN."

Several continuing education activities were carried out. In 1982, just prior to the beginning of Phase 3, a ten week curriculum design course was held. WACN members participated as co-trainers. Two intercountry workshops on

curriculum development in primary health care were held in 1984 and 1985. These two workshops, attended by a total of 45 participants, were designed to improve the skills of senior nurse educators. Followup questionnaires were developed and sent out to all participants.

Two additional WACN regional workshops were implemented in 1985 and 1986 by WACN facilitators and consultants with some SHDS input: one, a workshop on research and the second, on supervision and evaluation of primary health care services for senior public health nursing personnel. Eight national workshops were carried out by WACN of which 3 had SHDS inputs.

In 1984 the WACN Regional Continuing Education Committee, representing the five WACN countries, was appointed. This committee drafted a plan of action for 1985-1986 which was approved and distributed. It included plans for two regional workshops and for the development of a 5 year plan of action. A continuing education needs assessment was carried out; nearly 60% of the 200 questionnaires were returned. A proposal for a regional system of continuing education for 1987-1991 was drafted and accepted, in principle, by the WACN Steering Committee. It will be submitted to the WACN Annual General Meeting in March 1987. A proposal for funding the continuing education program has been developed in order to facilitate implementation.

4.3.3 Observations

WACN has demonstrated a capacity to coordinate and implement programs to improve nursing education in the West African region. WACN/SHDS collaborative efforts achieved some major successes, reflecting a WACN commitment to excellence in nursing education and practice. SHDS supported a number of curriculum design workshops and provided technical assistance with coordination and implementation, as well as materials to other regional and national workshops. SHDS also provided technical assistance to WACN for the development of the regional continuing education plan of action.

SHDS support included financing a fulltime WHO/AFRO education consultant who was seconded to the WACN secretariat in Lagos from April 1985 for almost a year to assist the WACN in conducting a continuing education needs assessment and developing a five year plan of action. He also assisted with the followup surveys of WACN workshop participants and provided administrative support for 1985 workshops held at WACN headquarters in Lagos. Unfortunately, the consultant had to spend a lot of time on routine administrative activities of the WACN secretariat as the WACN nursing administrator was recuperating from an automobile accident during most of the time he was there.

Among workshop participants interviewed, there was general consensus of immense benefit from SHDS workshops. For many, these workshops provided the first opportunity for continuing education. Information sharing and curriculum development skills acquired for PHC training have been stimulating. A few have been given the opportunity to utilize the knowledge and skills developed in helping to plan, coordinate and, in a few cases, to implement WACN/SHDS workshops on an ad hoc basis. An example is the WACN National Chairman of the Community Health faculty participated in planning and coordinating the subregional workshop on supervision and evaluation of PHC services. Another example is the under-fives nutrition course in PHC, developed in the 1984 curriculum development workshop, was subsequently refined by the participants from Sierra Leone. For others it hasn't been possible to use the skills learned. Constraints have included: job placement; selection of participants which occasionally seemed to have been based on an incentive/reward for long service employees; transportation; and other financial difficulties. The more fundamental problems might be linked with the following conditions: the lack of health manpower development plans; no continuing education regulations for nurses; national civil service policies, i.e. promotion based on seniority; outdated regulations governing nursing practice; financial and organizational constraints at the various levels of the health system, i.e. highly centralized.

Nigerian nursing leaders discussed problems specific to Nigeria. They pointed out that the WACN/SHDS strategy did not work as well as anticipated because of a lack of coordination and linkages among various levels of nursing governing bodies in the region. In addition, nominations in Nigeria are made strictly according to geographic representation which spans 4 zones with 5 states in each. The number of workshop participants has been very small (an average of 6 per WACN workshop) when compared to the size of the country and the number of nurses. (Nigeria's population is greater than the total population of all the other 19 SHDS countries.)

The Chief Nursing Administrator (CNA) expressed concerns for the future of the College. There is tremendous dependence on voluntary services; the CNA is the only fulltime staff. If the College is to survive, increased support for the WACN Secretariat must be provided. WACN activities are funded by the West African Health Community through subventions from member countries; 45% Nigeria, 25% Ghana, 14% Sierra Leone, 9% Liberia and 7% The Gambia. The flow of funds from subventions has been irregular and inadequate. Funding for special programs has been provided by other donors e.g.: Commonwealth nurses; Canadian nurses, used to support curriculum standardization pilot projects; USAID; and SHDS. Also, the WACN organizational structure needs to be

developed and strengthened to improve communications among fellows, agencies, and member countries of the West African Health Community. The CNA, who is a Ghanaian national, was scheduled to end her tour of duty in December 1986. A Nigerian, whose appointment is pending the WAHC Executive Board, is likely to succeed her. It is anticipated that this will increase support from the WACN National Chapter-Nigeria.

SHDS inputs were significant in supporting the development of a continuing education program coordinated by the WACN; however, a lot of work still needs to be done. Institutionalization of a program of continuing education is a major step toward self-sufficiency for nursing education and practice in the region. WACN has among its ranks a "critical mass" of nursing leaders who have, over the years, demonstrated their capability to find and manage resources for planning and implementing special programs and workshops. They have shown a commitment to raising the standard of nursing education and nursing practice within member countries. With additional support ultimately the WACN goal of self-sufficiency will be realized.

4.3.4. Recommendations

(1) Support should be provided to implement the five year plan for a regional continuing education program.

(2) Mandatory continuing education policies should be formulated and a regular system of continuing education for nurses should be established that coordinates national continuing education efforts with WACN.

(3) Support should be provided to enable WACN leadership to participate in regional nursing and PHC meetings.

(4) Cooperation and coordination between WACN and the CESSIs should be encouraged, including a newsletter or journal, in order to establish a regional nursing network and information system.

4.4 Objective II: Anglophone Nursing: Cuttington University College

Objective II: "To increase skills and improve the utilization of health personnel providing generalized services at the supervisory and local levels."

Subobjective 2: "To develop a Post-Basic Nursing Education Center in order to strengthen nursing services and nursing education in the region."

4.4.1 Background

During Phase 2, SHDS supported the development of a post-basic nursing education program at the Cuttington University College (CUC) designed to serve graduates of the basic schools of nursing from Liberia, Sierra Leone, and The Gambia. The other two Anglophone SHDS countries, Nigeria and Ghana, already had well established post-basic nursing institutions. In preparation for developing the post-basic nursing education program, a workshop was held in Liberia in August 1979. Sierra Leone and The Gambia each sent two participants, one from the school of nursing and the other from the nursing service. Members of the provisional council of WACN were co-planners, participants and observers. The outcomes of the workshop were guidelines for revising the post-basic nursing curriculum at CUC and the development of a proposal for post-basic education and training programs for all levels of nursing personnel.

A revised curriculum was implemented at CUC in 1981. The purpose of introducing the new curriculum was to prepare the participants to assume leadership roles in teaching, supervision, and administration of nursing, with emphasis on primary health care. Continued assistance to the CUC was planned for Phase 3 in order to strengthen this program.

4.4.2 Achievements

EOPS P: "Curriculum reformulation and evaluation have been institutionalized in the Nursing Department of the Cuttington University College post-basic nursing program."

A regional post-basic nursing program has been developed at CUC and fully institutionalized. An evaluation of the program was undertaken in May 1984. Based on the evaluation, curriculum changes were planned. However, in order to complete this evaluation, the followup survey of graduates needs to be finished. The delay in completing the survey is, in part, due to problems of job placement for the graduates, especially in Liberia. An annual followup survey of graduates has been implemented; the most recent questionnaires were received by CUC at the end of 1986 but have not yet been analyzed.

EOPS T: "Master's degree level faculty has been increased at Cuttington University College as a result of SHDS fellowships."

Three faculty members received master's degrees with SHDS support. Two of the three returned to CUC, one of whom left CUC subsequently to join her husband in the U.S.

EOPS R: "Field practice sites are established."

Existing primary health care sites have been upgraded for use as field practice areas.

EOPS S: "Faculty at basic schools of nursing in the Anglophone region has been increased as a result of SHDS fellowships to CUC."

Faculties at basic schools of nursing in the Anglophone region have been increased as a result of SHDS fellowships to CUC. However, out of the 13 graduates sponsored by SHDS/WHO during 1980-83, the disposition of only four is known -- 2 are at the Tubman National Institute of Medical Arts in Liberia, 1 at The Gambia School of Nursing, and 1 Gambian is deceased. A final reckoning cannot be made until the survey of graduates is completed.

4.4.3 Observations

A regional post-basic nursing program was developed at the CUC following a process of carrying out a needs assessment, evaluation of previous graduates, revision of the old curriculum, implementation of the reformulated curriculum, evaluation, and revision. The program has been fully institutionalized and CUC has the institutional capability to continue, with assistance, to function as a regional post-basic nursing program.

In May 1984, an evaluation of the post-basic program was undertaken with the participation of a SHDS-sponsored advisor who had been the long term advisor to CUC during the reformulation process in Phase 2. As a result of the findings of this evaluation, curriculum changes were planned. Two new tracks, or specialized courses were designed--one in Community Health Nursing/PHC and one in Maternal and Child Health/Midwifery. The possibility of giving college credits for the latter course, which is to be offered at the Phebe Hospital, in collaboration with the CUC Nursing Division, is being investigated.

Between 1980-1983, thirteen graduates were sponsored by SHDS/WHO, eight Liberians and two Gambians. There were 16 graduates during 1983-1985, 1 from Lesotho, 1 Ugandan and 14 Liberians.

Sierra Leone did not have any candidates in the program. The reasons given for the non-use of this regional facility include: the relationship of the College to the national chapters was unclear during the formative years of the WACN; the absence of a clear policy regarding the utilization of graduates; and the problem of information flow within the health system of Sierra Leone. Two candidates, one from the School of Nursing, eventually submitted applications to CUC in 1983. By then, SHDS sponsorship for tuition, room, and board had stopped. Several persons in Sierra Leone

expressed regrets at not having taken advantage of the opportunity when it was available and wished for similar opportunities in the very near future.

Primary health care field practice sites exist. These sites were not specifically developed in conjunction with the post-basic program; existing sites were upgraded to emphasize primary health care, using guidelines for developing appropriate field practice areas.

4.4.4 Recommendations

(1) Additional support to CUC should be contingent upon the completion and findings of the evaluation.

(2) The regional post-basic B.Sc. degree program at CUC should be utilized more by countries in the region. This would provide faculty for the national schools of nursing and a core of nursing leadership needed to develop and support the nursing role in PHC.

4.5 Objective II: Anglophone Nursing: Basic Schools of Nursing

Objective II: "To increase skills and improve the utilization of health personnel providing generalized services at the supervisory and local levels."

Subobjective 1: "To collaborate with basic schools of nursing, WACN and AFRO in planning organizational capability for a system of formal and continuing education programs in primary health care in the region."

Subobjective 2: "To develop a Post-Basic Nursing Education Center in order to strengthen nursing service and nursing education in the region."

4.5.1 Background

SHDS strategy for strengthening the nursing role in primary health care was the reformulation of nursing curricula, introducing competency-based, task oriented curricula with a PHC focus. SHDS trained nursing school faculty in the region to carry out the curriculum redesign methodology. The reformulation process applied to the CUC post-basic course was the model used for revision of the basic nursing school curricula. CUC faculty members who participated in the reformulation worked collaboratively with the SHDS advisor and learned the process. In addition, during Phase 2, SHDS sponsored a 10 week curriculum development course in Liberia that was attended by participants from the basic schools of nursing.

In 1982, the WACN appointed a task force that developed a set of common standards for basic nursing programs in member countries. The task force identified the minimum criteria for standardizing the curricula and proposed guidelines for preparing a polyvalent nurse who, upon completion of the program, would be competent to work as a general nurse practitioner in health care institutions and communities. The WACN criteria for standardizing the programs of basic nursing schools, which was formally approved in 1984, provided a framework for reformulating the basic nursing school curricula.

4.5.2 Achievements

EOPS Q: "Curriculum reformulation and evaluation has been institutionalized in three basic schools of nursing through the WACN."

Curriculum reformulation was institutionalized in three institutions: the School of Nursing and Midwifery of the Tubman National Institute of Medical Arts (TNIMA), Liberia; the National School of Nursing, Sierra Leone; and The Gambia School of Nursing. Curriculum evaluation has not been institutionalized in the basic nursing schools.

4.5.3 Observations

(1) Tubman National Institute of Medical Arts (TNIMA)

TNIMA, a multidisciplinary training center for training mid-level health workers, is an integral part of the John F. Kennedy Medical Center. The School of Nursing and Midwifery is one of 4 schools within the Institute. The School offers a 3 year professional nursing program (RN), a 2 year course in practical nursing (LPN), and a 2 year course in midwifery (CM).

During 1983 the curricula of the basic nursing program, the midwifery program and the licensed practical nurse program were reformulated with the assistance of a SHDS advisor, using the CUC reformulation process. The school was closed during 1984 as the entire medical center was closed for political and economic reasons. During this time, the faculty worked together to complete and improve the curricula and to prepare lesson plans. The reformulated curricula were introduced in mid 1985 when the school reopened.

An evaluation protocol, using the model developed at CUC, should be developed. The evaluation should assess the extent to which the curricula are appropriate and the skills learned are being used by graduates.

(2) Sierra Leone National School of Nursing

The National School of Nursing offers a 3 year course for state registered nurses and a 2 year course for state enrolled community health nurses. The school has a total of 300 students, half in each of the courses.

The National School of Nursing was designated as a pilot project for implementation of the WACN guidelines for standardizing basic nursing school curricula. Reformulation of the curriculum was completed in 1985; however, the model curriculum development process used at CUC was not replicated as it had been at TNIMA. Instead, the faculty revised the curriculum using the training they had received in the curriculum development course in Liberia which three members of the faculty had attended in 1982. The Community Health Course developed during this workshop served as a model for the reformulation. The SHDS nursing coordinator provided individual assistance to faculty members on an ad hoc basis.

SHDS' offer of technical assistance to the curriculum reformulation through the WHO/SHDS short term consultant to the WACN was not utilized. It was decided by the faculty that technical assistance would be needed to provide consultation on the evaluation process of the revised curriculum after its implementation during 1985-1986. SHDS was unable to support the request because the project was phasing out. The faculty were advised to forward the request to the WACN.

Faculty efforts to utilize local expertise in reformulating the basic nursing curriculum is indeed commendable. Review of the curriculum suggests that their efforts could have been maximized with some technical assistance. In view of the educational preparation of faculty members, continuing education would increase the curriculum design and teaching capabilities of the faculty and hence the quality of the education.

Library facilities and other training materials and equipment are inadequate. Most of the text and reference books, as well as nursing literature on PHC, are outdated.

The principal indicated that components of the reformulated curriculum relating to PHC, community health and PHC field practice sites were being implemented. According to the faculty, PHC field practice sites have been developed in Makeni, Bombali District in the Northern province, Bo in the Southern province, and at Lumley Health Center in the Western area. The Lumley Health Center site was visited. There were no students assigned there at the time of the visit. It was pointed out that transportation difficulties pose serious constraints to the assignment of students to

these PHC field sites. Guidelines for PHC field practice were not available. It appears that these sites are the areas in which PHC activities are being implemented nationally.

(3) The Gambia School of Nursing

The Gambia School of Nursing was designated for implementation of the WACN standardized criteria and the curriculum was reformulated. However, the faculty did not utilize the curriculum reformulation process developed in the CUC Post-Basic Nursing Program as planned. The school requested a full time curriculum consultant which SHDS could not support as it was too close to the end of the project. They were able, however, to get funding from other sources for a long term consultant to complete the curriculum reformulation process that had been initiated by SHDS.

4.5.4 Recommendations

(1) In order to strengthen basic schools of nursing, support should be provided for continuing education of nursing school faculty and for advanced nursing preparation.

(2) There should be support to WACN to further the implementation of WACN criteria for standardizing basic schools of nursing within member countries.

(3) Support should be provided for consultations to requesting countries and institutions, especially from WACN and the post-basic nursing schools in the region.

(4) Assistance should be provided to update basic school of nursing libraries.

4.6 Objective II: Anglophone/Francophone Collaboration

Objective II: "To increase skills and improve the utilization of health personnel providing generalized services at the supervisory and local levels.

Subobjective 1: "To collaborate with basic schools of nursing, WACN and AFRO in planning organizational capability for a system of formal and continuing education program in primary health care in the region."

4.6.1 Background

The WHO resolutions emphasizing the critical role nurses must play in the training and management of health operations personnel to achieve the goal Health for All/2000

serve as the basis for fostering collaboration between English and French speaking nurses to promote the nurses' role in primary health care. Nurses are the predominant group among trained health personnel, outnumbering physicians by an average of 10 to 1 in SHDS countries. Nursing educational and professional institutions provide a vehicle for networking and improvement of health care.

SHDS planned to contribute to Anglophone/Francophone cooperation by supporting collaborative activities between the CESSIs and the WACN, and by assisting WHO/AFRO efforts to standardize and improve nursing practice in the region.

4.6.2 Achievements

EOPS U: "Anglophone and Francophone nurses have initiated a collaborative relationship to define common approaches to the promotion of the nursing role in PHC and to identify the means of implementing those approaches."

The first international meeting on Anglophone and Francophone collaboration in nursing for primary health care was held in Brazzaville in June 1985. A followup meeting was held in February 1986. Although neither of these meetings was funded by SHDS, SHDS was a catalyst, and the SHDS nursing coordinator participated in the planning and implementation.

WACN and the CESSIs developed as focal institutions in efforts to promote communication and collaboration between Anglophone and Francophone nursing in the region. With SHDS support, a representative from CESSI/Yaounde and one from CESSI/Dakar attended the Annual General Meeting of the WACN held in The Gambia in March 1984. A visit of two WACN officials to CESSI/Dakar was scheduled in 1986. The visit had to be postponed because of the bereavement of one of the officials and could not be rescheduled before SHDS funding ended.

4.6.3 Observations

Although SHDS did not finance either of the regional Anglophone/Francophone meetings, SHDS played a catalyst role. The WHO/AFRO Health Manpower Development Office, supported by the SHDS Nursing Coordinator, found funding for the first round-table and the SHDS Coordinator attended as an observer. The second meeting was financed by WHO. A third meeting has been planned for 1987 with the possibility of biennial meetings in the future, depending on the availability of funding.

A new effort to enhance collaboration between Anglophone and Francophone nurses is being planned by the WHO/AFRO Health Manpower Development Nursing Office. A regional task force

has been named with the purpose of encouraging the exchange of ideas and information within and among WHO/AFRO member countries regarding the nursing role in primary health care. The task force will make recommendations on ways in which the training of nurses and their role in the delivery of health services can accelerate the achievement of health for all.

4.6.4 Recommendations

(1) Support AFRO regional task force on nursing to look at nursing education, regulations, and practice in an effort to standardize and upgrade nursing throughout the region.

(2) Continue support for participation in WACN and CESSI workshops and annual meetings to encourage communication and development of a network of nursing leaders.

5. OBJECTIVE III: DISEASE SURVEILLANCE

Objective III: "To improve regional and national disease surveillance and health demographic data systems and to integrate these systems into national health planning delivery systems."

Subobjective 1: "To establish regional training capabilities in epidemiology, disease surveillance and data collection."

Subobjective 2: "To create Epidemiologic Demonstration and Training (EDT) zones through conversion of two former EPI Demonstration and Training Areas (DTAs) -- one anglophone Gambia) and the other francophone (Ivory Coast) for demonstrating appropriate epidemiological interventions in primary health care."

Subobjective 3: "In one country develop a model system to train health personnel to collect and utilize epidemiologic data in the planning, management and evaluation of primary health are programs."

Subobjective 4: "To hold a disease surveillance conference in collaboration with WHO/AFRO and CCCD to review disease problems of current interest in Africa."

5.1 Background

During Phase 2, Objective III focused on the implementation of Expanded Program of Immunization (EPI) efforts throughout the region. Objective III activities were implemented by the Centers for Disease Control (CDC). Three demonstration training areas (DTAs) were selected to test the approach to delivering immunization service programs; the DTAs were located in The Gambia, Cameroon, and Ivory Coast. There was a significant amount of training in epidemiology and in the management of EPI programs, and an analysis of disease surveillance systems in several countries in the region. The SHDS relationship with CDC ended in 1982 and subsequently AID-supported EPI activities have been implemented by CDC through the Controlling Communicable Childhood Diseases (CCCD) project in Africa.

During Phase 3, Objective III was reoriented from direct service to supportive training, data systems development, and regional communication activities. Although the objective remained the same new subobjectives were agreed upon. The subobjectives and corresponding EOPS developed

for Phase 3 reflected the new orientation, with the exception of the second subobjective which was later dropped.

5.2 Subobjective 1: Regional training in epidemiology

5.2.1 Achievements

EOPS Y: "An intensive course in field epidemiology for medical epidemiologists has been prepared for Francophone Africa and was institutionalized at OCEAC in Yaounde."

The course was given once in 1983, 1984 and 1985; a total of 35 persons participated in the three sessions. The course materials were revised after each session and the text for the course, "Cours d'Initiation Aux Methods Epidemiologiques", is available in final form.

5.2.2 Observations

At the beginning of Phase 3 an agreement was reached that SHDS would collaborate with OCEAC (the Coordination Organization for Control of Endemic Diseases in Central Africa) to develop an introductory course in epidemiology to train medical epidemiologists to plan and manage the operations of preventive health services at national and district levels. The course was planned in anticipation of the opening in 1988 of a new school of public health in Brazzaville; it was designed in part to prepare physicians for advanced degree programs, including entry into the new school. It was also designed to be utilized by the school of public health as the introductory course in epidemiology. It was planned that 12 people per year would be trained and that, after SHDS funding ended, OCEAC would continue to offer the course.

The program consists of a 45 hour modular course that includes descriptive epidemiology, statistical methods, epidemiological surveillance and practical research, including field exercises. Participants are introduced to epidemiologic concepts, principles, methods and tools that form the basis of participants' ability to design and carry out active and passive surveillance activities as part of their day to day responsibilities. Upon completion of the course, participants were asked to apply the knowledge and skills acquired by designing and carrying out a research project under supervision in their own countries over an eighteen month period. Upon successful completion of this part of the training, they have the qualifications to be considered for entrance to advanced degree programs.
Some of the course participants have begun to use their new expertise in studies monitored by OCEAC. Such individuals have a newfound facility in talking and working with OCEAC professionals. Alternatively, some participants who were

prevented from engaging in the specific problems envisaged during the course have been successful with other relevant work, dictated by the needs of their ministries, which has benefited from the methodology taught in the course.

The SHDS/OCEAC/AFRO epidemiology course, prepared with support from SHDS, including substantial technical assistance from the SHDS epidemiology advisor, represents an impressive achievement. With SHDS financing the course was given three times at OCEAC, benefiting with each successive session from the chance to test and revise the suitability of the materials. The course is an important tool for teaching epidemiology in the African region and represents the first innovative approach to introductory epidemiology training in French. A decision was taken by the OCEAC inter-ministerial conference in 1985 that the course should form the basis of public health curricula in medical schools in the region. Some revision is necessary to incorporate the materials into the time schedules of these schools of public health. The course was adapted and introduced into the medical school in the Ivory Coast.

5.2.3 Recommendations

The course should continue to be given to selected participants on an annual basis. In the absence of continued funding by SHDS, which permitted the course to be given at OCEAC, it might be desirable to propose that the course be given at the Centre Universitaire des Sciences Sanitaires (CUSS) in Yaounde. Support should also be offered to adapt the course for use by other interested medical and public schools in the region.

5.3 Subobjective 2: Field epidemiology training

5.3.1 Achievements

EOPS W: "Systems for rapid collection, storage and analysis of epidemiological data for use in the management of PHC programs have been established in 2 Demonstration and Training Areas (DTAs) for field epidemiology (one Anglophone and one Francophone)."

This subobjective and EOPS were dropped in 1984.

It had been planned to develop two Epidemiologic and Training (EDT) zones to introduce training programs in basic field epidemiology. The first EDT was to be developed in Ivory Coast with an Anglophone zone to follow. However, because of changes in MOH personnel and policies the program activity did not proceed in the Ivory Coast. During discussions between WHO/AFRO, USAID/REDSO and SHDS it was agreed to eliminate this subobjective from the 1985 implementation plan.

5.4 Subobjective 3: Model health information system (Sierra Leone)

5.4.1 Achievements

EOPS X: "A national system of rapid collection, storage and analysis of epidemiological data from the periphery in support of PHC has been demonstrated for one country (Sierra Leone)."

This EOPS has been partly achieved. An experimental health information system was developed in the Bombali District in Sierra Leone. The system was designed to collect three kinds of information: management data (payrolls, mileage, fuel consumption, drug inventories, and service tariffs/charges); demographic data (baseline information -- location of population by age and sex, births, deaths); and simplified reporting of a few diseases that could be recognized by community health workers (malaria, diarrhea, skin diseases, and respiratory illnesses) as well as health center referrals.

In 1984 a microcomputer was installed in the primary health care center in Makeni. Two Peace Corps Volunteers, in succession, assisted the project, helping to write programs and to operate the machine, as well as to train local clerks.

A baseline study, based on a sample census, was carried out and the demographic data were entered into the computer and analyzed. A management information system was established and is still being used; it is operated entirely by local staff. A disease reporting system was introduced: pictured reporting forms for illiterate community health workers (CHWs) and traditional birth attendants (TBAs) were designed; CHWs and TBAs were trained and began submitting reports through their local primary health care units to the center in Makeni. However, information is no longer being received from the primary health care units.

Ultimately a standardized primary health care information system will have to be agreed upon for use throughout the country. The SHDS-supported system is still highly experimental. A GTZ-funded project in the Bo area is also developing a health information system that has had some preliminary field-testing.

5.4.2 Observations

The purpose of this program was to develop a model health information system for primary health care. The strategy was to focus initially on one district of Sierra Leone in which primary health care was already established and to design and test a model that could be adapted for use in

other parts of the country. The Bombali District was selected because of the presence of a UNICEF assisted PHC program with which an Italian mission had been involved for seven years. SHDS inputs included a computer and the appropriate software. SHDS also provided short term technical assistance to help plan and design the information system and to train local technicians in the use of the computer.

The Kaypro microcomputer, installed and maintained successfully in Makeni, has proved to be durable. There have been no mechanical failures. The computer uses current from the local leprosy hospital and when this shuts off a stand-by battery switches on instantly so that no information is lost. The battery can function as long as fifteen minutes. However, the computer is five years old and is no longer "state of the art". It is excellent for keeping records but not as useful for data analysis. Nonetheless, it is being used and the local technician clerks operate it competently.

The computer has been useful for accounting and money management, including payrolls, drug inventories and fuel allotments. However, money and resources flowing into the project from the central government have been reduced or, in the case of fuel allotments, virtually absent in 1986. Thus, the amount of management information is diminished.

A disease reporting system for use at the periphery was introduced by the PHC project. With the assistance of a SHDS consultant, reporting forms, based on symptomatic diagnoses of common diseases, were designed to be used by illiterate community health workers. However, the system broke down. Much of the information submitted by CHWs was invalid and not useful for planning purposes. The computer picked up errors in the data and the reasons were traced back to the CHWs. Evidently, a system of rewarding CHWs and TBAs by permitting them to sell drugs had resulted in abuses. Drugs were being sold in the absence of treatment and disease reporting was being inflated to justify receiving added supplies of the more easily sold drugs, such as chloroquine and penicillin. The primary health care project subsequently decided to stop the distribution of drugs to the community health workers. By removing the main motive for cooperation, the flow of disease information effectively ceased. Efforts were made to improve reporting from the periphery but were constrained by the general fuel shortage in Sierra Leone.

The reporting forms were designed to ensure the data could be linked to key indicators; they indicated the chiefdom, village, and month, the names of children being followed for weight increase and immunization record, as well as mothers' prenatal and postnatal followup. One of the principal contributions of the SHDS project has been the development

of a computer program to follow the first two years of a child's life in terms of weight gain and to compare this automatically with national weight for age standards.

This project is an example of a well-conceived approach to designing an information system for primary health care programs that foundered because of a lack of data flowing through the system. The value of the system for management purposes diminished as resources were reduced. The reporting of disease data broke down as the utility of collecting and reporting the information became less apparent to the community health workers. The computer is a fine adjunct to a system that works; when reports stop coming in, the computer is no longer helpful.

The health information system in Sierra Leone was never fully operational. In particular, the flow of epidemiological data from the periphery hardly moved beyond the design stage. Therefore the project did not succeed in achieving the objective.

5.4.3 Recommendations

(1) An officer should be nominated by the MOH in Sierra Leone and placed in charge of all decisions affecting health data collection. Such a person would be attached to the Statistics Office in Freetown but would have access to experimental field sites throughout the country. (This would imply an assured supply of fuel for his vehicle.) AID might choose to cooperate with WHO in proposing this need to the MOH and might assist in rectifying any budgetary imbalance that eventuates.

(2) Attention should be given to changing the style and content of health data sought by the HIS in any future project. A successor project should work with the MOH to develop standard reporting forms for MCH and priority diseases. Attempts should be made to increase the motivation for community health workers, and others working at the peripheral level, to report accurate data from succeed, a cost-effective system of periodic data collection should be considered.

(3) A major contribution of SHDS was the installation and maintenance of a microcomputer to facilitate information retrieval and analysis. But the computer cannot make useful output out of faulty input. The system of data collection must be organized and functioning dependably before accession by the computer. In future, the computer should be considered as an adjunct to a working system, not as the "master" of the project.

(4) Under a future project, consideration might be given to replacing the Kaypro at Makeni with a more up-to-date machine.

5.5 Subobjective 4: Annual disease surveillance conferences

5.5.1 Achievements

EOPS V: "A program of annual disease surveillance colloquia to promote the exchange of ideas, and information has been established under the auspices of WHO/AFRO."

Two colloquia were held biennially during Phase 3; an Anglophone conference in Freetown in 1984 and a bilingual conference in Bamako in 1986. A Francophone conference was held in Abidjan in 1982 during Phase 2.

In the conference in Abidjan, the papers that were presented discussed information systems at national and regional levels, the evaluation of surveillance systems, and the surveillance of specific diseases, especially those of interest to EPI.

The 1984 conference in Freetown was attended by 31 participants from the five Anglophone countries covered by the SHDS project, plus representatives from the Ivory Coast, Kenya, Somalia and the United States. The theme of the conference was the practical organization of health services to provide disease surveillance. Twenty papers were read, a workshop on the use of microcomputers was held, and there was a field visit to the SHDS supported health information system project site in Bombali. Complete conference proceedings were distributed to the participants and other interested individuals.

The 1986 conference in Bamako was attended by 17 participants from Francophone and Anglophone countries in West and Central Africa, as well as 13 observers, consultants and technical experts. The conference focussed on the collection, analysis, dissemination and use of demographic, immunization, and disease incidence data for effective primary health care program management. There were 7 formal presentations, group discussions, tutoring sessions, and workshops.

5.5.2 Observations

The disease surveillance conferences were designed to promote the exchange of information and ideas on disease surveillance methodologies as part of the strategy to develop regional training capabilities in epidemiology and disease surveillance.

The conferences were well conceived and assisted those responsible for the operations of primary health care systems to communicate with each other and discuss approaches to the collection, analysis and dissemination of health information.

5.5.3 Recommendations

In the future absence of SHDS, some mechanism should be sought by WHO/AFRO to permit a continuation of these conferences. In the future, they should become truly "annual" conferences. A desirable continuity could be achieved by inviting many of the same people to participate in serial annual conferences. Finally, some mechanism should be established to permit the timely publication of conference results, including presented papers in their entirety, so as to ensure the widest possible circulation both within and outside of the region. The conferences should continue to be bilingual.

6. OBJECTIVE IV: APPLIED RESEARCH

Objective IV: "To develop training, service and research demonstration models for low-cost health delivery through applied research."

Subobjective 1: "To train trainers in applied research design and proposal development within the region for application to delivery of primary health care (PHC) services."

Subobjective 2: "To fund applied research projects within the region as a component of training in applied research."

Subobjective 3: "To disseminate results of applied research training activities and projects and to encourage their utilization."

Subobjective 4: "To collaborate with WHO/AFRO in the development of a plan for a network of training institutions which will promote applied research."

6.1 Background

The purpose of Objective IV, as stated in the 1985 revised work plan was, "To work with WHO/AFRO to achieve the goal of strengthening individual and institutional capability within the region to do applied research which will improve and expand the delivery of primary health care services." The original goal of promoting "low-cost health delivery systems" was abandoned during Phase 2 following a formal request from WHO/AFRO. The new orientation responded to a need identified by WHO/AFRO for strengthening applied research skills of Africans. It had been observed that African researchers were not able to take advantage of the Tropical Disease Research (TDR) grants being made available from WHO/Geneva. It was believed that the reasons for this were intimately involved with traditions of education and training of African medical personnel that tend to emphasize curative medical services and seldom present the need for, or teach the methodologies of field research.

The plan was to develop teaching materials that would emphasize the preparation of research proposals, to train trainers and potential researchers in applied research, to provide "seed money" to support selected research proposals, and to assist in the publication or dissemination of results. One aspect of the program plan was to strengthen a developing network of institutions able to support training and research activities.

The activities carried out under Objective IV during Phase 3 were a direct outgrowth of Phase 2. In Phase 2 a number of regional workshops in applied research were held and one research project was funded by SHDS. Training materials for a health services research course were developed.

During Phase 3 it was planned to continue the activities begun in Phase 2; the four subobjectives constitute the framework for the implementation of Objective IV. In the revised logframe, only three EOPS were articulated. Other end-of-project status indicators were implied by outputs listed under the third EOPS (EOPS BB). Neither EOPS nor outputs correspond neatly with the subobjectives. Therefore, in discussing each of the subobjectives, the subobjective itself will be stated and the relevant EOPS and/or outputs will be cited.

6.2 Subobjective 1: Training in applied research

Subobjective 1: "To train trainers in applied research design and proposal development within the region for application to delivery of primary health care (PHC) services."

6.2.1 Achievements

EOPS Z: "Five countries have organized and presented Applied Research (AR) courses at the national level."

Altogether nine national AR courses were organized in the SHDS region at national level during Phase 3: three were SHDS funded; three were organized with the assistance of SHDS, and SHDS obtained funding and provided technical assistance and training materials; and three were independently organized although SHDS-inspired and they used materials furnished by SHDS.

Although it was anticipated that SHDS would finance five national courses, the project only funded the following three. The Dakar course (1983) had 10 participants. The Bamako course (1984) had 26 participants from the National Institute for Public Health Research (INRSP), the MOPH, and the Schools of Medicine and Pharmacy. The conference was preceded by a three day applied research orientation session for Malian decision makers. The Abidjan course (1984) had 26 participants from the National Institute of Public Health (INSP), the Institute of Hygiene, the MOH, and the Schools of Medicine, Pharmacy and Nursing. The facilitators included Africans who had been trained in previous workshops.

The Togo course (1985) was initially planned as a national course but became a regional course, although the preponderance of participants were from Togo. The fifth

national course was to have been in an Anglophone country but was ultimately dropped from the implementation plan. More emphasis was put on the Francophone countries during Phase 3 because they were further behind.

The SHDS assisted but non SHDS funded courses were held in Dakar in 1985 (funded by USAID/Senegal), Ouagadougou in 1985 (funded by USAID/Burkina Faso), and Abidjan in 1986 (partly funded by WHO/AFRO). The SHDS inspired courses were held in Liberia in 1983 (supported by IDRC), The Gambia in 1983 (supported by the AID-funded Family Health Initiatives project), and Mali (supported by IDRC).

EOPS AA: "A final edition of the SHDS/AFRO/AR course manual has been prepared and distributed throughout the region."

The manual was developed and revised during Phase 2. A member of the SHDS staff was the lead author. The final version was published in French and in English by Boston University in 1983 and distributed during Phase 3. The manual is entitled Health Services Research Course: How to Develop Proposals and Design Research to Solve Priority Health Problems. It is accompanied by a trainer's manual, Course Guide for Administrators and Trainers.

EOPS BB: "A program to support AR has been developed in the region in collaboration with WHO/AFRO."

Output: "2 regional courses on training of trainers in AR."

Three regional training of trainers courses were held during Phase 2. The TOT course included, in addition to the basic applied research training, a supplementary week of training in pedagogy. Almost all of the facilitators in these courses were individuals who had been trained in earlier courses.

Courses were held in Lome (1983 and 1985) and in Banjul (1985). In the first course in Lome, eight Francophone countries were represented by a total of 21 participants; the second course had 16 participants from four countries. At the Banjul conference, the five Anglophone countries in the SHDS region were represented by a total of 17 participants.

Two additional courses were held in 1984 to train the network consultant trainers in applied research in health management. These courses, one Anglophone (Benin City) and Francophone (Brazzaville) formed part of the series of four TOT courses sponsored by SHDS under Objective I to train trainers in management. (See Sec. 3.2.)

6.2.2 Observations

The applied research course manual has met with almost universal approbation. WHO/AFRO has officially decided to make it the basis for its approach to research training in Africa. WHO/Geneva sponsored a meeting in Cameroon in 1984 in which the six WHO regions were represented. At that time the SHDS training materials were discussed and the consensus was a strong recommendation that these materials be made available in other regions. Since that time WHO/Geneva has played a role in distributing the manual. PAHO is planning to have the manual translated into Spanish for use in the Pan American region; it has already been used in countries throughout the world, including Italy, Malaysia, and Sudan. However, an issue for the future is that the manual is heavy and expensive to produce and to mail. Continued circulation will require financial support.

In Senegal, a principal goal of institutionalization has been met; applied research training has become self-replicating. Senegal sent several participants to early applied research courses. Subsequently, two applied research courses were held within the country, in Kaolack and in Tambacounda, with Senegalese staff as trainers using materials from the manual. At least one of these "second-generation" trainees has been successful in developing, writing, and presenting a PHC-oriented research proposal for approval and funding.

Other "second-generation" effects are worth noting. For example, a research course for social scientists interested in tropical disease research was held in Yaounde in 1984, in collaboration with the Centre Universitaire des Sciences de la Sante (CUSS). Although funding was from WHO/Geneva, the SHDS applied research manual was used in the course; 40 copies of the book in French were donated by SHDS. In Togo, applied research has been integrated into the curriculum of the Medical School by an individual initially trained in AR under SHDS.

Another important "spin-off" effect of the SHDS applied research course has involved the International Development Research Centre (IDRC) in Ottawa, Canada. IDRC has been utilizing AR courses based on SHDS material as part of their health services research approach in Africa. Regional IDRC workshops, utilizing African trainers who had participated in SHDS AR courses, have been held in Liberia, in East Africa, and in Mali.

Inevitably, certain constraints also became apparent during the life of the SHDS project with regard to the successful application of the principles of applied research training. The activity requires continued political and financial support and, if the first type has been more or less

guaranteed by the active interest of WHO, the source for the second remains less certain. Applied research training must become a regular part of the training of physicians, nurses, and other health workers. As there is a danger that good people who are trained may be sent "up-stairs" to administrative duties, a constant search for new participants must be part of the process of institutionalization.

6.2.3 Recommendations

(1) AID should explore with WHO/AFRO continued support of the regional training of trainers courses and the national applied research courses, utilizing the materials developed by SHDS.

(2) Regional and national courses should include opportunities for users of the research to work together with potential researchers to ensure support for and relevance of research activities.

(3) Funding should be provided for continued production of the health services research course manual and a mechanism established to facilitate distribution of the manual throughout the African region.

6.3 Subobjective 2: Applied research projects

Subobjective 2: "To fund applied research projects within the region as a component of training in applied research."

6.3.1 Achievements

EOPS BB: "A program to support AR has been developed in the region in collaboration with WHO/AFRO."

Outputs:
- "at least 12 research proposals have been developed by former AFRO/SHDS AR course trainees"
- "twelve research projects have been selected and funded"

The objectives of the applied research courses were to train the participant to: comprehend the role of applied research in solving priority health problems in his region (with emphasis on problems relating to primary health care); learn the tools needed to design and carry out a research project; and learn how to prepare an acceptable health services research proposal. Having experienced this training, participants were encouraged to prepare research proposals and submit them to SHDS.

Once a research proposal was received by SHDS it would be reviewed by SHDS and returned to the author with substantive comments. As most of the initial proposals received were concept papers, they required considerable elaboration to bring them to the stage of a fundable proposal. SHDS followed up the preliminary submissions with a 2-3 day visit. The majority of proposals were then revised and resubmitted to SHDS. SHDS sent these proposals to AID/REDSO and WHO/AFRO for approval. If approved, they could be funded through the SHDS "mini-grants" programs.

Altogether 31 preliminary proposals were developed by participants in the various applied research courses and were submitted to SHDS. The countries of origin of these proposals were: Cameroon (2), The Gambia (2), Ghana (1), Ivory Coast (5), Liberia (3), Mali (10), Nigeria (2), Senegal (3), and Burkina Faso (3).

Out of the total number of initial proposals received by SHDS, 13 were never resubmitted. SHDS funded 7 proposals from the following countries: Burkina Faso (3), The Gambia (2), Senegal (1), Ghana (1). At least 3 other proposals were funded by other donors; 2 Mali projects were funded, one by WHO/TDR and one by IDRC, and PRICOR funded a project in Liberia. At least one proposal was rejected during the approval process and others await a decision by AID/REDSO or WHO/AFRO or are still under review by SHDS.

6.3.2 Observations

SHDS followed up participants who submitted initial research proposals individually. It might have been more cost-effective to have held workshops devoted to the elaboration of proposals in which several potential researchers could have been helped individually and also learned from each other.

The focus of the applied research training was on helping participants to identify and study real problems that they faced in the implementation of primary health care. However, because the primary objective was to teach research techniques, the research projects were considered an integral part of the learning process. Therefore, less emphasis was placed on the substance of the research than on the design and implementation process.

There has not been sufficient time for completion of many of the research projects. However, several outstanding investigators were identified and encouraged in the course of this activity. The budgets of the 7 SHDS funded projects total a modest $81,000.

6.3.3 Recommendation

Since it is anticipated that WHO proposes to continue applied research training, means should be identified to continue the system of "mini-grants".

6.4 Subobjective 3: Dissemination of research training and projects

Subobjective 3: "To disseminate results of applied research training activities and projects and to encourage their utilization."

6.4.1 Achievements

EOPS BB: "A program to support AR has been developed in the region in collaboration with WHO/AFRO."

Outputs:
- "two conferences on AR in Africa"
- "reports on results of 12 AR projects"
- "report on lessons learned from research projects and training activities"

Two applied research conferences were held, a Francophone conference in Dakar (1984) and a bilingual conference in Abidjan (1986). The first conference, in Dakar, was attended by 26 African participants from 10 countries (Benin, Burkina Faso, Mali, Senegal, Togo, and Zaire); there were 29 observers -- 16 from Senegal and the rest, representatives of international agencies, including donor organizations from Belgium, Canada, France and the United States. In the second conference, in Abidjan, there were 15 African participants from 8 countries (Cameroon, Central African Republic, The Gambia, Ghana, Ivory Coast, Mali, Senegal, and Togo), plus representatives of international agencies.

Out of the 7 research projects funded by SHDS, approximately 15 reports are known to have been published. Articles have appeared in international journals, including French and WHO publications. Results were also presented at the two applied research conferences and conference proceedings were published.

No report on lessons learned from the research and training activities was ever produced. A preliminary draft of a questionnaire to be circulated to AR course participants and facilitators was prepared as were guidelines for interviewers seeking to evaluate the training process. However, this activity did not progress beyond the planning stage.

6.4.2 Observations

The conference held in Dakar in 1984 was the first opportunity to synthesize the experience that had taken place during two years of intensive applied research training activities in the Francophone region. The conference was designed to bring together researchers, decision makers and donor agency representatives from each of the countries that had a research project funded or pending. The researchers discussed their research, either results, progress, or plans, depending on where they were in the process. It was exciting for participants; decision makers were made aware of the high quality of research potential in the region. Each of the country teams developed an 18 - 24 month plan of action for carrying out applied research in their respective countries. Donor agencies discussed the availability of resources and their criteria. Several contacts that were made in the conference resulted in subsequent support for researchers.

Although the publication of research results was a relatively low priority, certain of the participants did publish and make real contributions to knowledge. The customary goal of research is the adequate publication of the results in a format that permits ready retrieval by the scientific community. For many if not most investigators, publication eventually becomes a primary goal.

If USAID continues to support applied research in Africa, there will be a need for an organ of diffusion that does not now exist to publish original papers in the field of primary health care in Africa. In addition to publishing research articles, the journal could also print other news of the region concerning PHC activities.

With SHDS support the Regional Training Centre in Lome has been developed as a documentation center. It could serve as a center for publishing a Journal of African Primary Health Care. An editor could be added to the staff. The languages of publication could be both English and French, and eventually, possibly Portuguese.

6.4.3 Recommendations

(1) Regional health services research conferences should be held at least every two years bringing together decision makers, donors and representatives of research and training institutions, and researchers. These conferences should serve to increase the appreciation of the value and sophistication of research in the region and to stimulate funding for research activities.

(2) The dissemination of research results and lessons learned should be supported both as an encouragement to researchers and as a means of making research findings available for use by others.

(3) A journal for the African region should be developed, in conjunction with WHO/AFRO, that would provide a forum for the publication of research results and reports of other kinds of primary health care activities.

6.5 Subobjective 4: Network of Institutions

Subobjective 4: "To collaborate with WHO/AFRO in the development of a plan for a network of training institutions which will promote applied research."

6.5.1 Achievements

EOPS BB: "A program to support AR has been developed in the region in collaboration with WHO/AFRO."

Outputs:
- "one WHO/AFRO subregional center supported in the development of its AR program"
- "an inventory of AR activities and institutions with potential for AR"
- "a long term plan for AR activities in collaboration with WHO/AFRO"

The National Center for Research in Public Health (INRSP) was strengthened. Four Malians, including the Director General of INRSP, attended the regional TOT conference in Lome in 1983. The national applied research course held in Mali in 1984 had a number of participants from the INRSP and other workshops were organized at the Institute. SHDS made four technical assistance visits to INRSP during Phase 3. Technical assistance has continued, with support from IDRC, using a former SHDS consultant. Nine preliminary research proposals submitted to SHDS originated in the INRSP; several were funded by other donors.

SHDS planned to develop an inventory of donor resources in the African region that offer research grants, training, or other types of support for health services research. A letter requesting information was sent to more than 50 organizations in 1984; the response to this letter was poor. The information that was received, though limited, was disseminated at the 1984 Dakar conference and at SHDS funded AR courses held in 1985. The list has not been updated.

The anticipated SHDS output relating to the development of a long term plan for AR activities was dropped at the request of AID/REDSO in 1985.

6.5.2 Observations

The National Center for Research in Public Health (INRSP), established in 1981, is a division of the Ministry of Health but under the independent management of a Public Health Administrative Council, with membership from the ministries of Education, Agriculture, Planning, Labor, Finance, and Health. INRSP has 150 staff members, including 20 research investigators, of whom 3 are professors and 3 are chiefs of clinical units. The Institute has three rural research centers.

The decision of SHDS to select and support the INRSP in the development of its applied research program was made in accordance with a broader plan to support a number of such institutions in the region. It is clear that not enough time remained in the life of the SHDS project after the applied research course held in Bamako in 1984 to permit full development of the institutional capability. However, the followup support provided by IDRC is an important spin-off of SHDS.

6.5.3 Recommendations

(1) Since the SHDS Project ended before some of the activities supported at INRSP could be completed, the possibility of continued support should be explored. In addition, as INRSP has developed a capability in health services research, collaboration with the Institute in conjunction with research activities carried out under bilateral or regional AID funded projects should be promoted.

(2) The inventory of donor resources available to support applied research activities should be updated and maintained.

APPENDIX I: SCOPE OF WORK: SHDS EVALUATION

II. Terms of Reference

A. Approach to Work

The final evaluation of the Strengthening Health Delivery Systems Project will concentrate on the impact of the project on the twenty participating countries and its contribution to the actual strengthening of health care delivery systems. The team will evaluate project impact primarily at a national level (as opposed to regional training programs) as well as the effectiveness of project management by Boston University, WHO/AFRO and AID. The evaluation will be based on three major components: analysis of a project data base prepared by SHDS and REDSP/WCA; subsequent site visits to selected participating countries; and, a final report which assesses the extent to which project strategy, objectives, and composition of activities were appropriate and effective. To the extent possible when evaluating individual activities, the WHO evaluation format re inputs, outputs, progress measures, efficiency, efficacy and impact will be used.

B. Scope of Work

1. Analysis of Data Base

To develop sufficient background information for evaluation of project activities, the contractor is expected to review and assess a data base prepared by REDSO/WCA and SHDS. The data base will be presented to the contractor in the form of a number of reports which enumerate the achievements of the project for each objective and activity listed in 1983-85 implementation plan according stated inputs, outputs, verifiable indicators and status statement. At a minimum, the following .information will be provided for contractor review and assessment:

-- Project Paper (1976)

-- 1980-83 Workplan

-- 1983-85 Workplan and EOPS

-- Annual Reports, 1978-1985

-- Previous evaluation reports (1980, 1982, 1985)

-- Data base from SHDS MIS

-- EOPS verifiable indicators reports

-- RIG report, 1984

-- Report of internal evaluators

-- Course materials and curricula

-- Manuals, guides, and modules

-- Description of SHDS objectives

-- Report on background information compiled by Shepperd and Cohn

-- Other background material

2. Site Visits

The contractor will visit eight selected sites -- Cameroon, Congo, Nigeria, Niger, Sierra Leone, Senegal, Togo and Guinea -- to assess the impact of the project by interviewing appropriate individuals in the ministries of health responsible for the five training areas of the project: management, nursing, primary health care programs, disease surveillance and applied research; and by interviewing those individuals responsible for the various national level training programs and, where relevant, the regional training centers. To the extent possible, regional and national level courses being conducted during the time of the evaluation should be attended. Management questions will require visits to AID/Washington, Boston University, REDSO/WCA, SHDS/BU office in Abidjan and WHO/AFRO as well as to individual MOH representatives on the PRC and PCC. Countries with little or no participation in the project will be visited to determine reasons for lack of participation.

3. Evaluation

To evaluate project impact, at a minimum, the following aspects of each specific project objective and activity should be addressed:

Objective 1 (Improve Health Management and Planning:

1. Determine whether Objective 1 goals to improve health management training capacity and to aid ministries of health in policy development were achieved, whether the goals were appropriate and the degree to which they supported attainment of over-all project objectives.

2. Assess the effectiveness and appropriateness of strategies to reach Objective 1 goals.

3. Describe individual subobjective activities and assess degree to which they were appropriate and effective in implementing the Objective 1 strategies.

4. Assess the ability of network institutions to exchange effectively, inter alia, resources, common programs and teaching material.

5. Assess the effectiveness and impact of bringing primary health care concerns to the attention of national policy makers through inter-ministerial seminars.

6. Make specific recommendations regarding the need and appropriateness of future investment in Objective 1 areas.

Objective 2 (Increase Skills and Improve Utilization of Health Personnel:

1. Determine whether Objective 2 goal to strengthen national level training of trainers programs was achieved; if the capability to produce training materials at the Lome center was reached; whether the goal was appropriate and the degree to which it supported attainment of overall project objectives.

2. Determine whether Objective 2 goals to utilize the outreach potential of the CESSI Program to improve educational programs at Basic Schools of Nursing and to improve the CESSI Primary Health Care Curricula content were reached, whether the goals were appropriate and the degree to which they supported atainment of overall project objectives.

3. Determine whether Objective 2 goals to develop a Regional Continuing Education Program for WACN, to complete the curriculum development program for the CUC Post Basic Nursing Programs and to continue curriculum development for the Basic Nursing Programs at TNIMA and in Sierra Leone were reached; whether the goals were appropriate; and, the degree to which they supported overall project objectives.

4. Investigate the reasons for the curriculum revisions not being accepted at Yaounde CESSI.

5. Assess the effectiveness and appropriateness of the strategies to reach Objective 2 goals.

6. Describe individual subobjective activities and assess the degree to which they were appropriate and effective in the implementation of Objective 2 strategies.

7. Make specific recommendations regarding future investment in Objective 2 areas.

Objective 3 (Improve Regional and National HIS):

1. Determine whether Objective 3 goals to develop regional training capabilities in epidemiology and disease surveillance and to enhancwe the development of a national health information system capability have been reached, whether the goals were appropriate and the degree to which they supported attainment of overall project objectives.

2. Assess the effectiveness and appropriateness of the strategies to reach Objective 3 goals.

3. Describe individual subobjective activities and assess the degree to which they were appropriate and effective in the implementation of Objective 3 strategies.

4. Make specific recommendations regarding future investment in Objective 3 areas.

Objective 4 (Applied Research):

1. Determine whether Objective 4 goal to strengthen African capability to carry out applied research has been reached, whether the goal was appropriate and the degree to which it supported attainment of overall project objectives.

2. Assess the effectiveness and appropriateness of the strategies to reach Objective 4 goals.

3. Describe individual subobjective activities and assess the degree to which they were appropriate and effective in the implementation of Objective 4 strategies.

4. Make specific recommendations regarding future investment in Objective 4 areas.

Project Management and Policy Development:

1. Assess the effectiveness and appropriateness of the Boston University/SHDS organizational structure and personnel in providing the levels of services required and, in particular, the role of the Boston University on-campus office in support of project activities.

2. Assess the effectiveness of WHO/AFRO in undertaking project management responsibilities.

3. Assess the effectiveness of REDSO/WCA in undertaking project management responsibilities.

4. Assess the role of the PRC and PCC vis-a-vis project policy development and decision making as well as effectiveness in representing the interests of the participating countries and in recommending new project directions.

General:

1. Describe and assess the reasons for countries not participating or participating minimally in SHDS activities.

2. Assess the changes in curricula at all SHDS participating institutions attributed to SHDS project activities.

3. Assess the appropriateness of master's level training in the United States for SHDS participating institutions' faculty and impact of that training on institutional development.

4. Assess the quality and usefulness of pedagological material, modules and curricula developed under each objective of the project for PHC and Management Workshops.

APPENDIX II: LIST OF PERSONS CONSULTED, BY COUNTRY*
(INCOMPLETE)

*Participated in SHDS supported activity

CONGO

*Dr. Lielie BULA-BULA, Enseignant, Insitut des Sciences et Techniques Medicales, Kinshasa

*Dr. Kitsoro KINZOUNZA, Director, Ecole Nationale d'Administration et Magistrature (ENAM), Brazzaville

Dr. A. TOURE, WHO Representative

*M. Jean M'BIKINA, Directeur de la Maternite Blanche Gomez

*Mme. Hectorine KINIONGONO, Directrice Generale, Direction des Affaires Sociales, MOHSA

*M. Herv DIATA, Enseignant, INSSEJAG, Universite Marien Ngouabi

*Mme. Rose-Marie MAYETELA, ENAM, Universite Marien Ngouabi

*Dr. Hyacinthe DEFOUNDOUX, Chef, Dept. de Gestion, INSSEJAG, Universite Marien Ngouabi

*M. Jean-Paul BONCKONDAS, directeur General, Hpital General de Brazzaville

*Jean-Benoit MAKELE, Directeur d'Administration, Hpital General de BRAZZAVILLE

*Mme. Sybille MISSE, Nurse Educator, Project CNG/HMD/001

Mme. Philomene FOUTY-SOUNGOU, Monitrice Permanente, Institut National des Sciences de la Sant

*Dr. Alphonse GANDO, Directeur General de la Sant

*Dr. N'DELLE, Conseiller Sanitaire, MOHSA

Mr. Pierre Ernest ABANDZOUMA, Directeur de Cabinet, MOHSA

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APPENDIX III: NUMBERS OF SHDS PARTICIPANTS, BY COUNTRY

TABLE III.1

Participants from Twenty SHDS Countries
in SHDS Workshop Conferences
(1978-1986)

Nationality	Phase II (1978-82)	Phase III (1983-86)
Benin	55	9
Burkina Faso	46	72
Cameroon	173	28
C.A.R.	47	5
Chad	9	4
Congo	54	69
Equatorial Guinea	9	3
Gabon	59	55
Gambia	49	10
Ghana	49	15
Guinea	74	3
Ivory Coast	61	31
Liberia	96	15
Mali	68	25
Mauritania	17	
Niger	31	
Nigeria	145	143
Senegal	160	137
Sierra Leone	52	15
Togo	89	13
TOTAL	1343	652

* These figures were taken from the SHDS project information system. The evaluation team found that the numbers of participants were under-stated for several activities.

TABLE III.2

Participants from Non-SHDS Countries in SHDS Workshops/Conferences (1978-1986)

Nationality	Phase II (1978-82)	Phase III (1983-86)
Algeria		1
Angola	9	3
Botswana	9	3
Burundi	24	1
Comoros	12	
Ethiopia	27	1
Guinea Bissau	7	
Kenya	37	2
Lesotho	29	
Madagascar	12	
Malawi	16	
Mozambique	14	2
Namibia	19	
Rwanda	29	
Sao Tome	11	
Seychelles	1	
Swaziland	8	
Somalia		1
Tanzania	44	3
Uganda	17	
Zambia	13	1
Zaire	20	12
Zimbabwe	3	1
TOTAL	361	31

TABLE III.3

Participants from SHDS Countries in Objective I Activities (1978-1986)

Nationality	Phase II	Phase III
Benin	16	5
Burkina Faso	7	29
Cameroon	29	6
C.A.R.	9	--
Chad	3	--
Congo	7	45
Equatorial Guinea	4	--
Gabon	7	29
Gambia	2	1
Ghana	12	2
Guinea	11	1
Ivory Coast	1	--
Liberia	36	3
Mali	15	1
Mauritania	6	--
Niger	7	--
Nigeria	13	128
Senegal	36	121
Sierra Leone	6	1
Togo	12	2
TOTAL	239	374

TABLE III.4

Participants from SHDS Countries in Objective II Activities (1978-1986)

	Phase II	Phase III
Benin	23	--
Burkina Faso	26	1
Cameroon	86	5
C.A.R.	25	--
Chad	5	--
Congo	34	16
Equatorial Guinea	3	--
Gabon	46	23
Gambia	23	6
Ghana	29	10
Guinea	55	--
Ivory Coast	13	1
Liberia	50	7
Mali	37	1
Mauritania	9	--
Niger	18	--
Nigeria	97	7
Senegal	69	3
Sierra Leone	43	5
Togo	38	--
TOTAL	729	85

TABLE III.5

Participants from SHDS Countries in Objective III Activities (1978-1986)

	Phase II	Phase III
Benin	10	--
Burkina Faso	12	--
Cameroon	46	10
C.A.R.	--	5
Chad	--	4
Congo	--	7
Equatorial Guinea	2	--
Gabon	10	3
Gambia	5	2
Ghana	19	2
Guinea	5	--
Ivory Coast	43	--
Liberia	1	3
Mali	9	1
Mauritania	1	--
Niger	4	--
Nigeria	18	6
Senegal	34	1
Sierra Leone	1	8
Togo	27	1
TOTAL	247	53

TABLE III.6

Participants from SHDS Countries in Objective IV Activities (1978-1986)

	Phase II	Phase III
Benin	6	4
Burkina Faso	1	21
Cameroon	12	3
C.A.R.	11	--
Congo	3	1
Gabon	1	--
Gambia	5	1
Ghana	6	--
Guinea	3	2
Ivory Coast	4	30
Liberia	9	2
Mali	7	32
Mauritania	1	--
Niger	2	--
Nigeria	17	2
Senegal	21	12
Sierra Leone	2	1
Togo	12	10
TOTAL	123	121

TABLE III.7

Participants from Non-SHDS Countries in Objectives I and II Activities (1978-1986)

	Objective I		Objective II	
	Phase II	Phase III	Phase II	Phase III
Angola	5	3	4	
Botswana		3		8
Burundi	2	1	20	1
Comores			9	
Ethiopia	6	1	20	
France		1		
Guinea Bissau	4		3	
Haiti			1	
Kenya	12		21	
Lesotho	3		25	1
Madagascar	3		8	
Malawi	5		11	
Mauritius	2		4	
Mozambique	4	2	9	
Namibia	2		17	
Rwanda	6		22	1
Sao Tome	4		6	
Swaziland			7	
Uganda	6		10	1
Zaire	10	9	15	
Zambia	7	1	6	
Zimbabwe	3	1		
TOTALS	84	22	226	4

TABLE III.8

Participants from Non-SHDS Countries in Objectives III and IV (1978-1986)

	Objective III		Objective IV	
	Phase III	Phase II	Phase II	Phase III
Algeria				1
Belgium				1
Botswana	1			
Burundi	2			
Canada				1
Comores	1			
Ethiopia				
France	5			1
Kenya	2	2		
Lesotho	1			
Madagascar	1			
Mozambique	1			
Rwanda	1			
Sao Tome	1			
Somalia		1		
Swaziland	1			
Tanzania	1		2	
Uganda	1			
U.S.A.	10	5	5	
Vietnam	1			
Zaire	1			3
Total	8	32	2	12

APPENDIX IV: NUMBERS OF SHDS CONSULTANTS, BY COUNTRY

TABLE IV.1.

Consultants Used Under SHDS Project by Country
(1979-1986)

Nationality	No.
Angola	1
Belgium	2
Benin	12
Burundi	2
Cameroun	35
Canada	4
Central African Republic	1
Congo	6
France	5
Gabon	9
Gambia	10
Germany	1
Ghana	9
Great Britain	1
Guinea	2
India	1
Ivory Coast	12
Kenya	4
Lesotho	1
Liberia	9
Mali	10
Mauritania	3
Niger	1
Nigeria	19
Rwanda	1
Senegal	39
Sierra Leone	3
Somalia	1
Sudan	1
Sweden	2
Switzerland	3
Tanzania	2
Togo	10
Turkey	1
Uganda	1
Upper Volta	6
USA	77
USSR	1
Zaire	5
Unidentified Country	1
Total	314

TABLE IV.2.

Percent of SHDS Consultants Used by Region

		%	Number
From SHDS Countries	=	62%	(196)
From other African Countries	=	6%	(19)
From USA	=	25%	(77)
From Europe, India, USSR, Turkey, Canada, U.K.	=	7%	(22)
Total		100%	(314)