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EVALUATION REPORT

STRENGTHENING HEALTH DELIVERY SYSTEMS

(698-0398)

AGENCY FOR INTERNATIONAL DEVELOPMENT

WASHINGTON, D. C. 20053

APRIL 1982

INTRODUCTION

The final evaluation of Phase II of the SHDS Project has been jointly sponsored by USAID and WHO/AFRO.

Both organizations have been supportive of the evaluation process for which each contributed the full time participation of a health staff professional to be members of the Evaluation Team.

The Team is warmly thankful to Ministries of Health, WHO, AID and other officials who helped make our short visits in their countries productive and gave us their thoughtful comments on the SHDS Project. We are especially grateful to the many health professionals, trainers, village health workers and village health committees who shared their experiences, successes and problems in strengthening health services for their populations.

This report would not have been possible without the efforts made by the SHDS Project staff to cooperate with the evaluation team. The SHDS/ Abidjan professionals and office personnel responded to enumerable requests for program data and generously shared their insights and implementation experiences with the team. Special appreciation goes to Saul Helfenbein, Assistant Director, who collaborated closely with the team, clarified for us complex situations and helped insure historical and informational accuracy.

This evaluation has been effected through the Regional Economic Development Services Officer for West and Central Africa (REDSO/WA) of USAID, directed by Gordon W. Evans. The report has been prepared within the office led by Hadley E. Smith, with George Jones, the SHDS project manager. The Team is grateful to the REDSO/WA staff for their continuous support and for their foresight in making the assistant project manager, Susan Lloyd available to assist the team. We are deeply grateful to

Ms. Lloyd who worked for many months assembling project reports, organizing data, preparing tables for the evaluation report and ably assisting the team with their analysis.

Special thanks go to the many secretaries and translators who contributed to the preparation of this report. We are especially appreciative of the talents of Marilyn Erickson who typed expeditiously the bulk of the English version all the while caring for her infant, and Jocelaine Wong who generously gave many extra hours of secretarial support.

Finally, this report has benefited from the careful review by colleagues attending the Evaluation Review Committee meeting in March 1982. Members of the Project Coordination Committee, including representatives of Congo and Liberia, BU, CDC, WHO/AFRO and AID, and SHDS staff, read and discussed the report in a collegial and constructive manner. The Team, however, takes full responsibility for its opinions and for any errors in fact which may have escaped the scrutiny of the review committee or the editing process.

PROJECT DATA SHEET

Countries: SHDS Region states Benin, Cameroon, Central African Republic, Chad, Congo, Equatorial Guinea, Gabon, Gambia, Ghana, Guinea, Ivory Coast, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, Togo, Upper Volta.

Project Title: Strengthening Health Delivery Systems (SHDS) in Central and West Africa, Phase II

Life of Project: Five years, 1978-1982

Project Implementation:

1. Phase I : Planning, 1976-1978
2. Phase II: Implementation, 1978-1982
3. Obligation: \$17,043,000.

Project Completion--Final Disbursement: December 31, 1982

Project Funding (actual expenditures as of 12/31/81):

Total AID	\$12.8
WHO/AFRO	2.5
Boston University	5.6
CDC	3.4
Measles Vaccine purchase	1.3

Implementation:

1. Grant Agreement with WHO/AFRO (No. 698-0398).
2. Contract (AID/afr-C-1414) for Project implementation with Boston University.
3. PASA (H2/AR-0398-6-78) for Project technical support with CDC.

Evaluations:

1. Mid-term evaluation of Project by Dimpex 1980.
2. Final joint (USAID and WHO/AFRO) evaluation of Project 1982.

Responsible AID officials during Life of Project:

1. AFR/RA Director: Donald F. Miller
2. REDSO/WA Director: Gordon W. Evans

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EVALUATION REPORT

ON

THE STRENGTHENING OF HEALTH DELIVERY SYSTEMS (SHDS)

IN CENTRAL AND WEST AFRICA

March 22, 1982

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A. EXECUTIVE SUMMARY

This Evaluation pertains to the first four years (1978-81) of the five-year Phase II of the SHDS Project. Under the joint sponsorship of USAID and WHO/AFRO, the three-person team reviewed documents, interviewed persons and visited 11 of the 20 countries in the Project Region during the period September 1981 to March 1982.

The Project is funded under a Grant Agreement between WHO/AFRO and USAID/Africa Bureau and implemented through an AID contract with Boston University (BU) and a Participating Agency Service Agreement (PASA) with the United States Center for Disease Control (CDC). Boston University set up a resident professional unit of three in Abidjan and backstopped it from Boston University with a permanent staff and with short-term consultants. CDC placed six professionals in the field who were backstopped with a permanent staff from CDC headquarters in Atlanta, Georgia.

Encompassing all four Project objectives, SHDS did a great deal of work of high quality and produced much of value that will have residual utility for some time to come, all with a relatively small core of professional staff residing in Abidjan. The cost was high and there seems to have been opportunities to pare. On the whole, the inter-agency structure that was established worked quite well and SHDS' relationships with governments are good. Transferring some AID responsibilities from Washington to the AID (REDSO) office in Abidjan was a facilitating move. Contacts with AID Missions have been appropriately frequent, with AID Missions usually providing support in connection with SHDS-sponsored workshops occurring in the respective countries. However, general communication with AID Missions was not of the best, a reflection of the regional level of SHDS

work. It was appropriate in Phase II to favor regional rather than country level focus, but not to the extent that was mandated by AID. The restriction kept SHDS from capitalizing on country interest and responding to requests for follow-up contact.

The SHDS Project evolved from the AID-supported WHO smallpox eradication and measles control program (1966-72) in 20 West and Central African nations. The American Public Health Association (APHA), contracted by AID to evaluate this project, emphasized that further international development assistance in health should be focused toward improving the actual health delivery systems in the 20 country region through a regional health project supporting regional health organizations and institutions. In 1973, AID and WHO sponsored meetings for representatives of the 20 national governments, sub-regional organizations and bilateral and multilateral assistance agencies; a large multi-donor regional health project was planned to tackle health systems weaknesses and a coordinating mechanism for such a project was agreed upon in the form of two committees. In 1975 the APHA signed a contract with AID to implement a Phase I of the SHDS Project which would be primarily concerned with planning a five-year Phase II. The APHA sub-contracted the technical implementation of Phase I to Boston University. In 1978, AID awarded Boston University the contract for Phase II through a non-competitive bidding process, since AID/Washington judged that Boston University had "predominate capability" to implement a Phase II.

Expenditures for the first four years (1978-81) of Phase II were \$12.8 million, and \$4 million has been obligated by AID for the fifth and final year of Phase II. The major functions of, and the proportion of costs allocated to, the organizations and institutions involved in the SHDS Project are as follows:

		TOTAL*	\$12,779,309	100%
AID	initiated funded and monitored the Project			
			Donor Agency	
WHO/AFRO	served as the Project secretariat with responsibility for overall coordination and organization		\$ 2,448,546	19.2%
Boston University	implemented the overall Project, providing professional and technical expertise in the Project's daily administration.		\$ 5,643,706	44.2%
Center for Disease Control (CDC)	provided epidemiological and other technical expertise to accomplish major elements of one of the Project's four objectives (Objective III).		\$ 3,351,825	26.2%
*	Add in purchase price of measles vaccine and Ped-o-jets provided through the SHDS Project to 18 of the 20 countries for a		\$ 1,335,250	10.4%
		GRAND TOTAL	\$12,779,309	

Four major objectives of the SHDS Project, Phase II are:

- I. Strengthening regional and national capacities for public health planning and management.
- II. Strengthening regional and national capacities for training and development of health workers.
- III. Strengthening communicable disease control, including Expanded Programs of Immunization (EPI) and integration with related health activities.
- IV. Strengthening applied research on primary health care (PHC) services.

OBJECTIVE I -- Strengthening regional and national capacities for public health planning and management

Twenty-one workshops or short-term courses were held* during 1978-81 concerned with health planning and management for top and mid-level officials

* at Dakar WHO Centre Program and PTC Lagos and Lome, and non-institutionally affiliated

and supervisors. Of the 21, six were workshops/courses which SHDS helped to actually initiate as well as providing inputs in the areas of curriculum development, provision of facilitators and/or financing (including fellowships). Fifteen workshops/courses were not initiated by, but nevertheless received direct benefit from, SHDS in curriculum development, provision of facilitators, and/or financing (including fellowships).

All total, 287 participants from the SHDS Region attended the 21 workshops or short-term courses, 78 to the six workshops/courses SHDS initiated and 209 to the fifteen workshops/courses receiving other SHDS Project inputs.

Participants rated the quality and utility of the workshops/courses as very high. Some changes in country health planning, administrative structure and management methods have been noted subsequent to the workshops/courses.

WHO/AFRO began developing a plan in 1979 for a regional network of eleven African national institutions that teach management, to strengthen their attention given to the theme of health service and program management. The secretariat of this group will need much support in serving the participating centers and in making the activity a true network with cooperative planning and interchange of information and resources among centers and planning units of ministries of health.

In the immediate years ahead, it is logical to capitalize upon the rich activity in regional management workshops and give more attention to technical assistance to governments in implementation of the concepts acquired.

OBJECTIVE II -- Strengthening regional and national capacities for training and development of health workers.

Strengthening training capacity was approached in three ways:

1. SHDS financed two years of graduate studies for nine nurses at Boston University and the University of Montreal. Upon their return, these nurses are to teach at a CESSI or at Cuttington College.
2. SHDS supported three non-institutionally affiliated Anglophone nursing workshops (total number of participants 42) which focused on integrating primary health care concepts into basic and continuing education for nurses.
3. SHDS supported long and short term (less than six months) training courses (including some fellowships) at five Regional training centers: CESSIs at Dakar and Yaounde; Cuttington College in Liberia; and the RTCs at Lagos and Lome.
 - A. Centre d'Enseignement de Soins Supérieur des Infirmières (CESSI) at Dakar and Yaounde:

Four classes (class size range: 17-26) matriculated at each CESSI during the 1978-81 period under Evaluation. The enrollees numbered 176 from the SHDS Region in the CESSI two-year Francophone post-basic nursing programs. SHDS did not provide fellowships, but contributed consultants, equipment and funds for student field practice.
 - B. Cuttington College Post-Basic Nursing Program, Liberia:

This post-basic nursing program was organized for Anglophone nurses from Liberia, Sierra Leone and The Gambia. Ten students (six on SHDS fellowships) began the two-year program in 1980 and eight students (four on SHDS fellowships) began the following

year. SHDS provided consultants and equipment to
Cuttington College.

The two CESSIs predated the SHDS Project; Cuttington College began post-basic nursing training in 1976. Although these schools have improved considerably through the SHDS contribution, they have not yet reached desirable levels.

In the world effort to strengthen and expand PHC services, the nursing profession, through its several levels, commands a crucial role. Nurses constitute the supervisory echelon and often are the trainers of the Village Health Worker. The present general weakness of PHC efforts may be due more to the paucity of quality supervision than any other single factor.

C. WHO Regional Training Centers (RTC) at Lome and Lagos:

Nineteen workshops or short-term courses aimed at strengthening capacities for training and development of health workers (under Objective II) received SHDS support between 1978-81*.

Of these, nine were workshops/courses which SHDS helped to initiate (167 participants from the SHDS Region) and which received other

* In addition to these 19 workshops/courses listed under Obj II aim of training
add in 11 workshops/courses listed under Obj I aim of planning/management
add in 3 workshops/courses listed under Obj III aim of communicable disease control

TOTAL = 33 workshops/courses receiving SHDS support 1978-81
held at the two RTCs.

SHDS inputs in the form of curriculum development, provision of facilitators and/or financing (including fellowships).

Ten were workshops or short-term courses (141 participants from the SHDS Region) which were not initiated by SHDS but which did gain from the SHDS Project in the way of curriculum development, facilitators, and/or financing (including fellowships).

In terms of the Objective II aim of training health trainers, the two RTCs workshops and short-term courses touched far more individual health workers than did the other institutions involved with the SHDS Project, albeit for shorter periods of time. The participants commended the quality of the workshops/courses hosted by the RTCs. The RTCs' heavy seeding of the Region with individuals interested in and knowledgeable about training methods that emphasized PHC has led to government requests for follow-up in-country adaptation of the courses so that national training systems could be developed. Some countries have moved into creation and operation of such systems. Details on this are given in the body of this report.

The readiness for national-level follow-up should be capitalized upon by continued support of this training objective. Emphasis in the future can move from primarily regional level training to in-country technical assistance. The staffs of the Regional Training Centers are better able than before to carry this function and have an appreciable number of African workshop graduates to act as workshop facilitators in their own countries. For two or three years, continued external assistance, such as given by SHDS would be needed, chiefly working in countries alongside the Training Center consultants in assisting the governments to strengthen national training systems. The demands of regional work by the external consultants

would be lessened considerably with respect to past regional requirements, but would be replaced by the volume of activity in the different countries. In-country work would serve as a practical and effective way of contributing to upgrading of junior staff members of the center.

For both PHC and EPI, the national training systems have to be decentralized so as to achieve geometric rate of increase in numbers of trained peripheral health workers and trained supervisors. Sophisticated planning and organization of the training systems will be required to avoid years of delay before these services can approach national coverage on the road to the year 2000. Talent is less the crying need than funds. Donor agencies are reluctant to support in-country personnel training expenses because that should be a regular on-going activity in all services. In the present instance, helping a national training system to be established and to start functioning would be a catalyzing and not a long term function.

OBJECTIVE III -- Strengthening communicable disease control, including Expanded Programs of Immunization (EPI) and related health activities

By arrangement with CDC, the SHDS Project helped set up Demonstration and Training Areas (DTAs) in three countries -- Cameroon, Ivory Coast and The Gambia, with a full-time Operations Officer from CDC in each of those countries. In addition, three full-time Epidemiologists were stationed in l'Organisation de Coordination pour la lutte contre les Endemies en Afrique Centrale (OCEAC), l'Organisation de Coordination et de Cooperation pour la lutte contre les Grandes Endemies en Afrique de l'ouest (OCCGE), and The Gambia, respectively with additional responsibilities in adjacent countries in the SHDS Region.

Under direct supervision from CDC in Atlanta, the sub-objectives of Objective III were quite well met. Geographic coverage in the DTAs was

achieved by means of intensive effort. Within the covered areas completed series of immunization against measles, diphtheria, tetanus, pertussis, tuberculosis and polio for target-age children were achieved to the levels given below. (See also Table 16)

The Gambia (for the entire country--approximately 600,000 population)

Measles	70%
DPT (diphtheria-pertussis-tetanus)	76%
BCG (tuberculosis)	95%
Polio	66%

Ivory Coast (within three defined zones--approximately 3,000,000 population)
lowest to highest among the three zones

Measles	37 - 73%
DPT	28 - 80%
BCG	49 - 87%
Polio	28 - 80%

Cameroon (within three defined zones--approximately 1,000,000 population)
lowest to highest among the three zones

Measles	30 - 56%
DPT	27 - 58%
BCG	60 - 83%
Polio	27 - 56%

Immunization of pregnant women against tetanus was far less complete and not as carefully documented. Problems and constraints were identified and analyzed. Some solutions were tested and instituted or planned.

All three countries initiated steps beyond the DTAs towards national EPI coverage. Measles vaccine was furnished to 18 countries. General interest in EPI in the Region was greatly stimulated by SHDS activities. As part of WHO's general policy and plans, EPIs have been started in 14 of the 20 countries of the SHDS Region.

The aim to train counterparts to the six CDC advisors was only partially achieved. Counterpart assignments to the three Operations Officers were made and were well utilized. The Operations Officers worked assiduously with their respective counterparts. In fact, the CDC Operations Officer in the Ivory

Coast was transferred and the national counterpart is now working independently.

~~Counterpart placement with the Epidemiologists, however, was far from complete~~

~~or continuous. This was due in part to difficulty in solving regional and~~

country roles and relationships. There is in the Region considerable difference of opinion about the best pathway to achieving epidemiologic self-sufficiency. Proponents exist for aiming first for: subregional epidemiologists each serving several countries; national epidemiologists; strengthening epidemiologic knowledge of all new physicians. Such issues undoubtedly will receive special attention in the forthcoming CDC program for the Combatting Childhood Communicable Diseases (CCCD) in Africa and the three recently established epidemiology positions and the zonal plans of WHO/AFRO.

Nine workshops were held on different aspects of EPI management. Six workshops SHDS helped to initiate (165 participants from the SHDS Region) and which received other SHDS inputs in the form of curriculum development, provision of facilitators and/or financing (including fellowships). Three workshops on EPI (87 participants from the SHDS Region), although not initiated by SHDS, did gain from the Project in curriculum development, provision of facilitators, and/or financing (including fellowships).

Additionally, five workshops or short-term courses (42 participants from the SHDS Region) were held on other aspects of communicable disease control; although none of the five were initiated by SHDS, each gained in curriculum development, provision of facilitators and/or financing (including fellowships) from the Project.

Participants generally commended the quality of the workshops and short-term courses.

With respect to development of disease surveillance and collection of demographic information, the fact that only moderate success was achieved can be attributed to the underlying constraints that prevail in the Region.

Extensive reliance on routine disease reporting was replaced by a shift toward a system of collecting data from selected sentinel sources such as referral hospitals. Little progress was made in development of national information systems for health planning.

Future AID support of communicable disease control activities in Africa will occur within the new Combatting Childhood Communicable Diseases (CCCD) Project. It is logical that in the selection of first countries for CCCD Project development, consideration would be given to countries' present status achieved with past supports. With respect to the three SHDS DTA countries, EPI has reached national geographic coverage in The Gambia and has respectable immunization rates in Ivory Coast and Cameroon.

In Cameroon, at least, removal of the intimate full time professional collaboration that CDC/SHDS has been giving, before the MOH gives adequate support and resolves major problems, would seriously threaten the stability of the on-going DTA services and the likelihood of successful expansion of EPI into other parts of the country.

OBJECTIVE IV -- Strengthening applied research on Primary Health Care (PHC) services

SHDS helped initiate, design, conduct and finance two workshops on the practical organization of PHC and three workshops on research. Fifty-five persons from the SHDS Region attended these five workshops; general reaction was favorable.

The research design workshops have engendered interest, but would not be expected to have conferred technical competence in one short exposure. Participants wanted more training that would use their respective service settings as case material. Several countries asked for in-country training seminars. SHDS also helped to introduce some research content

into the training at the PTCs.

In-country follow-up is now timely. Investigators need to be helped to select simple but pressing questions for practical types of investigation of short duration, preferably under six months. Funds might be earmarked for just one small study in each participating country and the investigators later brought together at a workshop for intensive exchange of experiences. These supports for applied research would be a first phase, with subsequent patterns of support determined by development.

Under Objective IV, one research project was given consultation assistance and funded: "A Cost-Effectiveness Study of the Expanded Program of Immunization in Ivory Coast". The issue is important; the principal investigator thoughtful, dedicated and experienced in research; and the study design adequate. However, the Evaluation Team considers that the problem is too multi-faceted, the required research methods too complex, and the question too difficult to answer for a first study under SHDS Objective IV. Yet funding and consultation should be continued to carry the study to planned conclusion or a reasonable end-point.

Regional Capability and Prospects

The Region does not yet have adequate funds or other resources for self-sufficiency in manpower development for public health programming, but it has achieved considerable progress in that direction. Existing resources include a number of regional centers, national centers in the larger countries that can also serve their neighbors, plans for a network of centers and other exchanges between them, outstanding leaders in many countries and an appreciable cadre of persons in different related disciplines qualified to give consultation outside their own countries. Phase II of

~~SHDS contributed to that encouraging situation. Future support should shift major emphasis to in-country assistance. The strength of health services~~
in the Region ultimately depends on strengths within the individual countries.

The world health drive is for Primary Health Care (PHC) with the Expanded Programs of Immunization (EPI) as an intermediate step. There are many uncertainties about ways to achieve effectiveness in both these efforts. EPI compromises among relative dependencies on fixed health facilities, mobility and community health workers. Optimum immunization technology has yet to be achieved.

PHC has even more profound unknowns and inadequately tested concepts, such as considerations as to the scope of duties that can reasonably be carried by a village health worker, how to remunerate them, how to give them clinical supervision and how to maintain a backup referral service and supply system. These issues must be faced in the immediate years ahead to minimize wasteful detours. International donors must invest heavily in the training, support and consultation elements needed under the drive of the member countries of WHO. It is essential furthermore that EPI be integrated with PHC if either or both are to capitalize to the maximum on intervention efforts.

Africa is a great river of humankind that has a long hard path to cut before reaching the sea of health care for all. Everything possible and reasonable must be done to help find the shortest, most direct course so that not as many mothers and children and their families have to wait for the turn of the century before standing at the shore.

B. THE EVALUATION

1. Introduction:

Evaluation looks at the past, the present and the future. This evaluation of the SHDS Project examines past SHDS activities, structure, relationships and costs; and attempts, in the context of the West and Central African Region, to identify impact on current public health services and on certain target diseases. Understanding of the present helps in choosing among possible approaches and public health methods in future international and country efforts. Looking back at the experience may help donor and health policy agencies decide on future plans.

The Evaluation is a joint endeavor by USAID and WHO/AFRO. The Evaluation Team consists of three public health professionals: a nutritionist (AID/REDSO), a nurse (WHO/AFRO) and a physician (team leader and consultant). The period examined is the first four years (1978-81) of the five-year Project.

2. Information Collection:

The Evaluation work took place during the period September 1981 through March 1982. Documents and data were collected from, and interviews held with, officers of the collaborating donor, contracting and executing agencies and units:

USAID - Washington and Abidjan (REDSO)

WHO/AFRO - Brazzaville

Boston University - Boston and Abidjan

Centers for Disease Control (CDC) - Atlanta

Eleven of the 20 countries (Appendices 1 and 2) in the geographic scope of the Project were visited by the team: Cameroon, The Gambia, Ivory Coast, Liberia,

~~Mauritania, Niger, Nigeria, Senegal, Sierra Leone, Togo and Upper Volta. In each of these countries, field visits were made to health care facilities and observations made at community health activities and attempt was made to talk with:~~

USAID Mission health officers and U.S. Embassy representatives

WHO Country Coordinators (WPC/NWC)

Relevant government officials and personnel

Persons in related international agencies, e.g., CARE, UNICEF

Faculties in teaching centers and institutions

Individuals who participated in SHDS activities

Health service personnel

Village Health Committees

Appendix 3 gives a detailed listing of persons seen, places visited and dates.

The Evaluation plan (Appendix 4) was discussed with the Program Coordinating Committee of the Project (November 1981) and the penultimate draft of the Evaluation Report was reviewed with a Special Evaluation Committee representing the participating agencies and governments (March 1982).

3. The Evaluation Concept:

The Project aim of Strengthening Health Delivery Systems (SHDS) is defined primarily as working to increase indigenous capacity in The Region rather than merely furnishing external resources. At first, The Project would put most emphasis on supporting training activities at the Regional level, such as in a number of manpower training centers. The purpose of regional emphasis was to have widest impact on intra-country capacity at national level and from there

reach out to lower political jurisdictions and finally to the local communities.

This Evaluation examines Project activities at Regional level, assesses such work directly as to amount, relevance, quality and effectiveness, and also searches for evidence of secondary country developments. It is not implied, however, that identified country changes necessarily result from SHDS work. To use a metaphor, if one were to stand by a hillside stream, you could be quite certain that some of the water will find its way to the river below. And that can be confirmed by following the stream until it joins the river. Seldom in public service, however, can such continuous tracking be done. Relationship between regional activity and country changes must be sought through several types of association -- association in kind, in place, in persons, in timing and in magnitude. This report attempts to furnish data on Project inputs and information on relevant concurrent or sequential country uptake in reasonably full detail so as to highlight logical associations. At the river bank, you do not know which part of the water came from the particular hillside stream. But at times near the point of juncture, there may be apparent widening or speeding of the current or possibly change in direction of the channel.

The SHDS Project is not exclusively Regional in approach. Three of the four major objectives have smaller country level elements, and the other objective on Disease Surveillance, Expanded Programs of Immunization (EPI) and related considerations, works in the larger part directly in countries. In such instances, direct relationships are somewhat easier to demonstrate and are identified in this Evaluation.

C. AIDS ACTIVITIES

I. Contractual Obligations:

The Project is funded under a Project Agreement between WHO/AFRO and USAID/Africa Bureau and implemented through an AID contract with Boston University and a Participating Agency Service Agreement (PASA) with the Centers for Disease Control (CDC) (Appendices 5-7)

The major functions of the organizations and institutions involved in the AIDS Project are as follows:

- | | |
|----------|--|
| AID | initiated, funded and monitored the Project |
| WHO/AFRO | served as the Project secretariat with responsibility for overall coordination and organization. |
| BU | implemented the overall Project, providing professional and technical expertise in the Project's daily administration. |
| CDC | provided epidemiological and other technical expertise to accomplish major elements of Objective III. |

From the outset and continuously thereafter, discussions among parties and with coordinating committees led to the establishment and modification of major Project objectives and sub-objectives. Project design and planning throughout Phase II have involved the four organizations and institutions and representatives of the 20 countries. In essence, the thrust of the endeavor has been along four lines, stated here simplistically, as:

- I. Strengthening regional and national capacities for public health planning and management;
- II. Strengthening regional and national capacities for training and development of health workers;

III Strengthening communicable disease control and integration with related health activities;

IV. Strengthening applied research on primary health care.

The Evaluation Team strongly endorses the concentration on these four objectives for a number of reasons.

Objective I. In addition to the obvious desirability of good management, it is especially critical if maximum effectiveness is to be obtained from the limited funds that are available for health services in the Region. Also, since the picture in the years ahead should be one of expansion and intensification of population and geographic coverage, systematic planning and administration will be particularly called for. As health services grow, success at all levels, and especially in the decentralization that will become necessary, will depend on good management.

Objective II. Capacity to meet the personnel requirements of expanding public health services calls for Regional training centers and institutions of higher learning; national training centers and decentralized systems; organized job orientation practices, consistent schedule of formal in-service refresher seminars and effective on-the-job supervision. The SHDS Project aims to advance the self-sufficiency of the Region in such capacities. The current drive by WHO to bring Primary Health Care (PHC) to local communities, especially in rural areas, makes the health manpower deficiencies more evident and the need for correction more urgent.

Objective III. It is generally accepted that the most likely avenue to quick reduction in prevalent rates of morbidity and mortality in rapidly developing countries is through control of communicable disease, especially among young children and pregnant women. An important part of communicable

disease control, as currently emphasized in different parts of the world, is that of Expanded Programs of Immunization (EPI). ~~Although there is a long history of national and international control programs, it is still not certain what are the methods of organization best suited to different situations of population dispersal, communication, travel and economic level. Appropriately, the SHDS Project approached Objective III through the "demonstration area" method. This also gave opportunity for training and research. An important sub-objective and the original focus of Objective III was the development of regional and national disease surveillance and health data collection systems.~~

Objective IV. Late in the Phase II period, decision was made to redefine the approach to this objective to support applied research on primary health care services. This was a desirable step, as there remain many unanswered questions on delivery of health services, especially in relation to PHC and EPI. Selective studies could help to make the confluence of traditional and modern health beliefs and practices a more harmonious than an antithetical experience.

2. SHDS Structure and Relationships; Staff:

The SHDS/Abidjan unit has relationships with many types of agencies in different directions -- organizationally with WHO/AFRO, AID, Boston University; collegially with CDC and Regional Centers; and cooperatively with governments and nationals. The interplay of bureaucracies, though necessary and usually constructive, at times made for difficulties, contradictions, communications gaps, and delays. Sitting in the middle, the SHDS group have done surprisingly well.

~~An intimate and collegial relationship has existed with AERO and the~~
~~country representatives of WHO have as a rule been helpful.~~ The Africa Bureau of AID kept a sustained interest in and gave support to the Project throughout Phases I and II (see Appendix 8 for SHDS Project Background). Some differences in specifics of Project Implementation have arisen over the years. Sometimes, the Abidjan group has been overridden by the higher authority, especially with respect to budget approval. The recent (October 1981) transfer of most of the direct monitoring and administrative responsibilities to the AID office in Abidjan -- Regional Economic Development Services Office for West Africa (REDSO/WA) -- expedited matters considerably and permitted better communication and constructive exchange. Among other issues with AID/Washington, the long-standing one about emphasizing interventions at the Regional level, in contradistinction from intra-country work, loomed large and will be discussed later in this Report. The same limitation undoubtedly lessened SHDS' visibility in countries as well as government responses to offered fellowships and other benefits.

Relationships with CDC have been variable, sometimes difficult, but understandably so. Although CDC gives technical direction for the EPI part of Objective III, that activity is an integral part of the SHDS Project. Supervision from Atlanta of epidemiologists and operations officers stationed in four different countries gave those persons multiple sets of "bosses" and introduced some remoteness in decision-making. Nevertheless, working relations between field personnel and SHDS/Abidjan were good on the whole, varying somewhat with personalities. Similarly, the tightness of control over CDC field personnel from CDC/Atlanta differed with the individuals.

Generally cordial relationships and mutual respect exist between SHDS and training centers, as between SHDS and government officials. The SHDS/Abidjan

group are on a personal basis relationship with an amazing number of individuals in the 20 countries. Free use of the telephone and, when necessary, of the telex have helped, in the light of the serious communication problems in the Region.

With the aim of promoting coordination among the agencies and countries, two committees were set up. The Project Review Committee (PRC), which meets biennially (1978-81, 1 time; 2nd scheduled for 1982), has a representative from each of the 20 countries in addition to agency members. The Project Coordination Committee (PCC) which meets every year (1978-81, 4 times), has only four country members who rotate from the larger group, two each for English and French-speaking countries.

The committees reviewed implementation plans and budgets and received progress reports. Consensus decisions made at the meetings were distributed to all parties and were considered authoritative guidelines within contractual, budgetary, and agency policy limits. It is difficult to judge the utility and value of this committee mechanism. Among the advantages was that, certainly, personal familiarity was increased, communication improved and fuller cooperation engendered. SHDS/Abidjan staff believe the committee mechanism to be one of the most important devices for making the Project a creation of the Region rather than an external superimposition. Country participants speak favorably of it. Occasionally, weaknesses are mentioned, such as the infrequency of meetings. Perusal of documents suggests that implementation plan changes recommended at the Committee meetings have not been radical or numerous. Undoubtedly, in the dynamic activity of the Project, some important decisions must have to be made between meetings. Observation at several meetings gives an impression of crowded agendas, insufficient time for discussion in depth, and over-formal conduct produced

~~by the bilingual translation system. Transmission of meeting information beyond those who attended varies with the individual. Several copies of meeting reports should be furnished to each country so that a wider circulation would be possible. Efforts should be made by WHO/AFRO to ensure they are disseminated to the appropriate persons. The cost of holding the meetings is another consideration to be discussed later in the Report.~~

One wonders how many other international meetings on health are held which are attended by representatives of the same countries, even by the same persons. SHDS Project is only a small part of public health investment in the Region. What types of frequent information distribution in addition to recent newsletters could be developed if there were to be a continuing program after 1982? The Evaluation Team applauds the sincere effort at creative partnership evident in the committee structure and assiduous performance. It is suggested that thought be given to the development of less laborious and more effective mechanisms or modifications.

Interviews with MOH officials, AID, WHO representatives and other interested parties in the countries visited, indicate a lack of effective information dissemination to countries and project activities. Nationals, international staff and even SHDS consultants tended to be unfamiliar with aspects of the project outside their own direct involvement. For example, countries with EPI demonstration and training areas or WHO institutions usually understand SHDS largely in terms of support to these specific programs. The Evaluation Team met several AID and WHO officials who stated frankly that they did not have sufficient knowledge of the SHDS activities, accomplishments and opportunities to be able to make more than superficial comment on the Project.

Since the eleven countries the Evaluation Team visited were chosen especially because they had certain SHDS participation, such as in

regional centers or DTAs, it is likely that persons in the other nine countries are even less familiar with the Project.

SHDS tried hard and often succeeded in meshing the concepts of the four objectives into courses and workshops given under any one of the objectives, e.g., EPI modules into mid-level management courses at the Lagos and Lome PTCs, management and supervision into the Training of Trainers (TOT) of Village Health Workers courses. It is unfortunate that the same integrated communication did not occur at country level where Ministry officials were most often knowledgeable about only one activity area.

In Liberia, a SHDS committee was formed early in project implementation in order to share information and program initiatives and decide how best to take advantage of training possibilities. Subcommittees were appointed on each of the four SHDS Objectives to cooperate with the Project and to nominate participants to courses and workshops. Members of the committee and subcommittees were more informed about SHDS than comparable persons in most other countries.

In addition to PCC and PRC meetings and SHDS staff visits, three vehicles for information dissemination were developed on the regional level. SHDS started publishing a newsletter on their activities and staff in 1981. They also prepared an attractive, informative brochure in French and English. Thirdly, REDSO/WA sent several communications to AID offices and Embassies listing significant SHDS accomplishments, names of recent participants by country and announcements of future training opportunities. Feedback indicated that these efforts did increase awareness and are appreciated.

One country's Director General of Health, who had participated in a PRC meeting and in some SHDS activities, felt that SHDS had a good relationship with WHO/AFRO but a more remote one with the countries. For him the annual meetings are inadequate for involving the countries in the

Project. He suggested that AFRO and/or SHDS should inform the countries quarterly about what has been done in the last three months, what is planned for the immediate future and what other proposals are under consideration.

The AID limitation on development by SHDS of in-country activities should not have precluded SHDS staff visits for information about country opportunities for collaboration and involvement; or preferably SHDS staff capitalizing, while being in a country for any reason, to make additional contacts. Admittedly, consideration must be given to time pressures and travel costs. AID and WHO/AFRO shared in past contributions to information dissemination and responsibility for its deficiencies. They should take steps by newsletter and otherwise to strengthen their efforts in connection with future regional health cooperation.

The SHDS permanent staff throughout most of Phase II consisted of:

- In Boston - Planning and Evaluation Coordinator
- Educational Coordinator (1 1/2 years only)
- Campus Administrative Coordinator
- Campus Nursing Coordinator
- Four supporting staff (two full-time and two part-time)

- In Abidjan - Director
- Assistant Director for Objectives I and II
- Assistant Director for Objectives III and IV
- Nine supporting staff

3. Workshops and Short-term Courses

As will be described in later sections of this Report, SHDS did much of its work with eight already established training centers and institutions located in six cities in as many countries (Appendix 9). SHDS also helped to mount or support independent meetings in six other countries. Thus, at least one workshop or short-term course took place in 12 of the 20 countries involved in the SHDS Project. The subject material and other considerations are discussed in the sections of this Report on Objectives.

From 1978-81, 64 workshops and short-term courses (excluding the two-year nursing programs) occurred that received some degree of support from the SHDS Project. The distribution of numbers of such training events among the countries was:

Nigeria	14 (12 course offerings at RTC)
Togo	21 (21 course offerings at RTC)
Senegal	9
Cameroon	7
Gambia	2
Ivory Coast	3
Liberia	2
Sierra Leone	2
CAR	1
Congo	1
Mali	1
Upper Volta	1

The 64 workshops and courses held during SHDS Phase II were distributed thus over the four year period:

1978	5
1979	16
1980	22
1981	21

Thirty-eight workshops and courses were held in French; 23 were in English, and three were bilingual.

Short-Term Courses and Workshops which SNDS helped to initiate	By Month - By Objective				Area		SNDS Project Inputs				No. of countries		Number of Participants				
	Planning/Management	Training	Disease Control	Research	Focus	Audience	Fr	Eng	Conducted or Hosted by	Leadership/Initiation	Curriculum	Facilitator	Funding	SNDS Region	Other	SNDS Region	Other
	12				Mgmt of Health Services	Mid-level	X		Dakar MOH & WHO	X	X	X	X	8	0	18	0
	6				Village Health Workers	Trainers/Policy	X	X	Lome NTC	X	X	X	X	16	1	21	2
	7				Training of Trainers (TOT) of VHWs	Trainers	X		Lome NTC	X	X	X	X	11	1	25	1
	8				Post-basic N. Curriculum Workshop	Post-basic teaching personnel/sub-regional		X	WHO/MOH Monrovia	X	X	X	X	3	0	11	0
	10				Systematic course design	Lagos NTC staff & MOH faculty		X	Lagos NTC & MOH	X	X	X	X	1	0	18	0
	1				Pl & Mgmt of EPI	Nat'l EPI Planners - inter-country		X	WHO & MOH Lagos	X	X	X	X	5	8	12	9
	4				Pl & Mgmt of EPI	Nat'l EPI Planners - inter-country	X		WHO & MOH Abidjan	X	X	X	X	14	0	29	0
	6				Training and Research in FHC	Sr. level Health Officers inter-country	X	X	CUBS & WHO Yaounde	X	X	X	X	6	1	9	2

MASTER TABLE OF SHORT-TERM COURSES AND WORKSHOPS

1972

Short-term Courses and Workshops Not Initiated but Supported by SIDS

By Month - By Objective				Area		SIDS Project Inputs				No. of countries		Number of Participants				
Planning/ Management	Training	Disease Control	Research	Focus	Audience	Fr	Eng	Conducted or Hosted by	Leadership/ Initiation	Curriculum	Facilitator	Funding	SIDS Region	Other	SIDS Region	Other
1				Adv. Public Health	Doctors	X		Lome RTC and WHO	0	X	X	X	7	5	13	7
1				Organization Admin. of central level	Med. sec's/Admin	X		Lome RTC	0	X	X	X	7	5	15	7
8				Country Health Programming	Senior health officers Liberia	X		WHO & MOH Monrovia	0	X	X	X	1	0	34	0
10				Health Planning and Programming	Senior health officials	X		WHO Dakar	0	X	X	X	9	9	15	14
10				FHC orientation for mid-level supervisors	Health center supts.		X	Lagos RTC	0	X	X	X	4	9	8	5
	4			PH for nurses	Nurse/Midwives	X		Lome RTC and WHO	0	X	X	X	10	7	18	10
	9			Teaching methodology	Lab. technicians		X	Lagos RTC	0	X	X	X	5	5	8	8
	10			Recyclage	Health Inspectors	X		Lome RTC and WHO	0	X	X	X	10	6	16	8

1980

MASTER TABLE OF SHORT-TERM COURSES AND WORKSHOPS

25 d

Short-term Courses and Workshops which SHDS helped to initiate	By Month - By Objective				Area		SHDS Project Inputs				No. of countries		Number of Participants				
	Planning/ Management	Training	Disease Control	Miscellaneous	Focus	Audience	Fr	Eng	Conducted or Hosted by	Leadership/ Initiation	Curriculum	Facilitator	Funding	SHDS Region	Other	SHDS Region	Other
					Top level management	Multi sectoral	X		NOH/Senegal & WHO	X	X	X	X	8	0	21	0
	12				Mgmt/Health services	Mid-level		X	Dakar RHC & WHO	X	X	X	X	4	4	5	4
		1			TOT of VNs	Trainers of VNs		X	Lome RHC & WHO	X	X	X	X	5	3	22	8
		10			TOT	Trainers of FHC Workers		X	Lagos RHC & WHO	X	X	X	X	5	6	14	13
		10			TOT, EPI mid-level mgt	Mid-Level Health Personnel		X	Lagos RHC & WHO	X	X	X	X	1	0	14	0
		11			Nursing FHC	Inter-country cr. nursing training personnel		X	Danjul: NOH & WHO	X	X	X	X	3	0	15	0
		12			FHC and Role of Nurse	CENSI Faculty and CENSI graduates		X	Lome RHC & WHO	X	X	X	X	13	2	27	2
		12			1-day continuing edu. workshop on FHC	Teaching staff of Basic Nursing in Senegal		X	Dakar CENSI	X	X	X	X	1	0	25	0
		5			Mgmt of EPI	Mid-level		X	Danjul WHO NOH/Gambia	X	X(eval only)	X	X	4	0	37	0
		8			EPI	Mid-level EPI Managers		X	Bafoussa NOH/Cameroon	X	X(eval only)	X	X	4	0	24	0
		8			Applied Research - FHC	Upper-level Health Profs.		X	Omaha NOH & WHO	X	X	X	X	8	0	11	0

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MASTER TABLE OF SHORT-TERM COURSES AND WORKSHOPS

1980

Short-Term Courses and Workshops Initiated but Supported by SIDS

By Month - By Objective				Area		SIDS Project Inputs				No. of countries		Number of Participants				
Planning/ Management	Training	Disease Control	Nonpsych	Focus	Audience	Fr	Eng	Conducted or Hosted by	Leadership/ Initiation	Curriculum	Facilitator	Funding	SIDS Region	Other	SIDS Region	Other
1				Advanced Public Health	Doctors	X		Lome RTC & WHO	0	X	X	X	8	2	13	1
3				PHC orientation, mid- level supervisors	Health centre supts.		X	Lagos RTC	0	X	X	X	6	7	16	14
3				PH for Nurses	Nurses	X		Lome RTC & WHO	0	X	X	X	9	6	18	7
4				Admin/Supervision	PH Nurses/Midwives	X		Lagos RTC & WHO	0	X	X	X	5	9	11	14
10				PL/Mgmt health services	Sr. level	X		Dakar RTC & WHO	0	0	0	X	5	7	7	11
	5			Recyclage health eds.	Mid-level health personnel/health educ.	X		Lome RTC & WHO	0	X	X	X	10	4	18	7
		1		Env. health and CD control	Mid-level public health personnel		X	Lagos RTC & WHO	0	X	X	X	5	5	14	10
		3		Planning/Admin EPI	Nat'l EPI Planners inter-country	X		Brasas WHO	0	X (eval only)	X	0	9	9	16	14
	9			Recyclage	Health inspectors	X		Lome RTC	0	X	X	X	9	4	10	7
		9		Malaria Control Tech	Mid-level PH personnel		X	Lagos RTC & WHO	0	X	X	X	5	9	11	13
		6		Epidemiology	Epidemiologist trainees	X		WHO & Gov of Cam- eroon	0	X	X	0	1	3	2	5

Short-Term Courses and Workshops
which SNDS helped to initiate

By Month - By Objective		Area		SNDS Project Inputs				No. of countries		Number of Participants			
Planning/ Management	Training	Focus	Audience	Fr Eng	Conducted or Hosted by	Leadership/ Initiation	Curriculum	Facilitator	Funding	SNDS Region	Other	SNDS Region	Other
7		Top level Management	Intersectoral Ministerial	X	Nigeria MOH & WHO	X	X	X	X	4	0	19	0
10		Top level management	Multisectoral Ministerial	X	Lome RTC & WHO	X	X	X	X	6	2	12	4
12		Mgmt of health services	mid-level health pers.	X	Dakar WHO	X	X	0	0	8	1	11	11
	1	TOT	Trainers of FPC workers	X	Lagos RTC & WHO	X	X	X	X	3	4	10	6
	1	TOT	Trainers of FPC workers	X	Lome RTC & WHO	X	X	X	X	10	2	16	4
	2	Continuing Education (1-day) Nursing in FPC	CHSEI students & teaching staff of basic nursing schools, Cameroon	X	Yaounde CHSEI	X	X	X	X	1	0	25	0
	11	Nursing FPC	Er. level nursing pers. inter-country	X	Freetown MOH & WHO	X	X	X	X	3	0	16	0
	1	Mgmt of EPI	Mid-level supervisors	X	WHO & MOH Abidjan	X	X (eval only)	X	X	9	0	42	0
	6	EPI Management	Mid-level managers	X	Yaounde MOH Cameroon	X	X	X	X	1	0	21	0
	3	Applied research FPC	Upper-level health profs.	X	Bamako MOH & WHO	X	X	X	X	3	0	11	0
	12	Applied research in FPC	Mid-level, sr. level Health Personnel	X	Yaounde MOH	X	X	X	X	2	0	10	0

1981

MASTER TABLE OF SHORT-TERM COURSES AND WORKSHOPS

25

Short-term Courses and Workshops Initiated but supported by SNDS

By Month - By Objective				Area		SNDS Project Inputs				No. of countries		Number of Participants				
Planning/ Management	Training	Disease Control	Assesrch	Focus	Audience	Fr	Eng	Conducted or Hosted by	Leadership/ Initiation	Curriculum	Facilitator	Funding	SNDS Region	Other	SNDS Region	Other
8				Community Health	Mid-level health pers.	X		Lome RTC & WHO	0	X	X	X	8	3	11	9
8				Mgmt of health services	Mid-level		X	Lagos RTC & WHO	0	X	X	X	4	2	6	4
9				Mgmt of health services	Mid-level		X	Lagos RTC	0	X	X	X	4	5	6	9
9				Community Health	Mid-level health pers.	X		Lome RTC & WHO	0	X	X	X	10	6	16	8
10				Health Officers Mgmt of health services	Sr. level health pers.	X		Dakar WHO	0	X	X	X	11	7	20	11
	10			Recyclage	Health Inspectors	X		Lome RTC	0	X	X	X	8	5	11	8
		3		Training of mid-level EPI	Mid-level EPI Managers	X		Dakar MOH & WHO	0	X(eval only)	X	X	1	1	29	3
		8		EPI Management	Mid-level		X	WHO & MOH Freetown	0	0	X	X	2	0	42	8
		X		Epidemiology	Epidemiologist trainees		X	Gov. of Cameroon & WHO	0	X	X	0	3	6	4	5
		5		Epidemiology	Epidemiologist trainees	X		Gov. of Ivory- Coast & WHO	0	X	X	0	10	5	11	5

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The workshops and courses fall into one of two categories:

- I. 31 Initiated by SHDS or with help by SHDS and receiving other inputs in curriculum development, provision of workshop/courses facilitators, and/or financing.
- II. 33 Not initiated by SHDS but receiving other inputs in curriculum development, provision of workshop/course facilitators, and/or financing.

The Master Table of Short-Term Courses and Workshops gives more detail.

I. SHDS Participation In Course and Workshop Initiation

Following is a list of the twelve different types of workshops and courses which SHDS helped to initiate. The length of training time varied from one day seminars to 13-week courses, 110.4 weeks of training in total. The attendance from SHDS participating countries for all 31 training activities was 557, and there were 1897 person-weeks of training.

	<u>Workshop/Course</u>	<u>Times Held</u>	<u>Location/Year</u>
Obj. I	Management of Health Services for Mid-Level Officials	3	Senegal WHO Center '79, '80, '81
	Intersectoral Management of Health Services for Top-Level Officials	3	Senegal '80; Nigeria '81; Togo RTC '81
Obj. II	Orientation to the Training of Trainers of Village Health Workers for Policy Makers and Trainers	1	Togo RTC '79
	Trainers of Trainers (TOT) of Village Health Workers	5	Togo RTC '79, '80, '81; Nigeria (RTC) '80, '81
	Nursing and Primary Health Care	5	Gambia '80; Togo RTC '80; Senegal (CESSI) '80; Sierra Leone '81; Cameroon (CESSI) '81
	Systematic Course Design for RTC Staff	1	Nigeria RTC '79
	Post Basic Nursing Curriculum	1	Liberia '79

	<u>Workshop/Course</u>	<u>Times Held</u>	<u>Location/Year</u>
Obj. III	National Planning and Management of EPI	2	Nigeria '79; Ivory Coast '79
	Mid-Level Management of EPI	4	Gambia '80; Cameroon '80, '81; Ivory Coast '81
	Trainers of Trainers of EPI	1	Nigeria '80
Obj. IV	Training/Research in PHC	2	Cameroon (CUSS) '78, '79
	Applied Research in PHC for Upper Level Health Professionals	3	Upper Volta '80; Mali '81; CAR '81

II. Not Initiated by SHDS Yet Receiving Other Project Inputs

Thirty-three workshops and courses, although not initiated by SHDS, did receive SHDS inputs in the period 1978-81. Most of them (23) were courses regularly given at the two RTCs. The length of training for the 33 ranged from one week to 25 weeks, 245 weeks of training in all. The attendance from the SHDS Region totaled 478 summing to 3149 person-weeks of training.

SHDS contributed to the total 64 workshops in the following ways and to the following extent:

	<u>SHDS Input</u>
31 (48%)	Initiated and Planned
57 (89%)	Curriculum Development
58 (91%)	Provision of workshop/course facilitators
59 (92%)	Financing
64 (100%)	Any of the above

There were 29 workshops and courses that had first been held before 1978 when SHDS Phase II began (in Category II). Although there was only moderate increase in attendance when they were repeated with SHDS support, this was because

physical and other limits could not be overcome. In some instances, however, previous courses had not been filled to capacity but were when repeated. SHDS was instrumental in stimulating AID funds for assignment for renovation and space expansion at the Lome RTC.

Among the 64 workshops and courses during Phase II, 35 had never been given before 1978. Thirty-one of the 35 were SHDS-initiated.

Comparison of a pre-SHDS three-year period (1973-75) with Phase II (1979*-81) with respect to the two most active training centers, Lome and Lagos, showed the following differences. There was a 22% Actual Increase in number of participants at Lagos and a 60% increase at Lome.

The question is frequently asked, "Did SHDS support of fellowships (for example, at the RTCs) increase the total number or was the money merely a substitute for other previous sources?" The following table for the RTCs can be interpreted as indicating some of both. SHDS funded at least the full amount of increase. The portions of SHDS funds that were "substitutive" were 50% of SHDS fellowship support to Lagos and 34% of its support to Lome. (Calculation is made on the assumption of an average cost per fellowship.)

	<u>Lagos</u>	<u>Lome</u>
Average annual attendance - Pre-SHDS (1973-75)	87	80
Phase II (1979-81)	106	128
Percent Actual Increase	22%	60%
Average annual number of SHDS fellowships (79*-81)	38	73
That number as percent of pre-SHDS level,	(38/87)	(73/80)
The Expected Increase	44%	91%
Difference between Expected Increase and Actual	(44%-22%)	(91% - 60%)
Percent of SHDS fellowship funds --	(22/44)	(31/91)
not used for increase	50%	34%
Percent of SHDS fellowship funds used for increase	50%	66%

* SHDS Phase II's first year of funding participant fellowships at RTCs was 1979.

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~~For SHDS overall, the combination of more training locations in the countries,~~
more types of courses, more frequent offerings and greater average attendance per course in the RTCs contributed to the significant increase in amount of training received in the Region.

4. Consultations

SHDS arranged for and funded having consultants help in development and conduct of the workshops and courses and for other purposes. Ten different disciplines or fields of specialization were represented among them. Of course, some of the experts brought from their broad backgrounds additional elements from related disciplines. The consultants acted in various capacities, including, but not strictly limited to the following areas:

- workshop planning
- as workshop facilitators
- as advisors to in-country follow-up of TOT course
- as RTC, CESSI and Cuttington College staff
- as RTC, CESSI and Cuttington College advisors in curriculum development and evaluation

Fifty-seven different individuals gave a total of 8052 person-days of consultation. Many of the consultants were senior persons in their respective fields. The quality and utility of their contributions were highly appreciated by the persons with whom they conferred. Major focus of the consultations is given in Table 3. The emphasis clearly reflects the four SHDS Objectives.

Table 3 also distinguishes between Regional and external sources of consultation. It is worth noting that 36 of the consultants were drawn from the Region, many of these former participants at SHDS supported workshops. These Regional consultants gave 50% of the consultant days. This very important development will be discussed again with respect to strengthening

TABLE 3

AFRICAN AND NON-AFRICAN SHDS CONSULTANTS
BY AREA OF CONSULTATION

<u>Area of Consultation</u>	<u>Consultants from Outside Africa</u>	<u>Consultants from Africa</u>	<u>Total</u>
1. Management	Consultants 4 Days 196	490	10 686
2. Public Health Nursing Education	Consultants 9 Days 2086	15 2700	24 4786
3. EPP	Consultants - Days -	5 112	5 112
4. Public Health (Physicians)	Consultants - Days -	1 90	1 90
5. Sanitarian	Consultants - Days -	1 960	1 960
6. Training and Curriculum Development	Consultants 5 Days 841	2 73	7 914
7. Health Economics	Consultants 1 Days 31	-	1 31
8. Pharmacy	Consultants 1 Days 24	1 24	2 48
9. Health Research	Consultants 1 Days 92	4 115	5 207
10. Graphic Arts	Consultants - Days -	1 218	1 218
Total	Consultants 21 (37%) Days 3270 (41%)	36 (63%) 4782 (59%)	57 (100%) 8052 (100%)

of Regional resources. In the aim of achieving Regional self-sufficiency, steps should be taken to develop needed categories of consultants through long-term graduate study.

5. Other Professional and Technical Activities

In the previous section on consultations, short term contributions only by persons outside the SHDS staff were presented. The latter were in a continuous process of problem analysis, resource assessment, joint planning and other professional exchanges with persons in the Region beyond activities specifically related to workshops. A few examples are given in substantiation of the extent to which SHDS has become a recognized and contributing partner in Regional Health promotion.

SHDS has been active in supporting the WHO/AFRO objective of developing a network of management training institutions. SHDS has cooperated with the West African College of Nursing of the West African Health Secretariat. In Togo, SHDS was an early party in discussions that led to USAID's agreement to divert bilateral construction funds from the earlier plan for a health center to expansion of the Lome RTC.

SHDS assigned long term consultants at the CESSI/Yaounde, CESSI/Dakar and at Cuttington for faculty upgrading and for curriculum development or modification.

6. Fellowships

The SHDS Project supported three types of fellowships:

a. Fellowships to attend short-term courses and workshops held within the 20-country SHDS Region

(1) RTC/Lagos

1979*	28	SHDS-financed fellowships	(25%	of total RTC enrollment	of 110)
1980	56	" "	(41%	" " " "	" 135)
1981	31	" "	(42%	" " " "	" 73)

(2) RTC/Lome

1979*	97	" "	(67%	" " " "	" 144)
1980	58	" "	(50%	" " " "	" 115)
1981	65	" "	(52%	" " " "	" 124)

* First year of SHDS Phase II financing of fellowships at RTCs.

(3) Other: SHDS financed fellowships to workshops and short-term courses held at the Dakar WHO Center for Regional Programs in Programming, Planning, and Management; two workshops held at the two CESSIs; and various workshops not institution-affiliated but hosted by Ministries of Health. Unfortunately the Evaluation Team found no data available describing either the precise number of these fellowships provided nor the amount of actual expenditure for these fellowships.

b. Fellowships for the post-basic nursing course at Cuttington College

The first class following the improved curriculum started in March 1981, with four SHDS fellows from Liberia, out of a total enrollment of eight. However, six SHDS fellows, four from Liberia and two from The Gambia, started in 1980 with the old curriculum (total enrollment ten). At present, there are ten SHDS sponsored students at CUC.

c. Fellowships abroad for graduate education in nursing

Nine nurses attended two-year graduate nursing programs in Canada (five at University of Montreal) and in the U.S. (four at Boston University). Three of the nurses were Liberians, three Senegalese and three Cameroonians. Four majored in nursing education, two in nursing administration, two in parent-child nursing, and one in community health nursing.

7. SHDS Project Expenditures

Twenty million dollars was budgeted for SHDS, Phase II, when the Project Paper was signed in 1977. By the end of the fourth year of the Project, \$12,779,307 had been spent in Project implementation. Four million dollars was obligated for the fifth and final year of SHDS, Phase II and possibly for any carry over into 1983. (A sample budget from the SHDS Project is Appendix 10. 1981 is presented as it is the last of the four year period covered in this Evaluation.)

Of historical significance, SHDS Phase I (FY 1976-78) expended \$1,496,419. Of this amount, \$466,999 went to the American Public Health Association (the contractor for the execution of SHDS, Phase I) and \$978,000 to Boston University, to whom the American Public Health Association sub-contracted the Project. The primary purpose and accomplishment of Phase I was to prepare a plan for a Phase II. Boston University was awarded the contract for Phase II through a non-competitive bidding process, since AID/W judged that BU had "predominate capability" to implement a Phase II.

Following is a table delineating how the \$12,779,307 was spent in 1978-91. Boston University expended 44.2% of the total sum, CDC the next greatest amount

26.2%, AFRO expended 19.2%, and AID's purchase of measles vaccine and ped-o-jet and parts came to 10.4% of the total.

TABLE 4

TOTAL SHDS PROJECT EXPENDITURES
1978-81

Boston University	\$5,643,706	44.2%
CDC	\$3,351,825	26.2%
AFRO	\$2,448,546	19.2%
Measles vaccine and Ped-o-jets (est.)	\$1,335,252	10.4%
TOTAL	\$12,779,309	100.0%

TABLE 5

Boston University

Following is a breakdown of the \$5,653,706 spent by BU over the four-year period 1978-81:

<u>Amount Expended</u>	<u>% of Total BU Budget</u>	<u>% of Total Project \$12,779,309</u>	<u>Budget Expenditures</u>
\$5,643,706	100%	44.2%	All BU Expenditures
\$ 549,284	9.7%	4.3%	<u>Cost of the SHDS/Boston Professional Staff and Office (excluding overhead)</u> . Included here are two-three professionals' salaries, allowances, and travel costs; four office staff salaries; office equipment and supplies; and other direct costs.
\$2,283,617	40.5%	17.9%	<u>Cost of the SHDS/Abidjan Professional Staff and Office (excluding overhead)</u> . Included here are three professionals' salaries, allowances, support, and travel costs; six-nine office staff salaries; office equipment and supplies; and other direct costs, such as office rent, three vehicles and a motor scooter, and telex costs.
\$1,369,365	24.3%	10.7%	<u>Boston University Overhead</u> Overhead is figured on all BU budget items, including the cost of the Abidjan office and its field activities under the four objectives. The rate is 53% (on campus rate) on the cost of the SHDS/Boston office and 34% (off campus rate) on the cost of the SHDS/Abidjan office plus all activities.
\$1,441,440	25.5%	11.3%	<u>BU/SHDS Project Identifiable Field Activities (exclusive of SHDS/Abidjan staff, office and overhead costs)</u> . Included are consultants' salaries, support, and travel; graduate education for nine nurses abroad; training equipment and supplies for various institutions; occasional secretarial support; production of educational materials; other costs, such as communication.

In the Table below, Boston University/SIIDS Project Identifiable Field Activity Costs are disaggregated by years and by objectives:

Boston University Identifiable Field Activity Costs
(1978-81 in U.S.\$)

<u>Objectives</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>TOTAL</u>
I. Health Planning and Management.	11,335	30,773	47,771	34,447	124,326
II. Training Health Personnel and Training Centers					
Lome/Lagos	81,488	181,744	97,253	115,202	475,687
CESSis - Dakar/Yaounde	31,846	71,803	131,934	172,144	407,727
Nursing Education (Sierra Leone, Liberia, The Gambia)	1,346	32,218	91,786	210,210	335,560
III. Disease Surveillance	0	0	0	0	0
IV. Applied Research	14,522	18,297	26,326	38,995	98,140
TOTAL	140,537	334,835	395,070	570,998	\$1,441,940

TABLE 6

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TABLE 7

Center for Disease Control

CDC spent \$3,351,825 in the following fashion (1978-81):

<u>Amount Expended</u>	<u>% of Total CDC Budget</u>	<u>% of Total Project \$12,772,309</u>	<u>Budget Expenditures</u>
\$3,351,825	100%	26.2%	All CDC Expenditures
\$1,693,901	50.5%	13.3%	<u>CDC Staff and Atlanta Office Costs (excludes overhead).</u> Included are the salaries of all (Atlanta and field) professionals; travel costs of Atlanta staff; salaries of Atlanta administrative staff; and Atlanta office costs, such as equipment, supplies, printing, reproduction, and communications.
\$1,256,328	37.5%	9.8%	<u>In-country Costs of Field Staff and Activities (excludes overhead).</u> Included are staff allowances, support, and travel of six overseas staff; laboratory support costs; local hire personnel salaries; vehicles.
\$ 401,000	12.0	3.1%	<u>CDC Overhead</u> CDC charges 20% overhead for all budget items listed under <u>CDC Staff and Atlanta Office Costs</u> , CDC charges 5% on <u>In-country Costs of Field Staff and Activities</u> .

In the Table below, all CDC expenditures (Obj. III) are broken down by year.

	<u>CDC Expenditures</u>				<u>TOTAL</u>
	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	
Objective III	\$336,616	\$695,053	\$1,104,652	\$1,215,504	\$3,351,825

TABLE 8

WHO/AFRO

Following is a breakdown of the \$2,448,546 which WHO/AFRO spent over the period 1978-81:

Amount Expended	% of Total WHO/AFRO Budget	% of Total Project \$12,772,309	Budget Items
\$2,448,546	100%	19.2%	All AFRO Expenditures
\$2,268,884	92.6%	17.8%	<u>AFRO/SHDS Project Activities</u> Included here are consultants' salaries, support and travel costs; salary subsidies for five FESSI faculty; participants' stipends, support, and travel costs to short-term courses and workshops and for ten Cuttington College students; direct costs for training activities, such as translation of materials; equipment and supplies.
\$ 179,662	7.3%		<u>CCC and DCC Meetings</u>
\$ -0-			<u>AFRO professional contributions, organization costs and overhead.</u>

WIO/AFRO Expenditures

1978 - 81

<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>TOTAL</u>
\$ 7,467	\$ 42,870	\$ 120,619	\$ 166,381	\$ 337,337
--	287,031	256,149	233,683	776,863
--	57,247	130,086	231,914	419,247
				1,196,110
--	9,435	50,938	53,636	114,009
--	--	4,204	22,890	<u>27,094</u>
				141,103
--	--	26,795	218,999	248,561
--	181,341	48,007	42,909	272,257
--	--	20,405	53,111	73,516
20,017	57,775	86,664	19,206	179,662
<hr/>				
\$ 27,484	\$638,466	\$739,867	\$1,042,729	\$2,448,546
<hr/>				

TABLE 9

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TABLE 10

MEASLES VACCINE AND PED-O-JETS

1. \$1,200,000 of SHDS Project monies were used to purchase measles vaccine, for 18 of the 20 SHDS countries during the period 1978-81:

1978 -	120,000
1979 -	235,000
1980 -	370,000
1981 -	<u>475,000</u>
	1,200,000

2. Ped-o-jets and parts were purchased by CDC and AID/W under P10/C's"

1978 -	\$ 469.85
1979 -	78,623.00
1980 -	5,902.45
1981 -	<u>50,237.00</u>
	\$ 135,232.30

3. CDC Immunization Division donated \$32,422.60 worth of Ped-o-jets and parts to SHDS.

TABLE 11

SUMMARY TABLE OF TOTAL \$12,779,309 EXPENDITURES OF 1978-81

<u>% of Total</u> <u>\$12,779,327</u>	<u>Expenditure</u>	<u>Budget Category</u>
100%	\$12,779,309	All Categories
17.9%	\$ 2,283,617	BU/SHDS/Abidjan Professional Staff and Office (excluding overhead)
17.8%	\$ 2,268,884	AFRO/SHDS Project Activities
13.3%	\$ 1,693,901	CDC Staff and Atlanta Office Costs (excluding overhead).
11.3%	\$ 1,441,440	BU/SHDS Project Identifiable Field Activities (excluding overhead)
10.7%	\$ 1,369,365	BU Overhead
9.8%	\$ 1,256,328	CDC In-country Costs of Field Staff and Activities (excluding overhead)
10.4%	\$ 1,335,252	Measles Vaccine and Ped-o-jets
4.3%	\$ 549,284	SHDS/Boston Profession Staff and Office (overhead excluded)
3.1%	\$ 401,000	CDC Overhead
1.4%	\$ 179,662	PRC and PCC Meetings

COMPOSITION EXPENDITURES:

1978, 1979, 1980 AND 1981

<u>OBJECTIVES</u>	<u>1978</u>	<u>1979</u>	<u>1980 -</u>	<u>1981</u>	<u>TOTAL</u>	<u>PERCENT</u>
I. Health Planning & Mgt.	\$ 18,802	\$ 73,643	\$ 168,390	\$ 200,828	\$ 461,663	3.61%
II. Training of Health Pers.						
Trng. Ctrs. Lome/Lagos	81,488	526,022	483,488	580,799	1,671,797	
CESSIS-Dakar/Yaounde	31,846	81,238	187,076	248,670	548,830	
Nursing Education	1,346	32,218	118,581	429,209	581,354	
Workshop		2,767	-	-	2,767	
Sub-total					<u>2,804,748</u>	21.95%
III. Disease Surveillance-CDC	295,926	790,864	1,029,184	1,106,512	3,222,486	25.22%
IV. Applied Research	14,522	18,297	46,731	92,106	171,656	1.34%
Meetings	20,017	57,775	82,664	19,206	179,662	1.41%
Boston Univ. Abidjan	233,054	610,965	691,615	747,983	2,283,617	
Boston Univ. Boston	86,287	144,067	142,335	176,595	549,284	
Sub-total					<u>2,832,901</u>	22.17%
Overhead						
Boston University	81,417	409,874	393,172	484,902	1,369,365	
CDC Atlanta	40,690	85,530	123,475	151,901	401,596	
Sub-total					<u>1,770,961</u>	13.86%
Measles Vaccine & Ped-o-jets	120,470	313,623	375,902	525,237	1,335,232	10.45%
TOTAL:	<u>\$1,025,865</u>	<u>\$3,146,883</u>	<u>\$3,842,613</u>	<u>\$4,763,948</u>	<u>\$12,779,309</u>	<u>100.00%</u>

COMMENTS ON SHDS PROJECT EXPENDITURES

Per Annum Costs

The annual costs of the total Project increased progressively during the four-year period, reflecting the growth in activity. The annual percent

Increases were:	1978 to 1979	151%
	1979 to 1980	24%
	1980 to 1981	20%
Projected	1981 to 1982	7.5% (not allowing for 1983 carryover)

The level of a year's total expenditure had reached somewhat under \$4,000,000 in 1981. That is the amount that comes under consideration in assessing future support needs related to extant activities.

Objectives

The Evaluation Team was not able to obtain or calculate the exact distribution of funds for each of the four objectives nor was it deemed useful to attempt precise artificial division of each staff member's time or of other expenditure items in that way. It is of interest, at least, to estimate the relative weights of investment in the different major efforts. Toward that end, rough distribution was made where identification of differential responsibility was possible. The gross estimation given below for Objectives I, II and IV (using 1980 as illustration) does not give consideration to general administration and other infrastructure and supporting costs which are assumed to be proportionate to identified objectives activity but are not necessarily so.

TABLE 13

APPROXIMATE EXPENDITURES BY OBJECTIVES (1980)
(IDENTIFIABLE EARMARKED AND ESTIMATED PRORATED ITEMS)

Objective I - Planning and Management	\$ 215,000
Objective II - RTCs and TOT	517,000
Objective II - Nursing	391,000
Objective III - Disease Control	621,761
Objective IV - Applied Research	136,000

~~As shown in Table 13, Objective II for IOT and related manpower development~~
received the most funds. That was appropriate. The strengthening of RTCs and exposure of large numbers of fellows distributed through all the countries consolidated the Regional training institutions and seeded the Region with upgraded health trainers.

For the future, manpower development would continue to deserve the greatest share of any external supports that are forthcoming, with the Regional Centers depending on fellowships and other assistance as well as requiring expansion of faculty and of other resources for intensive work in-country on national training systems.

Nursing was a close second in total cost. There is less basis for satisfaction with relative cost-benefit here although it is recognized that with a long-term investment results are harder to see. A good part of the SHDS contributions was absorbed by the nursing schools (CESSI Yaounde in particular) to augment their faculty as well as for curriculum modification and faculty development.

Understandably, Objective IV on applied research was last in rank of expenditure. It was a late starter. Similarly, future needs would be expected to remain smaller than those of the other objectives. Some consultation time will be needed to stimulate small research studies and assist in their design, but would probably be adequately covered by one full-time consultant. The only likely way that an appreciable number of studies could be started and conducted is through external coverage of research costs. This would not be a large amount if the studies are kept simple, small and of short duration.

PARTICIPATING AGENCIES AND INSTITUTIONS

Boston University - The larger part by far of funds expended by the University were directly for activities that took place in Africa (approximately 70%) and

only about 30% in Boston. One gets the impression that expenditures could be lowered if two levels of administration -- Abidjan and Boston -- were made less redundant in certain respects. To be certain of this calls for detailed analysis of administrative and fiscal procedures beyond the reasonable scope of this Evaluation. The amount of overhead is a matter of Agency policy, but is made particularly large because the rate that applied to African activities, although lower than for Boston-based ones, is still substantial.

Obviously and expectedly, it is more expensive to use external than Regional personnel. Salaries and allowances are much higher; additional travel and communication costs are introduced, and overhead piles up. Cost alone should not be sufficient basis for deciding between a Regional and external resource. But when the products are reasonably comparable, that becomes an additional and cogent argument in favor of the indigenous preferences. It should be mentioned that because salaries of BU personnel were negotiated with AID according to AID contracting policies yet on the other hand local staff and consultant salaries were fixed following WHO guidelines, salaries are not always in proportion to responsibility and position in the SHDS structure.

The SHDS staff does a tremendous amount of travel, which is very expensive in Africa. It would be pennywise and pound foolish to prohibit travel when indicated as personal contact has been one of SHDS' most effective mechanisms. It is always incumbent upon staff to avoid other than essential trips and to schedule travel strategically for greatest economy. Funds should be made available for attendance at professional meetings to avoid scientific isolation.

The per annum estimated cost (\$51,442 in the 1980 budget) for the operation and maintenance of three automobiles and a motorscooter including drivers' salaries is inordinately high for the small Abidjan headquarters' staff with almost no demands for field use of the vehicles. In general, closer scrutiny of SHDS' budgets by AID would seem to have been desirable.

CDC - Atlanta-based staff visited Africa frequently for scheduled meetings,

evaluations, supervision and other purposes. The amount of such contact with field staff seemed to have been appropriate for the needs of the Project. Whether the number of salaries covered by the Project matches the proportion of personnel time required, cannot be answered flatly. It may be a bit on the high side. Although the CDC overhead rate is far lower than that of Boston University, overhead costs are higher than might be otherwise because African field staff are technically based in Atlanta.

GENERAL COMMENT

In any event, expenditures deserve careful scrutiny to avoid exaggeration. In the SHDS Project, total professional personnel costs (Table 14) are high, chiefly because of added overhead and allowances, especially staff housing. Two houses in Abidjan are budgeted for almost a third more reasonably comparable expatriate professional staff of REDSO in this same city. There may be extenuating circumstances.

TABLE 14

	<u>PERSONNEL COSTS (1980)</u>	
	<u>SHDS/Abidjan (5)</u>	<u>CDC Field Staff (6)</u>
Total Base Salaries	\$167,944	\$ 212,115
<u>Average Base Salary</u>	\$33,589	\$35,352
Fringe Benefits	35,268 (21%)	21,212 (10%)
Allowances	245,465	253,082 (and. rent)
<u>Average allowances</u>	49,093	42,180
Overhead (27.1%)	<u>121,591</u>	<u>97,282 (20%)</u>
Average Total per Person	\$114,536	\$97,282

WHO/AFRO - WHO/AFRO charges nothing for its administrative and professional
contributions to the SHDS Project. It manages the fellowships and coordinates
the PCC/PRC Committees, among other roles.

The range of cost per supported fellow for short-term courses at the RTCs
was between \$1,050 and \$3,800 with an average of \$2,300, exclusive of continuation
of salaries which were paid by sponsoring governments. The chief determinant
of fellowship cost is the duration of the course. Costs varied according to
place, position of fellows, travel distance and somewhat by disciplines. The
average cost for a week's attendance (also varying with duration) was about
\$225 for Lome RTC and about \$300 for Lagos RTC.

The PCC/PRC Committee expenditure item was relatively small, though not
insignificant about 1 1/2 percent of the total cost. As stated elsewhere
in this Report, ways need to be found to improve coordination. Additional
expenditure for effective coordination would pay its way.

1981 OVERHEAD RATES FOR ORGANIZATIONS

PARTICIPATING IN SHDS

	<u>Headquarters</u>	<u>Field</u>
WHO/AFRO	0%	0%
Boston University	53%	32%*
CDC	20%	5%**

* Off campus expenditures and activities

** In-country costs only

D. OBJECTIVES

OBJECTIVE 1 -- To improve national and regional health planning and management

1. Introduction

Within this objective there have been several activity areas called sub-objectives. These sub-objectives have changed during the course of Phase II in respect to institutional focus and content. The 1979 Implementation plan included the following sub-objectives:

- a. To provide staff and resources to assist in the attainment of SHNS Project goals at the Dakar Center;
- b. To upgrade and expand the health planning and management training programs at the Dakar Center with the goal of training a core of management/planners from the West and Central African countries who can design and implement in-country health planning and management training programs;
- c. To develop a Dakar Center consultation service in health planning and management for the countries of West and Central Africa;
- d. To strengthen the applied research component of the Dakar Center program;
- e. To strengthen collaborative relations with other regional centers and institutions and appropriate national institutions; and
- f. To develop practical systems of monitoring and evaluation.

Substantial revision was made in these activities in accordance with WHO/AFRO modification of their regional strategy for development of a network of planning and management centers. The 1980 Implementation plan listed five sub-objectives as follows:

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- a. To strengthen health planning, programming and management training programs given by the Dakar and other collaborating centers.
- b. To improve intersectoral management capabilities of planners from the West and Central African countries in development of health programs.
- c. To strengthen the Dakar and other collaborating centers; capabilities to participate in and follow-up CHP exercises and facilitate the implementation of national health development programs.
- d. To develop an applied research component of the Dakar and other collaborating centers in the planning, programming and management process in relation to primary health care.
- e. To develop health planning and management training capabilities of selected national educational institutions.

As increasing emphasis was put on development of the network of national centers and the item on applied research activities was transferred to Objective IV, further modifications were made in Objective I activities. The 1981 implementation plan was approved with the following three sub-objectives:

- a. To strengthen planning, programming and management training programs emphasizing primary health care.
- b. To improve intersectoral management collaboration in the West and Central African countries in development of health programs emphasizing primary health care.
- c. To strengthen Country Health Programming (CHP) exercises and facilitate the implementation of national health development programs.

The trend of the changes during the three years might be summarized as follows:

- ~~a. Away from a single center to a network of centers;~~
- b. Additional emphasis on multisectoral management;
- c. Greater emphasis on in-country work rather than at the exclusively Regional level.
- d. Special focus on Primary Health Care.

Because of the substantial changes made in emphasis within Objective I, discussion of progress will be organized by type of activity rather than specific sub-objectives.

2. Institutional Development

Progress: During the first few years of Phase II, attention was to be focused on strengthening and expanding the Dakar WHO Regional Program in Programming, Planning and Management (Dakar Program). This center was created in 1974 by the integration of two WHO projects (Consultative Project for National Health Planning and the Institute of Health Planning). Courses have been conducted annually in health planning and management, in English and in French in alternate years.

Consultants were sent and plans formulated for augmenting the Program's staff of three professionals (Director, economist, and management specialist) to accommodate increasing responsibilities. Additional consultants were to be recruited to complement the core staff in such areas as epidemiology, demography and statistics.

Early in Phase II (1979), WHO/AFRO began a revision of its strategy for responding to health planning and management needs in the Region. The new approach involves a network of selected national institutions identified as potential health planning and management training sites. SHDS adjusted its proposed

implementation plans accordingly so as to include the "Dakar Program and Collaborating Centers".

Although the SHDS staff realized the significance of the shift away from the Dakar Program to the network and proposed several options for the Project's Objective I activity, AID was firm regarding its commitment to focus its resources on building up the center in Dakar, as stated in the Project Agreement. Some PCC representatives felt that supports for the Dakar Program and the proposed network were not mutually exclusive.

SHDS staff and short term consultants worked in 1978, 1979 and 1980 with the three Dakar center staff members to improve and expand the courses offered and enhance their contribution to the country programming exercises. Nevertheless, the Dakar Program was ultimately not strengthened as an institution, supplementary consultants were not recruited, and in fact, two of its three staff members were transferred (one in July 1980 and the other in August 1981) to other posts. The Coordinator has remained at the facility, but the project he has been implementing was changed in 1981 and his responsibilities within the network are not yet clarified.

SHDS has contributed to the early phases of the national management institutions network development. The SHDS Project was invited to participate in the secretariat of the first WHO/AFRO consultation on health management training in July 1980 in Arusha. Following this meeting, 11 institutions were selected as sites where health management training could either be developed or strengthened. Six of these are within the SHDS Region. SHDS is currently collaborating with WHO/AFRO in planning training of trainers courses for facilitators of national top level intersectoral management programs. Plans are for these courses to be organized in one of the countries which has a participating institution within the health management network.

~~SHDS has also assisted the Lomé and Lagos RTCs to develop new intermediate level health management courses. The Project has been active in strengthening the programs offered at these two centers. (See Objective II for full discussion.)~~ Since early 1981, SHDS has enlarged the scope of its institution building activities at the RTCs to include enriching their staff capabilities for conducting management courses.

3. Training Programs

Progress: During SHDS Phase II several new workshops/courses on management were created and conducted and a six-week health planning course was strengthened.

SHDS staff and consultants collaborated with the Dakar Program staff on improving the content and organization of the annual six-week planning course for senior health officials. Particular emphasis was put on the integration of more management techniques and country health programming methodology into the course.

A new ten-day workshop on management for intermediate level health officials was initiated at the Dakar Program with SHDS assistance. It was conducted for the first time in December 1979 for 10 participants from eight SHDS countries. The objective of the course was to 'make middle level personnel aware of the processes, attitudes and techniques of modern management and the way of applying them in health services'. This workshop is held yearly in Dakar, for English speakers and French speakers in alternate years.

SHDS has pioneered in creating management training programs for top level personnel in the Region. SHDS staff and consultants have designed, implemented and evaluated top level intersectoral management workshops. This program has been held three times in Senegal, Nigeria and Togo, for participants from several countries each time. These two-tiered meetings were attended by Ministers of Health, Social Welfare, Rural Development, Science and Research and Economic

Planning, as well as Cabinet Directors and other top-level officials from those ministries. Through the case study method, emphasis was placed on solving inter- and intra-ministerial coordination problems, improving decision making and operations through planning and management by objectives and overcoming personnel problems. Based on the successful experiences gained in carrying out the three workshops, SHDS staff and facilitators are preparing modules on use in the TOT courses for the national institutions network in 1982.

Most recently SHDS has collaborated with the staff of the Lome and Lagos RTCs to develop mid-level health management courses as part of their regular program. SHDS has provided management consultants to both institutions respectively for the Community Health Course in Lome and the Health Services Management course for mid-level health personnel in Lagos. These courses have replaced others at the RTCs and in a way act as Regional replacements for courses discontinued at the Dakar Program.

4. Country Health Programming

Progress: WHO developed the methodology on the Country Health Programming (CHP) approach for country-wide planning, programming and management of health systems in the late 1970's. Its fundamental principle is "to emphasize the interaction between the health sector and other relevant sectors, thus placing health in the broader perspective of total socio-economic development". CHP was introduced into health planning training programs in the WHO/AFRO Region, especially at the Dakar Program. CHP workshops and exercises have been carried out in a number of sub-saharan countries including The Gambia, Liberia, Niger, Senegal, Mali and Benin within the SHDS Region.

SHDS participated directly in the CHP exercise in Liberia and in introducing CHP concepts into the training courses at the Dakar Program. The staff of the

Dakar Center were very active in carrying out CHP workshops and exercises for the WHO/AFRO Region, but SHDS was not directly involved. SHDS had proposed evaluating the CHP impact in a selected country; however, this was not done due to budget limitations.

5. Relevance

With demands from populations increasing for health care and with resources not responding proportionally, assuring the effective and efficient use of human and material resources is essential. Development of primary health care, which aims at reaching people at the peripheral level, is placing added stress on referral facilities and ministry supply and transport systems.

It is increasingly apparent that planning and management of health programs within the Region are critical weak links in the strategies for health development. SHDS has focused some attention on these elements and helped to increase awareness of the constraints. Moreover SHDS has initiated some important steps towards tackling some of the key problems. SHDS inputs have concentrated on the important areas of intersectoral cooperation, communication, supervision, attitudes and behavior, information/data systems, evaluation, manpower requirements, and organizational structure.

6. Effectiveness

SHDS has brought some of the key issues in planning and management into training programs for various levels of decision makers and mid-level officials. They have attempted to flow with the changing tides of health policies and program changes in the Region.

While the institution building aspects of Objective 1 have not been successful, alternative creative approaches to training have been found. The

~~consultants and SHDS staff involvement in major aspects of management have been good, in some cases, superior.~~

It is difficult to assess the results of the three top-level intersectoral workshops on health planning and management. The extent to which such courses can influence the structures and/or practices in the participating countries must first depend on the governmental positions held by those who attended. The majority of the representatives at these meetings were of satisfactorily high standing in the health ministries and other relevant departments of their respective governments. Several facts suggest that the influence has been positive. Comments from participants have been very favorable on the usefulness of such exposure. One minister who could not fit it into his schedule and who received a glowing report from his colleagues expressed his regret and asked for notice about the next seminar. There have been a number of requests for in-country follow-up of the multicountry workshops, indicating a certain success in sensitization on the importance of the topic. In at least one case, a ministry of health created a new health planning unit after an apparently critical mass of persons from that country had gone through the Dakar six-week planning course. The usual phenomenon of bureaucracy shock and frustration that participants suffer when they are unable to institute innovations suggested by the training discussions occurred in some instances here. The SHDS plan to try to reach several levels in each agency deserves continuing support, so that parallel attitude changes are more likely to occur.

7. Current and Future Needs

When demands are heavy and resources limited, the natural and typical tendency is to operate on a crisis intervention basis -- meet each problem as it arises, rather than anticipating developments and allotting resources accordingly. Yet, it is obviously in the very situation of scarcity of precious resources that

planning is most needed. Economists and development planners have given less attention to health than certain other sectors, such as agriculture. Where any health planning is done, principal responsibility for it may be vested in the generic planning body of government or in the Ministry of Health. In the former situation, it is important that the authoritative agency -- the Health Ministry -- be invited to furnish information and advice. The SHDS multisectoral high level workshops aimed at fomenting mutual inter-agency awareness in planning as well as in operation, and aimed to spread understanding that health is an appropriate subject for public planning.

It is recommended that the multisectoral approach, for both health planning and management, receive continued emphasis through the institutional network. This would need periodic renewal meetings to keep up with the notoriously rapid turnover of high government officials. The same concept should be infused into middle level management training and certainly in the TOT of VHWs. Even without policy directives from the top, the local health worker, the community development worker, and the agriculture extension agent can learn to cooperate and pool their efforts.

The SHDS activities for upper and middle level management have been extensive. Even though a considerable portion of the training time has been given to case studies, problem solving exercises and field work, each participant probably goes home feeling that the training experience has for him been largely didactic, in the sense that it did not pertain directly to his/her actual work problems. Nevertheless, a first step was necessary. It should help to create readiness for in-country workshops with ones real colleagues, in horizontal or vertical administrative relationships, participating together in discussions on concepts, principles and techniques of management as applied specifically to health service. It is encouraging that requests for such workshops are being made. Response to that interest deserves to be the major

~~emphasis in the future. The network being organized by WHO/AFRO should be~~
given sufficient types and amounts of resources to help develop and conduct
a scheduled series of in-service type training sessions, and more importantly
to give in-country consultation on health management questions. It is
recommended that two or three highly qualified experts be stationed in the
Region on a full-time, long-term, resident basis in support of the network
secretariat for in-country work. It would be useful for adaptations of
SHDS-produced educational materials to be made for the different country
situations.

OBJECTIVE II

~~This objective of the SHDS Project is designed in order:~~

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

1. Post-Basic Nursing Education -- This portion of the objective focuses primarily on three nursing institutions --

CESSI at Yaounde (Centre d'Enseignement Supérieur en Soins Infirmiers)

CESSI at Dakar

Post-Basic Nursing Education at Cuttington College in Liberia

More and more, the nursing profession is looked upon as the core of the personnel armamentarium of public health. They constitute the clinical link between medicine and the bulk of health workers. They help in training and do much of the supervision. Varieties of subprofessional and practical types of nursing "auxiliaries", with different titles, have been placed in public health programs around the world. They are all subsumed under the present discussion.

The current world drive for PHC adds particular emphasis to the crucial role of nursing, where most of the responsibility for training and supervising Village Health Workers (VHWs) will be vested. To do those tasks well in the country Primary Health Care (PHC) programs, nursing leadership will be needed. This is the justification for the SHDS Project giving such importance to post-basic nursing education in the Region, whereby capability might be increased in top positions in basic nursing schools, clinical settings and public health services. In PHC services, maternity care usually trails lamentably behind other activities. Thus a strong professional midwifery component is also essential to raise the quality of attendance at childbirth and of preventive care during pregnancy and the postpartum period.

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CESSIs

The objectives of this activity are: to improve CESSIs' existing curricula in order to meet nursing need in Francophone Africa; to provide on-going continuing education for CESSI graduates; and to introduce a systematic, on-going evaluation process.

CESSIs are government institutions which were established with the collaboration of WHO. CESSI at Dakar, Senegal, started in 1968. CESSI at Yaounde, Cameroon, is a department of CUSS (Centre Universitaire des Sciences de la Sante) that was started in 1972. The objective of both institutions is to train nurse/midwife educators and administrators.

The SHDS Project does not pay fellowships for CESSI students; these are paid by WHO/AFRO and UNICEF. SHDS contributes to the two CESSI programs by providing staff, consultants, equipment and funding field work for students.

After facing and partially overcoming many difficulties, CESSI/Dakar has instituted a new curriculum that integrates the PHC approach. CESSI/Yaounde is still in the process of reviewing its curriculum. Because of the shortage of faculty in CESSI/Yaounde, the SHDS field consultant was called upon to do teaching as a full time faculty member during the academic year 1980-81. This may be changing in 1982 since an agreement has been reached with the Director of CUSS and CESSI staff.

Both CESSIs have already evaluated their programs and the utilization of their graduates in the countries. It is in the light of these evaluations that CESSI/Dakar developed its new curriculum, and CESSI/Yaounde is working on its program.

With respect to in-country consultation to CESSI graduates, the best initial strategy to take was not obvious. SHDS consultants and CESSI staff decided that the best way to implement this activity is to develop a continuing education program for CESSI graduates.

In 1980, the faculties of the two CESSIs held a 10-day continuing education workshop for their graduates at the RTC Lome. This workshop focused on reorientation of national nursing and midwifery programs to PHC. Twenty-five participants attended, 23 of them from 13 SHDS countries. The participants expressed the value of such workshops in helping to update their knowledge on teaching methodology. Additionally, each CESSI held on its own a one-day continuing education faculty seminar on methodology of integrating PHC into the total curriculum. Also, two workshops are scheduled for 1982, one in Dakar and one in Yaounde. Participants will come from SHDS, and other Francophone countries of the WHO/AFRO region, and the focus will be on management. The pedagogic methodology used is being applied to continuing education and other parts of the CESSI curricula. A 1981 workshop had to be omitted because administrative arrangements by WHO/AFRO were not completed on time.

Due to shortages in full-time faculty, the CESSIs were not able to start planned in-country follow-up work with graduates. To overcome the shortage of qualified staff, SHDS sponsored six scholarships at Master's degree level at the University of Montreal and at Boston University (five and one respectively). Four nurses specialized in nursing education and two specialized in nursing administration. On their return, these fellows will teach full time at CESSI/Dakar and Yaounde.

SHDS helped in topping of CESSI faculty salary for a period. This was done in order to encourage qualified nurses not to leave the teaching profession. One year later, however, it was agreed that SHDS should discontinue this practice because it is contrary to AID policy. WHO/AFRO has agreed to take over this salary supplementation.

Future Needs of CESSI

By the end of 1983, CESSI/Dakar will have six full-time national faculty with Master's degrees, and CESSI/Yaounde will have five. These are not sufficient numbers for the task. Furthermore, since the host countries for the CESSIs do not give salary credits for Master's degrees, the stability of the staffs would be threatened if WHO were to discontinue its present practice of salary supplementation.

The development of CESSI staff is the key need in the goal of strengthening those institutions for in-country activities, continued education and consultation. It would be desirable to develop a panel of qualified nurses and midwives, especially with public health orientation, to enable the CESSIs to assist countries in the upgrading of nursing training and services.

TABLE 15

NO. OF CESSI ENROLLEES SINCE SHDS INVOLVEMENT

1978 - 81

Country	Total No. Students Enrolled in both CESSIs 1978-83	Class of '78-'80 Dakar Yaounde		Class of '79-'81 Dakar Yaounde		Class of '80-'82 Dakar Yaounde		Class of '81-'83 Dakar Yaounde	
Benin	12		1	2	2		2	3	2
Cameroon	57		15		12	2	16		12
CAR	4	1			1			1	1
Chad	2		1						1
Congo.	5	1	2				1		1
Eq. Guinea	0								
Gabon	4		1	1		1		1	
Guinea	0								
Ivory Coast	19	3	1	2	4	3		3	3
Mali	5	1				2		1	1
Mauritania	7	1		2		2		2	
Niger	10	1	2	1	2	1	3		
Senegal	32	5		6		11		10	
Togo	6	2		2		2			
Upper Volta	13	2	2	2	3	2		2	
Total for SHDS Countries 176*		17	25	18	24	26	22	23	21

* Add 16 enrollees from other Francophone countries for total CESSI entering enrollment 1978-81 of 192.

~~Anglophone Sub-regional Nursing Programs for The Gambia, Liberia and Sierra Leone.~~

~~The sub-objectives of the SHDS project for the Anglophone sub-regional~~

nursing programs aimed:

- to develop a post-basic nursing degree program at Cuttington University College (CUC);
- to implement a continuing education workshop so as to emphasize PHC elements in nursing education and administration at the basic nursing schools;
- to support the non-degree nursing program at the Tubman National Institute of Medical Arts (TNIMA), to be made available to students from the three countries.

The CUC, where the post-basic nursing degree program is offered, is located in Suacocco, Bong County, Liberia. As a private institution, the CUC relies upon fees collected from the students; grants and donations from the Episcopal Church in the U.S. and from USAID; and a subsidy from the Liberian Government. The SHDS Project has opened another avenue of tuition income to the CUC.

As a college, the CUC offers Bachelor's degrees in Sciences, Education, Humanities, Social Sciences, Nursing and Theology. The nursing division has two programs. The basic baccalaureate established in 1964 prepares beginners in a four-year nursing program to work in various health settings.

The post-basic program was established in 1967. This is a 2 1/2 year program for already trained registered nurses. It aims to add to their liberal education and to update their professional skills. While this post-basic nursing training antedated SHDS, the SHDS Project has contributed to strengthening and expanding it so as to be available to candidates from The Gambia and Sierra Leone. Under the revised curriculum, the post-basic nursing program of CUC upgrades professional nurses to BSc degree status. The program was developed in

~~consultation with the three countries of the Anglophone subregion. The first~~
~~class following the improved curriculum started in March, 1981, with four SHDS~~
fellows from Liberia (total class size eight). However, six SHDS fellows, four
from Liberia and two from The Gambia, started in 1980 with old curriculum
(total class size ten).

Three SHDS consultants have contributed to revising the post-basic nursing
curriculum. They have also participated in direct classroom teaching because
of the shortage of faculty in the Nursing Division. With about 100 basic and
post-basic nursing students, there are only five nursing faculty members.

Thirteen fellowships have been given by SHDS to further nursing education
for Liberia, Sierra Leone and The Gambia. Three fellowships were for Master's
degree study at Boston University in Community Health Nursing and Parent/Child
Nursing; these nurses upon return will enlarge the Cuttington faculty. Ten
fellowships were for BSc degrees in Community Medicine and Maternal/Child Care
taken within the post-basic nursing program at Cuttington College.

SHDS provided equipment for the nursing school and a jeep for transport.
At present, this vehicle is used by the SHDS consultant who lives in Monrovia
as a means of transport for the long distance to CUC. In the meanwhile, the
post-basic program has an acute shortage of transport to allow the students
to undertake their practical field work in PHC.

The project has also started to implement a non-degree nursing program
at TNIMA in Monrovia in order to strengthen nursing education and nursing
services in Liberia, Sierra Leone and The Gambia. The TNIMA is a government
institution for training at mid-level health personnel. There are four sections:

1. School of Nursing -- professional nursing
 -- practical nursing
 -- midwifery
2. School of Environmental Health
3. School of Physician Assistants
4. School of Medical Laboratory Technology

The Evaluation Team was told that the Minister of Health of Liberia is looking forward to the continuation of the non-degree program at TNIMA because there are not enough teachers for nursing schools of the three countries.

SHDS consultants conducted 3 workshops for 42 nurse educators and senior nurses on curriculum development, primary health care and nutrition. Participants from the three Anglophone countries attended. Included in the planning for 1982 are a one-week workshop on curriculum development and a three-month course on the methodology of integrating PHC into the basic nursing curriculum.

The post-basic nursing program at Cuttington College is in need of:

- consultants to strengthen the curriculum
- an expanded faculty
- vehicles and equipment, especially for field practice training
- developing the library
- supplies and miscellaneous needs

It is difficult to equate the educational purposes of the Cuttington development under SHDS assistance with the market for the graduates when they return to their respective countries. Governments are reluctant to promote young graduates over the heads of experienced senior nurses merely because the former have acquired an academic degree. Yet the graduates resent returning to their old jobs and salaries and wonder whether their investment in graduate study was worthwhile. A logical approach might have been to designate the senior nurses for attendance at Cuttington, but they had not been selected because of concern about their meeting the admission requirements.

All three Anglophone countries are in need of tutors for their nursing schools and would be able to place any who had graduate study specializing in nursing education. The Cuttington post-basic nursing program, however, offers no special track in nursing education.

Only two students (out of 18 total) have attended from outside Liberia, these from The Gambia. Apparently, the admission requirements at Cuttington had been a deterrent. It has now been clarified that compensatory examinations can

be accepted as equivalent to the usual academic requirement. Sierra Leone has designated two candidates, for whom jobs will be held for their return after study.

The Cuttington program as constituted will have hard sledding if it does not continue to receive external support. Some of the needs have been described in this Report. On the whole, it is not possible for the Evaluation Team to make recommendation concerning continuing support for the Cuttington post-basic nursing program before the dilemmas about job placement after graduate study are solved by appropriate parties in the Region.

~~2. Regional Training Centers (RTC) at Lagos and Lome --~~ This portion of Objective II of the SHDS Project was designed to improve training, evaluation and country outreach activities at the two RTCs and to promote their self-sufficiency in assisting West and Central African governments to strengthen their training and utilization of health personnel at supervisory and local levels, especially for PHC.

The RTCs at Lome and Lagos, teaching in French and English respectively, provide workshops and short courses for graduate public health personnel in different disciplines. Starting in 1978 at Lome and in 1979 at Lagos, SHDS has collaborated intensively with the two centers. Emphasis has been placed on the RTCs' aim to promote the PHC approach in the teaching. SHDS provided consultants, equipment and supplies and fellowships. Some of the consultant work resulted in the development of package instructional modules and materials (such as the modules for the training of trainers of VHWs) while other consultants contributed to modifying already existing course curricula.

The pedagogic methodology used was task-oriented. By going into the villages at the very outset, SHDS consultants demonstrated how important it is for trainers to be knowledgeable about the setting where the trainees will work. An important part of the materials developed for training of trainers of VHWs and for supervisor of VHWs pertained to actual field work.

With the new emphasis on PHC, the role of health personnel is changing. The aim, if not yet the practice, is to shift more toward preventive and promotive health services. The VHW is a logical person to perform these functions in the community, capitalizing on frequent contacts made in the process of curative and other services. Based on site observations, 50 principal health tasks that VHWs are expected to perform were identified. Using methods designed by the Center for Educational Development and Health

(CEDH) at Boston University, these tasks were analyzed so as to facilitate the design of detailed instructional manuals. RTC staff and SHDS consultants developed and field tested the first draft of VHW teaching materials and then produced a set of seven modules, on nutrition, care of children; first aid, sanitation, maternal care, care of adults and organization of VHW activities. This material is now available at the two RTCs. The modules have been used to train 87 trainers from the SHDS Region, who are now back at their homes and in turn have started training Village Health Workers.

From 1978-81, 19 workshops or short-term courses aimed at strengthening capacities for training and development of health workers (under Obj. II) received SHDS support at the two RTCs.* Of these, nine were workshops/courses which SHDS helped to initiate and which received other SHDS inputs in the form of curriculum development, provision of facilitators and/or financing (including fellowships). Ten were workshops or short-term courses which were not initiated by SHDS but which did gain from the SHDS Project in the way of curriculum development, facilitators and/or financing (including fellowships).

The nine new RTC courses/workshops which SHDS helped to initiate aimed at speci-

* In addition to these 19 RTC workshops/ courses listed here under Obj.II aim of training

add in 11 RTC workshops/courses under Obj.I aim of planning/management

add in 3 RTC workshops/courses under Obj. III aim of communicable disease control

Total 33 workshops/courses receiving SHDS support 1978-1981 held at the two RTCs.

fically at strengthening capacities for training (1979-81) are the following (see Master Table for more detail on all SHDS-supported courses):

- 1 Village Health Worker Training Course for Policymakers and Trainers
- 5 Training of Trainers (TOT) of Village Health Workers Course
- 1 Systematic Course Design Course
- 1 Primary Health Care and the Role of Nurses Workshop
- 1 EPI Mid-level Management Course

The SHDS consultants working with RTC faculties have not yet completed producing other training materials, these on supervision of VHWs. After completion of first drafts, the materials are to be subjected to field testing in the usual fashion. Evaluation methods also have been taught before, but for that subject too, systematized teaching guidelines still have to be developed.

The RTCs have just started outreach in-country training for VHWs. Out of 20 countries, only three had been assisted by the end of 1981. (The Gambia, Mauritania and Senegal). Much interest exists among the other countries for in-country training; five have already made requests for such assistance.

Outreach activities for in-country training of VHWs proceeds through three phases:

- assessment of training needs in the village
- training of trainers of VHW
- adaptation of the existing national program or the Village Health Workers training modules developed at RTC

The RTC staffs perform these activities at country level in collaboration with their former participants in the TOT course.

~~The two RTCs are not yet self-sufficient. The staffs are deficient in number and in certain specialties. For Centers that have been established to support and strengthen the countries' training systems, the RTCs need a large group of teachers to allow them to handle both RTC and in-country activities.~~

With their limited resources, RTC teachers perform good work. Former participants appreciated the quality of courses and teaching materials which some of them are already using.

SHDS consultants have also established subject matter committees at the RTCs for review of course content. Through these committees, a course on systematic course design was developed and offered.

Status of the RTCs

The compositions of the RTC staffs are as follows:

	<u>Lome</u>	<u>Lagos</u>
Full time	3	1
Short-term (3-11 months)	1	7
Part-time	(varies with course)	

The following bar graph shows the number of usual participants at both RTCs, (1973-81)

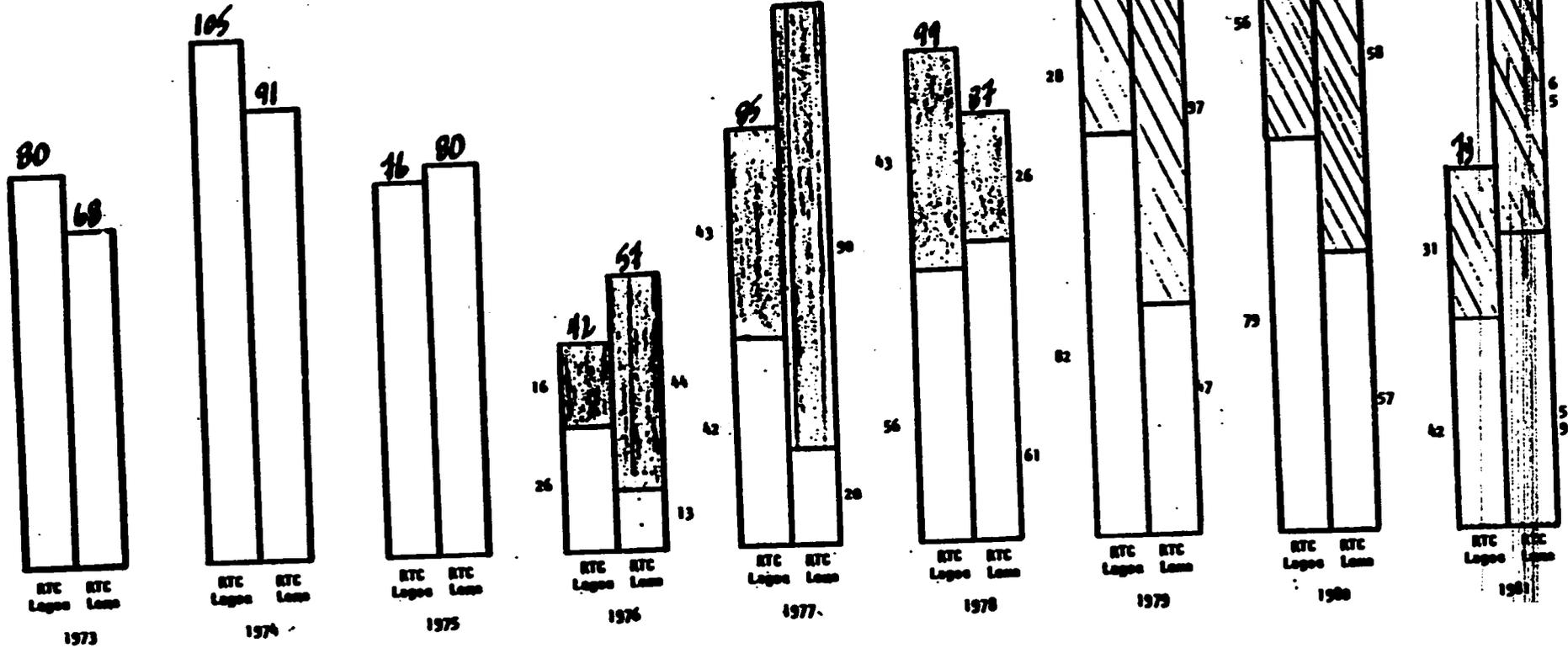
-  MSB Financed Participants (1973-1981)
-  USAID (non-MSB Phase-I) Financed Participants (1976-1978)
-  MSB Project Phase II Financed Participants (1979-1981)

STATE 1

Training of Lagos-Lomé KTC Participants 1973-1981

No. of Participants per Year to KTC Courses

No. of Participants per Year to KTC Courses



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Since two courses are frequently held at a RTC simultaneously, it appears that the ratio of teachers to participants is low according to the WHO standard of 1:5. This is of concern, especially for field training in the Training of Trainers of Village Health Workers Course, among others.

Both RTCs have limited facilities for student accommodation and for classrooms. However, the Lome Center is being expanded with USAID funding under bilateral cooperation with the Government of Togo.

In order to continue developing in-country training activities and also to give assistance to national training institutions, both RTCs need external support.

Future Needs of RTCs:

1. Increased number of regular faculty to absorb the burden of expanded activities described;
2. Long term consultants from the Region assigned for a full academic year plus preparation time;
3. Regular short term expert consultations for staff continuing education and for curriculum evaluation; and
4. An item in the budget for flexible use in meeting miscellaneous day-to-day needs, such as replacement parts for audio-visual equipment.

OBJECTIVE III

History: The Measles/Smallpox Eradication Program in West and Central Africa, financed by AID from 1966-72, was implemented by CDC. After this project was phased out, there were continuing needs in the participating countries for improvement of regional and national disease surveillance activities. In addition, while smallpox was eradicated from the Region (and subsequently the world), measles remained a serious problem everywhere. In 1977, a worldwide Expanded Program of Immunization Strategy (EPI) was formulated and accepted by WHO member countries. That history influenced the planning of the SHDS Project. CDC was selected to implement the elements of the Project included under Objective III because of CDC's demonstrated ability in these technical areas. In addition, CDC technical officers had been working within OCEAC and OCCGE for some time before SHDS started. A PASA was signed between AID and CDC in July 1978 (PASA H2/AR 0398-f-78) (Appendix 7).

Description: Objective III of the SHDS Project is designed to "improve regional and national disease surveillance and health demographic data systems and to integrate these systems into national health planning and delivery systems."

There are four activity areas within Objective III of SHDS called sub-objectives:

1. To expand immunization activities (multiple antigens) in the Region.
2. Development of training capabilities.
3. Development of capability to gather information (data necessary for health planning including demographic data) to strengthen regional and national systems of disease surveillance and health information gathering necessary for effective health planning.
4. To develop a coordinated laboratory system to provide necessary back-up services to the disease surveillance and control systems.

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Within each of these sub-objectives there are several different activities which are modified from year to year, depending on the implementation plans approved by the PCC and subject to available funds.

In order to implement the four sub-objectives, CDC has allocated six field positions: one operations officer in each of the three immunization demonstration and training area countries (Ivory Coast, Cameroon and The Gambia) and three medical epidemiologists to serve in sub-regions through OCCGE, OCEAC and in a sub-regional Anglophone group (Liberia, Sierra Leone and The Gambia).

CDC technical officers have functioned within the overall SHDS structure and there has been effective collaboration in the field. The SHDS assistant director for Disease Surveillance and Applied Research has worked closely with CDC staff. WHO/AFRO and WHO/Headquarters have, along with SHDS personnel, organized many training programs and EPI evaluations.

Inputs:

1. Personnel

The six field positions have been filled by CDC staff who are supported by a full time SHDS project officer in the Atlanta headquarters, and part-time by the Chief of the Field Services Branch and the Director of the Research and Development Division of the International Health Program Office. The operations officer positions have been filled nearly continuously. There has been some difficulty in posting medical epidemiologists for the OCCGE and Anglophone sub-region positions (see Table 16). The Anglophone sub-regional epidemiologist left in September 1981 and his replacement has not yet arrived at post, although he is scheduled to arrive in April 1982.

There have been two medical epidemiologists assigned to OCEAC consecutively, and two operations officers in The Gambia. Thus, a total of eight professionals have filled the six positions during the first years of Phase II of the Project.

The total cost of salaries and maintenance of field staff from 1978-81 is approximately \$2,525,000. Headquarters personnel expenses have totaled \$788,300.

2. Equipment and Supplies

During the first four years of the project (1978-81), one million dollars worth of supplies and equipment to support Objective III field activities were purchased and furnished. In addition, laboratory support costs and salaries of some local personnel were paid, for a total of \$616,325 over the four-year period.

The equipment and supplies include Ped-o-Jets and parts, cold chain equipment, vehicles, injection needles and syringes and office equipment. SHDS was the major contributor to the establishment of a surveillance laboratory at OCEAC which offers a wide range of routine, serology, bacteriology and other procedures referred from health professionals and students in the OCEAC member states. SHDS also contributed supplies to OCCGE, The Gambia National Laboratory and the Institut Pasteur.

3. Measles Vaccine

Measles vaccine has been provided through the SHDS Project since 1978. Quantities for each country are determined by SHDS and WHO/AFRO according to economic need, birth rate and program use. The total vaccine available varies from year to year depending on price. AID/W has placed the orders with the manufacturer and advised USAID/Embassies, WHO/AFRO and SHDS/Abidjan by cable of scheduled shipment arrival. The following amounts of measles vaccine have been provided through December 31, 1981:

TABLE

<u>Year</u>	<u>Total Doses Measles Vaccine Delivered</u>
1978	833,000
1979	1,360,000
1980	1,417,000
1981	1,313,000

The total cost of this vaccine has been \$1,010,000. Since 1980, a more heat stable vaccine has been provided by the Project. While most EPI officials contacted still instruct their field staff to treat all measles vaccine the same way, they feel the more heat stable vaccine provides an important extra measure of security. The Evaluation Team has not found any evidence of studies to assess improvement in this vaccine's efficacy. There have been a few problems with late deliveries of vaccine from the manufacturer and shipping complications, but in general the process has been orderly and the cold chain respected from factory to national EPI storage facilities. Since 1980, AID/W has requested the countries to report on measles vaccine usage. Compliance with this request has been irregular and most information received has been incomplete.

Sub-Objective 1: To expand immunization activities (multiple antigens) in the Region

Progress: Three countries within the Region were selected as demonstration-training areas (DTAs) for immunization service programs: Ivory Coast, Cameroon and The Gambia. Some immunization activities were already on-going in these countries on a smaller scale. Within each of these countries, three smaller segments of 200,000 population each were defined as demonstration training zones (DTZs).

The vaccinations given are against the six Expanded Program of Immunization (EPI) target childhood diseases (measles, poliomyelitis, tetanus, diphtheria, pertussis and tuberculosis) adapted to the WHO vaccination schedule. Tetanus toxoid vaccinations are given to pregnant women. (In addition, immunizations against particular disease problems are added in some countries as needed, i.e. yellow fever in The Gambia.) DTZ profiles are prepared annually which include general information on the zone, medical facilities and personnel

TABLE 16

SIGNIFICANT INDICATORS OF PROGRESS IN SIDS DEMONSTRATION & TRAINING AREAS

SIDS OBJ III DTA's	Operations Officer at post	Epidemiologist at post	National Operations Officer assigned	EPI started	Three DTA Zones in full operation	% of National Population with Access to EPI services	EPI Courses	External Evaluation	Range of Values From Most Recent Vaccine Coverage Surveys in Three DTA's (by sampling method)				
									Children				Pregnant Women
									BCG	1st DTP/ Polio	3rd DTP/ Polio	Measles	2nd tetanus toxoid
IVORY COAST	Oct '78 to Jan '82	Apr '80 to present	Aug '80 to present	June '78	Nov '79	79%	Upper level April '79 Mid-level Jan '81 1 person -- Upper level March '80 1 -- senior level Morocco March '81 1 -- Cameroon '81	Oct - Nov '81	1981/ 49-74%	Adjan and Ferte only 60-82% 44-54%	56-75%		
	39 JM									1980/ 66-84%	58-90%	28-80%	37-73%
CAMEROON	Mar '79 to present	Oct '78 to Aug '80	1st '78 to present	1975 in OCEAC (Sept '79 official date)	Sept '80	13.3%	Mid-level seminar Aug '80 Mid-level June '81 2--mid level Jan '80 2--upper level April '79 2--upper level March '80 Morocco '81	May '81	1980/ 63-87%	Yaounde only 57%	46-58% 50-53% polio	30-51%	Not Reported
	37 JM	Aug. '80 to present	2nd Dec '80 to Sept '81										
SIERRA LEONE	May '79 Nov '81	Sept '79 to Sept '81	'79 to Feb '81	May '79	Sept '80	100%	Mid-level May '80 1--upper level Jan '79 2--mid-level course Sierra Leone Aug '81	Nov '80	1980/ 85%	National Data Only 89%	68%	69%	
	Jan '82 to present		Apr '81 to present										

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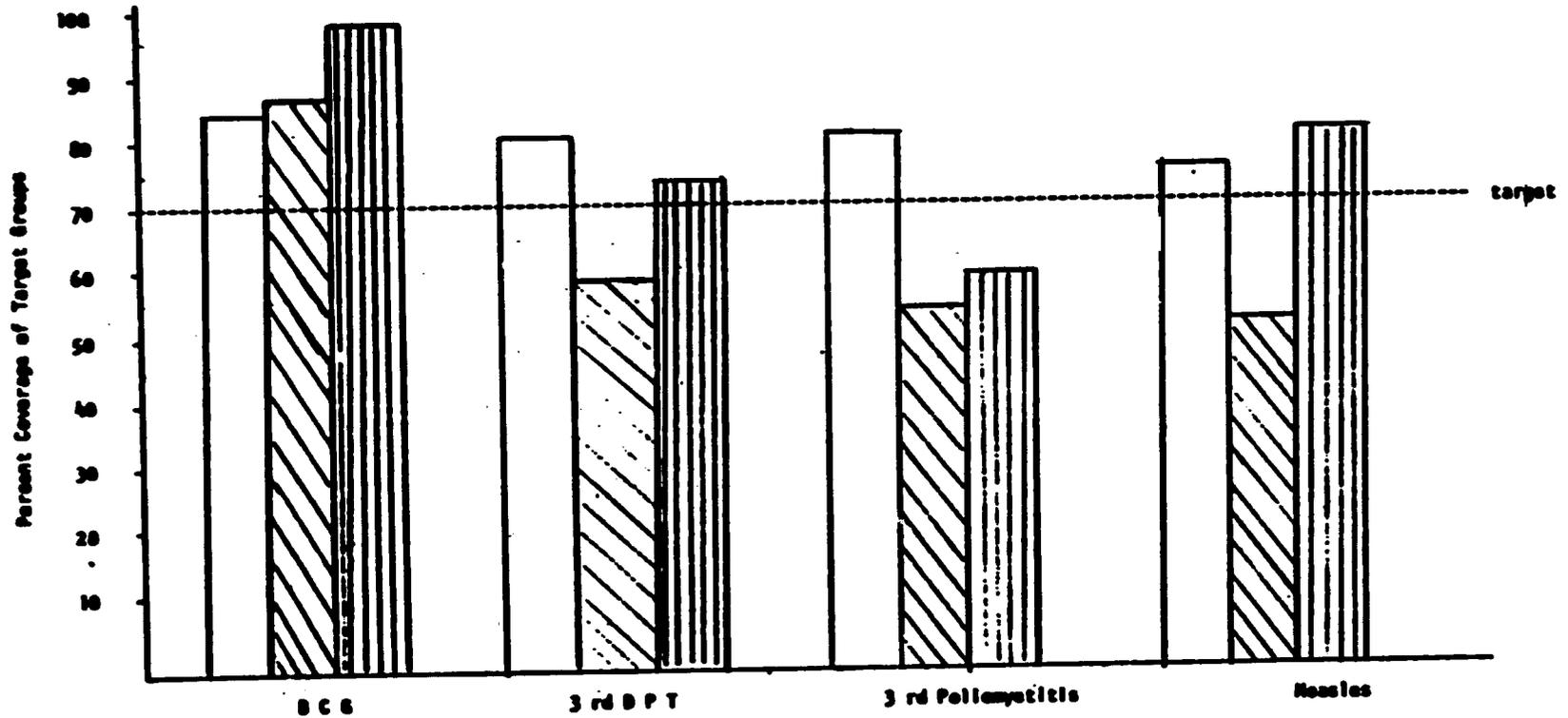
NFI Disease Morbidity and Mortality Reporting Data Collected DPA's	NFI Disease Surveillance Established in DPA's	Most Recently Available Data on Mortality Levels				Most Recently* Available Data on Morbidity No fixed targets established for morbidity.			
		Targets for 36 Months Full Operations				% Change in Measles	% Change in Polio	% Change in Pertussis	% Change in Neonatal Tetanus
		60% Measles	30% Polio	30% Pertussis	60% Neonatal Tetanus				
Oct. '80 1978 data Measles in all three DPA's Neonatal tetanus, pertussis, polio, tetanus, 2 DPA's	1980 Sentinel surveillance established in Abidjan & Abengourou & underway in Korhogo/Forho zone	Abidjan (35 mos) +26%	-95%	-100%	+58%	+16%	-72%	-100%	+26%
		Abengourou (35 mos) -62%	0	0	0	-28%	-66%	+29%	-41%
		Korhogo (23 mos) -100%	N/A	N/A	N/A	-77%	N/A	N/A	N/A
1979 - Yaounde 69-79 data Measles, Polio, pertussis and neonatal tetanus	Nov-Dec '80 Sentinel surveillance system est. but variable effectiveness	Yaounde (36 mos) -44%	N/A	N/A	N/A	-80%	-88%	N/A	N/A
		Befoussan (20 mos.) -82%	N/A	N/A	N/A	-56%	-11% (1980)	91%	-80% (1980)
		Bonanda (20 mos.) -45%	N/A	N/A	N/A	-58%	N/A	14%	N/A
		Issou (20 mos.) -45% (1980)	N/A	N/A	N/A	-29%	-63%	43%	+30%
May 1980 data pre-NFI period estimates neonatal tetanus pertussis measles diphtheria & polio	Under discussion since 1980	National Eastern Division (27 mos) N/A	N/A	N/A	N/A	-90%	-80%	51%	-10%
		North Bank/ Lower River (26 mos) N/A	N/A	N/A	N/A				
		MacCarthy Island/ Upper River (4 mos) N/A	N/A	N/A	N/A				

NA = Not available.

* 1981 except as noted.

**CHILD Immunization Coverage within SIDS OTA Countries:
Highest Value Attained within 1980-81 Vaccine
Coverage Surveys**

GRAPH 2



Ivory Coast (Target Assessment Age Group: 13-24 months. Intermediately Rigorous Standard)



Cameroon (Target Assessment Age Group: 12-23 months. Most Rigorous Standard)



The Gambia (Target Assessment Age Group: 15-27 months. Least Rigorous Standard)

~~involved immunizations and coverage assessment data, estimated changes in morbidity and mortality since the EPI began, a brief description of target disease surveillance activities, and efforts in training and public information/education.~~

Some support was also given to other countries, as requested, to develop their own national EPI programs.

Measles vaccine was provided, although this was not a CDC-directed activity but rather a shared responsibility between AID, SHDS/Abidjan, and WHO/AFRO.

Three DTZs of at least 200,000 people each have been fully operational in each of the three countries; in Ivory Coast since 1979 and in The Gambia and Cameroon since 1980. Progress in becoming fully operational has been more rapid than anticipated. Within each of these DTAs (a) baseline levels of morbidity and mortality from (at a minimum) neonatal tetanus, measles and poliomyelitis have been determined and reduction in mortality is being measured; (b) coverage is documented by on-going sample community assessment; and (c) external program evaluations were conducted in 1980 or 1981. An adequate cold chain now exists in all DTZs.

The goal of 70% coverage of identified target populations in DTZs within 18 months of full operations has not been uniformly achieved although coverage rates continue to increase annually (see Tables 16 & 17).

Coverage is monitored through on-going sample assessment in the DTZs and expansion areas. EPI personnel conduct house to house visits within a randomly selected cluster sampling area to obtain information on vaccinations of children within a certain age range (within the target group) from their vaccination cards. In general, a high percentage of families retain their children's vaccination cards so that loss of cards does not seem to be a serious limitation of this method. Records of coverage assessments show

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that the target age range used in surveys varies from country to country: The Gambia 15-27 months; Cameroon 12-23 months; and Ivory Coast 13-24 months. Because of this variation, as well as length of time of program operation, it is difficult to make exact comparison of coverage assessment among countries.

While EPI activities include tetanus toxoid injections (TT) for pregnant women, and surveillance records cases and deaths from neonatal tetanus, vaccination coverage assessments for TT are not made on a regular basis. EPI personnel should explore how best to document TT coverage.

Each of the three DTA countries has a plan for extending EPI operations to achieve national coverage. The Gambia, with its population of approximately 600,000 inhabitants is already entirely covered geographically by the three DTZs. The Ivory Coast has already expanded into one additional zone so that EPI services are available in areas containing 44% of the country's population of more than seven million persons. In addition to the three DTZs in Cameroon, the EPI there has begun to move its activity into eight extension zones. When these zones are fully operational, approximately 25% of the 7.6 million inhabitants will have services available to them.

The major problems with implementation of EPI activities in the DTAs have been administrative and/or logistical. There has been general reluctance and sometimes resistance on the part of health personnel to change from a mobile team vaccination approach to a strategy including fixed centers with EPI integrated into routine services. Nevertheless, the efforts made by The Gambia MOH, in particular, in integrating EPI into maternal and child services are to be applauded. There has been a lack of sufficient transportation for adequate supervision in Cameroon and The Gambia. In addition, in Cameroon attention and support from the Director of EPI has been inadequate. Supervision by central level staff in Cameroon has not been

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regular primarily due to an unresolved issue of inadequate per diem for in-country travel. The EPI evaluations have highlighted these problems and made recommendations for their resolution.

The three DTAs and most EPI programs within the region have benefited from a multidonor approach. In the Ivory Coast, for example, UNICEF, WHO, The International Children's Center, FAC, and the U.S. Peace Corps together with SHDS and the Ivorian Government, have developed an excellent program reaching nearly 45% of the population in just three years. SHDS has played an especially key role in training the top level managers who prepare national EPI plans, to which the donors then contribute.

Within the other 17 countries of the SHDS region, progress in planning and implementing EPI programs is variable. All of the countries have senior level and/or mid-level personnel who have participated in senior or mid-level management EPI courses sponsored by SHDS or assisted by SHDS staff. Visits by SHDS/CDC personnel for planning and evaluation of country EPI programs have been made to ten of the countries. All of the countries within the SHDS Project either have a national EPI underway, or a plan prepared or in preparation.

Effectiveness: (In terms of vaccination achievement) The number of children under two years and pregnant women vaccinated can be extrapolated from coverage assessment data and/or counted from health facility records. (These data are presented in Table 16). In terms of the numbers vaccinated annually with the target groups in the two years since operations began, the Evaluation Team considers that this is a very successful program. The key here is maintenance of vaccination rates, since EPI is meant to be an on-going, sustained program and not merely a series of periodic mass campaigns.

Efficiency: In order to measure efficiency of activities it would be necessary to have cost per unit of achievement, e.g. cost/fully vaccinated child or cost/vaccination given, etc. This information was not readily

accessible to the Team. The draft of the "Cost Study of Expanded Program on Immunization in The Gambia". January 1982, was made available to the Team. This study found that the national average cost in fiscal year 1980-81 per immunization dose administered was D3.06 (\$1.44) and varied among the thirteen sites surveyed between D1.16 and D6.32. The national average cost for fully immunizing a child including yellow fever was D49 (\$23.11).

Among the several issues related to assessing cost are: (1) the expensive mobile teams compared to the more economic fixed centers and the relative effectiveness in numbers of children and pregnant women reached; (2) the substantial costs for start-up, including expatriate salaries; and (3) the appropriateness of calculating costs only for fully vaccinating a child compared to costs of administering a single dose or establishing a definition for partial vaccination.

It is fair to say that EPI staff in all countries are concerned about keeping costs down while extending coverage as widely as possible. Although greater efficiency is obviously possible in areas with less population dispersal, this has not been the only basis for establishing priorities.

Impact: (Mortality and Morbidity Trends)

The across the board goal of 50% decrease of morbidity and mortality of all EPI target diseases by 36 months after initiation of full operations has been modified to "achievement of mortality reductions for the following target diseases: measles 60%, polio 30%, pertussis 30%, neonatal tetanus 60%." There have been significant reductions in mortality from most diseases within all of the DTAs since the programs began, even though none of the DTAs had been in full operation for more than 36 months as of December 31, 1981. The data summarized in Table 16, indicate that substantial progress has been made even though quantified targets have not been attained in all cases.

Although, morbidity data are obviously less easy to gather, some have been collected within all DTAs. However, since reduction in morbidity from the target diseases is certainly more impressive numerically than that of mortality, the impact of EPI activities is even greater than is reflected in mortality figures.

Sub-objective 2: Development of Training Capabilities

Progress: According to the overall SHDS Project goal of developing capabilities of Africans, training has been a central focus within Objective III. The three operations officers assigned to the DTAs have worked closely with national counterparts on every aspect of their EPI work. A training plan was prepared for each national officer to insure complete preparation for their assumption of full responsibility. In 1981 a decision was reached that the Ivory Coast operations officer was self-sufficient and accordingly at the end of that year the CDC officer was reassigned to another country. All national counterparts have participated in at least one EPI mid-level Managers Course.

In-service training has gone on continuously for different levels of personnel in all DTAs since the start of operations. Categories of staff reached include national-level managers, regional-level supervisors and health facility personnel. They have been trained in cold chain management, EPI surveillance, vaccination coverage assessment methods, health promotion and community participation techniques and other aspects of good program management. Training has included formal instruction using selected EPI course modules and on-the-job informal instruction. A national mid-level managers course has been held in each of the three countries with the following persons trained: Gambia, May 1980, 31 Gambians; Cameroon, August-September 1980, 21 Cameroonians, June-July 1981, 21 Cameroonians; Ivory Coast, January 1980, 31 Ivorians.

Training programs for personnel from other SHDS countries have been organized as well. ~~The Master Table lists nine mid-level and senior-level EPI courses held in the Region which SHDS helped to initiate and/or to~~ which SHDS contributed. Six of these courses were inter-country meetings through which several professionals from each of many countries benefited. The DTAs, as their name implies, were to be training sites for national and regional personnel. The Ivory Coast DTZs have been used for training in two inter-country courses and for individual training programs for a Togolese operations officer (6 weeks) and short observation visits from a Liberian health official and one USAID person. The DTAs have served as the field sites for EPI course training in vaccination coverage assessment for EPI participants from several countries and WHO epidemiology course trainees. In the first two years of the Project, it was expected that there would be a certain number of personnel invited from neighboring countries on a scheduled basis for organized field experience. A formal mechanism for this has not been established.

The other important area for training has been in connection with the three medical epidemiologists. The two epidemiologists posted at OCEAC and OCCGE have worked with staff of those institutions and national level professionals, while the one in the Anglophone subregion has worked with national counterparts only since there was no comparable regional institution. Since 1981 discussions have been many on the hiring at OCEAC and OCCGE of Africans from the member countries to work as regional counterparts with the two CDC epidemiologists in their regional work. For various reasons this has not occurred: insufficient budget to support these persons, lack of conviction regarding the appropriateness of this type of training for creating qualified epidemiologists, and priority of the countries to supporting national level professionals.

REGIONAL MEDICAL EPIDEMIOLOGISTS' ACTIVITIES

through December 31, 1981

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Regional Medical Epidemiologists	At Post	Country Visits & Activities*	Special Studies	Courses & Meetings	EPI Evaluations	Training African Epidemiologists
OCODE	April '80-present	Ivory Coast - EPI Upper Volta - EPI GUT Mauritania - EPI DS Togo - EPI Senegal - EPI Mali - EPI In-depth National Surveillance review completed: Mauritania '81 UV & IC ongoing IC '81	Meningococcal Meningitis in Tangaye, UV March-April '80 Polio Lameness Study - Kerkogo '80 Meningitis Epidemic UV '81	Mid-level course Abidjan '81 Banjul - SERS/CDC Disease Surveillance meeting April '80 Dakar - Feb. '81 2nd International Seminar on Vaccinations for Africa	Mauritania June '81 Ivory Coast Oct-Nov. '81	Training African Epidemiologists OCODE -- health professionals from member states 10 medical officers from WHO International Epidemiology course - IC training '81 Assistance in development of Upper Volta Epidemiology Bulletin
OCEAC	1978-80	Cameroon - DS, GUT Congo - EPI, GUT CAR - EPI Gabon - EPI, GUT	Yellow Fever - Cameroon '80 4th Annual Eval. of Immunization Coverage in Yaounde Nutrition status & sociological variables studied Paralysis due to polio in Cameroon 1980 Measles efficacy study - Yaounde '81 Cholera epidemic Cameroon - '80 Monkey pox Cameroon '81	Mid-level Seminar Cameroon '80 Mid-level course Cameroon '80 Upper level course Abidjan '79 Upper level course Brassaville '80 Mid-level course Cameroon 6/81 Mid-level course Cameroon 1/82	Cameroon May '81	CUES Students training course for Africa; epidemiology technical training yellow fever and African hemorrhagic fevers training cholera training African from WHO/Geneva EPI headquarters - 1 year Training laboratory technicians OCEAC Training WHO Epidemiology Courses, '80-'81 Integrated EPI management into curricula of (a) OCEAC Training Center; (b) CESSI (c) CUES
	Aug '80 - present	In-depth National Surveillance review completed: Cameroon - '79 Congo '80 Gabon - '80				
Anglophone Sub-region	Sept. '79 - July '81 Replacement not yet at post	Gambia - DS, GUT Liberia - EPI, DS Sierra Leone - EPI, DS In-depth National Surveillance review completed: Gambia - '80 Liberia - '80 Sierra Leone - '79	MCH services utilization survey - Aug '80 Gambia Measles Efficacy Study Gambia '80 Sierra Leone Tetanus Assessment '81	Mid-level course Banjul '80 Banjul - April '80 Disease Surveillance Meeting	Gambia Nov. '80 Liberia '81 Coverage survey	Gambian counterpart - 2 years

* DS = Disease Surveillance; GUT = Disease Outbreak; EPI = Planning, Implementation, Evaluation of EPI

TABLE 11

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A full time epidemiologist counterpart was assigned in The Gambia and an epidemiology unit was created in the MOH. During trips to SHDS countries, the CDC epidemiologists have worked collectively with nationals responsible for activities for which their assistance has been requested, i.e. EPI directors, national epidemiologists, etc. The epidemiologist assigned to OCEAC has assisted 5-7 CUSS medical students annually with their research for medical theses. In addition, training courses and meetings have been held at both OCEAC and OCCGE to which SHDS personnel have contributed. For example, the epidemiologist at OCEAC helped in designing training modules and field exercises for annual training for African epidemiology technicians.

Within Objective III, sub-objective 2, there has been some collaboration with the WHO RTCs in incorporating EPI training modules into certain of their courses. A CDC headquarters person, the SHDS Assistant Director and a WHO/Geneva staff member worked with staff in Lagos and the Federal Epidemiology Unit to integrate EPI training materials into the curriculum at the Center.

Effectiveness: EPI course evaluations and one year follow-up questionnaires sent by WHO/Geneva indicate that the majority participants were appropriately selected, that is, were working directly or indirectly with EPI in their country. The participants rated the course content as very useful and felt that their knowledge had been increased in all of the subjects covered. From interviews with officials in different countries, the evaluation team has seen that national EPI plans have been developed and implemented by some of the senior-level course attendees.

It is difficult to objectively assess the impact on African colleagues of working with SHDS medical epidemiologists. The Director of OCCGE and staff members of OCEAC have stated that their personnel have benefited technically from the association with these professionals. The Acting Director of Medical Services in The Gambia was positive in his comments

regarding the quality of personnel and the importance of the counterpart relationship. The first epidemiologist counterpart has left the unit for long term training in health manpower development and a second counterpart has been assigned during a break in coverage of the CDC post.

The Evaluation Team considers that investigating and controlling an epidemic or developing a disease surveillance activity with an outstanding professional, could have positive influence on the technical capabilities of African colleagues. One concrete example of the fruitfulness of the training activities and collaborative approach within SHDS has been the participation on EPI evaluation teams of African nationals. Some African professionals have served as external consultants to program evaluations in other SHDS countries, while others have joined the team for their own national evaluation exercise. In both cases the African evaluators have almost all been former participants of EPI training courses and often counterparts of CDC field staff.

Sub-objective 3: Development of capability to gather information (data necessary for health planning including demographic data) to strengthen regional and national systems of disease surveillance and health information gathering necessary for effective health planning.

Progress: In-depth analyses of national surveillance systems and recommendations for improvements have been completed in six SHDS countries and two others are in progress. (Cameroon 1979, Congo 1980, The Gambia 1980, Sierra Leone 1979, Liberia 1980, and Mauritania 1981; Ivory Coast and Upper Volta are in progress.) Surveillance of certain diseases, EPI target diseases in particular, has been improved in several countries of the Region. Within the OCEAC subregion, surveillance and investigations for cholera and African hemorrhagic fevers have been particularly emphasized. For Sahelian countries of the OCCGE and Anglophone sub-regional group, meningococcal meningitis has been of special interest. In all areas,

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~~surveillance of measles and other~~ ~~including investigations of outbreaks has~~
been a priority. As Table 16 shows, surveillance systems for the EPI target diseases have either been developed in the DTZs (six) or are in the process of being instituted (three).

Three regular national or subregional newsletters have been created through SHDS Objective III. OCEAC bimonthly EPI-Notes has been published and circulated to member countries and other interested groups since October 1978. The Anglophone subregional EPI bimonthly newsletter has been published since early 1980 in The Gambia. Similarly, the Ivory Coast publishes a quarterly EPI information bulletin for its national personnel and interested agencies. OCCGE has a monthly bulletin to which the SHDS/CDC epidemiologist contributes articles.

CDC personnel have been active in implementing within DTAs and other EPIs a program activity reporting system which is consistent with WHO management information system requirements.

Objective III activities have developed the sentinel center approach to disease surveillance within the Ivory Coast and Cameroon DTAs. This is an important advance for these countries towards streamlining their systems, reducing the workload of personnel and ensuring accurate data.

Effectiveness: The development of comprehensive national disease surveillance and health data collection systems within the SHDS region has not been accorded as much priority in terms of personnel time allocation as the EPI disease and serious outbreak investigation and the first two sub-objectives. The reasons for this are several. Requests from countries have been more oriented towards particular EPI program planning, assessment, and evaluation requests and specific disease problems investigation and

~~less towards overall national surveillance analysis. The recommendations~~
made for improvement in the systems by the epidemiologists have not been
implemented. The sentinel center approach to surveillance, using selected
sites, certain hospitals, and special surveys to gather information on
prevalence and incidence, has been recommended and is now being implemented.
OCEAC is currently working on a regional system which it would like member
states to adopt and so has not encouraged the epidemiologist to continue
with national reviews. OCEAC protocol has inhibited freedom of movement of
the CDC epidemiologist to member countries in recent years. Finally,
program planning has given the priority to EPI development in keeping
with regional PHC policy.

Nevertheless, there is evidence of strengthening capabilities within
the countries to monitor and control certain priority diseases.

Within Ivory Coast, for example, surveillance of target EPI diseases
is now a routine part of the Institut d'Hygiene's work. In Sierra Leone,
surveillance of neonatal tetanus continues and effectiveness of EPI is
being monitored.

While the emphasis of epidemiologists' work has been in accordance
with country requests and the high priority accorded to EPI throughout the
Region, it is regrettable that more progress was not made in health data
collection system development. The assessment of EPI and other health
interventions on demographic trends is an important area where more expertise
within governments is needed. Adequate health and demographic data are
essential for good health planning and management. Monitoring nutrition
status is another fundamental component of health surveillance which has
not received the attention justified by the prevalence of malnutrition in
the 20 countries.

Sub-objective 4: To develop a coordinated laboratory system to provide necessary back-up services to the disease surveillance and control systems.

Progress: The SHDS Project along with WHO has collaborated with the laboratories at OCEAC, OCCGE, and the Institute Pasteur in Abidjan and Dakar to develop or strengthen laboratory capacities for a variety of needs within the Region. SHDS has provided considerable equipment and supplies to the OCEAC laboratory and has trained an African laboratory technician. This laboratory now has a wide range of capabilities for support to member countries in disease surveillance and control systems.

SHDS has cooperated with the Institute Pasteur in Dakar and Abidjan to establish the capacity to monitor potency of measles, poliomyelitis and yellow fever vaccines. SHDS continues to provide support to the OCCGE Laboratory at the Center Muraz and its associated institutes located within the member states, who working in collaboration with the Institute Pasteur Abidjan/Dakar, now have the capability to perform all laboratory work necessary to support EPI activities in the subregion. This includes especially the competence to monitor development of immunity to measles and poliomyelitis. SHDS has encouraged the Medical Research Council (MRC), located in The Gambia and primarily British funded, to contribute its competence to the coordinated laboratory system for the West and Central African Region. Some supplies and equipment have been contributed by SHDS to all of these laboratories.

Effectiveness: The establishment of this coordinated laboratory system is an important accomplishment for the Region. The back-up services for EPI, disease surveillance and epidemic investigations are essential. Moreover, it is significant that this competence now exists within countries in the SHDS region. The creation of this network can only strengthen the technical

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cooperation among countries.. As communications improve among countries, the concept of multi-country resources would become more practical.

Relevance: The activities of Objective III are relevant to the overall goals of SHDS and to the health policies and problems of the Region. Improvements in EPI management and disease surveillance are key contributors towards development of "the capability to plan, implement, and manage effectively and economically feasible health delivery systems in the West and Central African Region".

The trend within Objective III activities towards EPI emphasis, including disease surveillance in support of it, is an indication of the relevance of the Project to health developments in the Region. Dr. Comlan Quenum, Regional Director of WHO/AFRO stated in a Memorandum on EPI in 1979, "As one of the components of primary health care, the Expanded Program of Immunization (EPI) constitutes in integrated health development, a crucial step towards achievement of the objective which the governing bodies have assigned to us: health for all by the year 2000". EPI is a crucial step towards "health for all" for two important reasons. First, the six target diseases, which are preventable by vaccination, directly or indirectly account for a substantial proportion of the under-five morbidity and mortality. Secondly, by focusing attention and resources on a selected priority public health program, the overall health system can be strengthened in a practical way. A successful EPI relies on development of good management, logistics, communication, training and public education. Objective III of SHDS has done an excellent job of providing useful resources to three countries in particular, but to several other countries as well, in a way that strengthens their health systems in a hopefully lasting way.

Impact: Of course, the ultimate test of a health project's impact is on health status and survival. The Evaluation Team feels assessment of such impact of SHDS Objective III in the Region is not feasible. Except for limited data on selected EPI diseases, statistics are not available to measure SHDS' impact in the 20 countries, nor were data collected on pre-project morbidity and mortality levels. It would not be possible to attribute to SHDS, even if one could document, improvements in overall health status and quality of life in any of the 20 countries during Phase II of SHDS.

Summary

Overall, substantial progress has been made within Objective III through the six field staff persons, provision of supplies and equipment and training. The quality of work of assignees to all six field staff positions (eight professionals total) has been high and the headquarters support for them has been good. Mid-year and annual reports from CDC headquarters to AID have been well organized, informative and timely. It is the judgment of the Team that Objective III, with the exception of Fed-o-jet part supplies for which AID/W had responsibility, has been professionally implemented and well managed.

To date, approximately 266 people from SHDS countries have participated in EPI management courses and hundreds of community health workers have received in-service training. EPI has started in 14 of the 20 countries and the other six are in the planning phase. CDC epidemiologists have visited nine countries for the purpose of giving attention to improving their disease surveillance and health data collection systems and three of them are actively reorganizing their information gathering. Methodologies for immunization coverage assessment and EPI program evaluation have been introduced and are widely utilized, and the sentinel approach to target disease surveillance has been applied in some countries. Beginnings of a

coordinated laboratory system have been developed as a multi-country resource for support of disease surveillance and EPI activities. Finally, several health professionals have increased their epidemiological skills through informal learning opportunities and all concerned parties are actively seeking means of inaugurating formal training programs for African epidemiologists. The SHDS evaluation team favors development of qualified epidemiologists and discourages the reassignment of resources to provide a bit of epidemiological training to medical school graduates before adequate specialists exist.

Future Needs

For the three DTA countries, continuing technical needs vary. According to external evaluations and reports to the SHDS team, the Ivory Coast and The Gambia Programs are well developed but would benefit from periodic visits from CDC technical staff. The Camercon EPI seems to require continuing full-time external support to achieve and sustain satisfactory coverage in all DTZs.

The status of EPI varies from the planning phase to partial geographic coverage within the other 17 SHDS countries and the needs for support differ accordingly. It is clear that EPI is an important preventive action program for the countries and that they are making efforts to extend it as widely as their limited health budgets permit. Many bilateral agencies and WHO and UNICEF contribute substantially to these programs. In general, the types of resources, training and support planned by the new AID-financed Combatting Childhood Communicable Disease Project (CCCD) are appropriate for the requirements and priorities of the Region and are needed by every SHDS country in varying degrees.

The establishment of disease surveillance and health data collection systems which provide reliable and adequate information for program planning, monitoring and evaluation is a continuing need within all twenty SHDS countries.

~~The training of epidemiologists qualified to develop these systems and~~
investigate outbreaks is an essential prerequisite. Decisions and plans need to be formulated for training national epidemiologists with due consideration to continuing relationships with OCCGE and OCEAC. Again, the CCCD Project envisions some activity in this regard.

In addition to trained epidemiologists, public health nurses and doctors and other professionals are in great demand and short supply. Programs offering a Masters Degree in Public Health like the Regional Center for Health Development in Cotonou, are a high priority in the Region to train a sufficient cadre to handle communicable disease control as well as other aspects of primary health care.

Three important aspects of communicable disease control that should receive more attention from AID, WHO, other donors and the countries, are diarrheal disease and malaria control and nutrition promotion. The CCCD Project as designed will incorporate the first two elements and possibly the third within the health education component. Countries and cooperating organizations should increase their efforts to ensure integration of active nutrition components in primary health care projects, including at a minimum nutrition education, growth monitoring and improved food conservation.

The measles vaccine supply to the countries from AID through SHDS is scheduled to terminate as of December 1982. Although other donors can be requested to increase the quantity of vaccine they provide, it is essential that SHDS, WHO/AFRO and AID assure that these requests are made in a timely fashion to prevent ruptures in stock and that decisions on uptake of the responsibility and plans for meeting it are formally laid down.

~~Objective IV -- To develop low cost (affordable) health delivery systems.~~
(Strengthening applied research on PHC).

Early in Phase II, the anticipation was to work with two institutions in the Region to develop capabilities for training, applied research and evaluation activities for improving systems of low cost (affordable) health delivery. Also plans were discussed for regional drug supply and transport activities. Ultimately these proposals were modified for various reasons and the change was made to an exclusively applied research objective, with the aim of promoting research capability in the Region.

The activities that ensued responded to the several subobjectives that were proposed by SHDS and approved by the PCC. The plan called for helping health ministries and others to develop actual research studies to try to answer real and pressing questions in their effort to give health service. The focus was to be specifically on PHC and, if looking at management considerations, would tie in with Objective I. If it concerned training of VHWs or their superiors, it would complement Objective II; if on IPI, Objective III would be served. It was felt that the best way to learn would be by doing.

It was recognized when establishing research as an objective that there were many questions for which answers could be extremely useful but that research experience and capability were largely absent, while administrative precedent and funding were not favorable. A lot of spade work was called for to reduce unfamiliarity with applied research among senior public health officials, demystify the basic techniques and make administrators aware of the feasibility and utility of facing questions with direct methods of inquiry, such as determining factors or contributions to effectiveness.

Among other first steps was the necessity to identify existing research talent in the countries, whether in individuals or (preferably) in institutions, that could serve and collaborate with health ministries.

~~In cooperation with WHO/AFRO, SHDS helped to initiate, sponsor and~~
conduct three applied research workshops, one in 1980 and two in 1981. SHDS staff along with African and other consultants did a large share of designing workshop curriculum and developing case studies, exercises and other teaching materials. SHDS professional staff in Boston and Abidjan devoted considerable time to the development of the systematic guidelines for applied research, which constituted a major text for the workshops. These workshops on research departed from the usual pattern of SHDS-related workshops for they were purposefully located in cities where few or none of the other meetings had been held and were hosted by the Ministries of Health of the respective countries. That was excellent strategy.

The three workshops were organized on the theme of applied research in PHC. The first (Upper Volta, 1980) involved a small number from the SHDS Region, only nine participants from six countries. This permitted intimate intensive work among this group of senior level health officials. The major message was the concept and value of research. The next two meetings were similarly held small. The workshop held in Mali in 1981 also aimed at senior health officials. The Central African Republic (1981) meeting combined senior with mid-level health professionals in order to move closer to the individuals who might have jurisdiction over or even possibly do the research. All three research workshops were in French (an English-speaking workshop is being held at the time of writing this report in March 1982).

The teaching materials were a good start in this new venture. The participants were excited by the new approaches and ways of thinking. They worked hard in small groups and typically complained that the time allowed for the meeting was too short. Requests were made for follow-up in countries, to be held for one country at a time, so that more colleagues could have the experience together and actual problems in their own Agency could be tackled

realistically under guidance. The learning would be furthered more effectively.

Clearly, interest levels were not paralleled by confidence for moving into launching research. We know of not a single acceptable new study proposal being admitted or ready for approval before 1982. Most health personnel who might move into research or evaluation positions still need help in selecting appropriate questions, conceptualizing a feasible approach and designing the processes of investigation and of analysis of data. For that, personal discussion on-the-spot is the best way to proceed.

For some time, there was uncertainty about approval procedures on project proposals. In October 1981, the present mechanism was established whereby SHDS, AFRO and REDSO/WA review and approve the projects. One project has been funded. This is a study on the cost effectiveness of FPI in the Ivory Coast. It had been developed some two years before with outside consultant help, but lay dormant for lack of funding until the SHDS resource came along. Since it is the only one, it will be discussed in some detail; although the work is just beginning, lessons may be learned from it for future sponsoring of applied research in the Region.

The principal investigator is a well trained economist on the staff of the Centre Ivoirien de Recherche Economique et Sociale (CIRES) and affiliated with the Institut d'Hygiene in Abidjan for purposes of this research. He has had experience in FPI evaluations and is receiving epidemiologic consultations through SHDS. The study tries to answer both epidemiologic and administrative questions and collect data about:

1. Comparing fixed facilities with mobile units for EPI work, and their cost-effectiveness;
2. Analysis of places of residence of clients in relation to places where immunizations are done;
3. Extent and areas of immunization coverage.

Without impugning the competence of the investigator, who is giving the matter careful thought and doing extensive literature review, the project is

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subject to criticism because it is too broad, multi-faceted and ambitious. The current issue in EPI no longer is that of choice between use of fixed facilities versus mobile teams. The pattern is a combination of the two. If they are to be complementary, the cost effectiveness of each is not independent of the other.

It is understandable why pressures accumulated for approval of this study in view of its high technical quality and absence of other acceptable proposals. As SHDS was launching a Regional fund-granting research program, however, this study in the Ivory Coast does not seem to have been fortunate first choice. It should have been kept simple and cut down in size.

It is noteworthy that this study is the first non-clinical, non-laboratory research done at the Ivory Coast's Institut d'Hygiene. The fund granting part of Objective IV can be very effective in getting research into new quarters. The Institut d'Hygiene is sufficiently attracted so that it is contributing to the cost of the study.

Stimulating applied research in the Region on PHC is strongly warranted at this time. PHC efforts are floundering in the mud of untested practices pertaining to scope of duties of VHVs, how to supervise them, how to pay them, how to maintain supply of medications, how to organize referrals and clinical backstopping, how to integrate EPI as a component of PHC, and many others. It is recommended that at least one full time expert on generic research design be obtained for the Region. That consultant should help identify in each of several countries a single individual who is in a specific position to do applied research on PHC in or with a Ministry of Health.

That person should be helped on-the-job to select a question and prepare a proposal, and if funded, design and conduct a study with technical assistance. In most parts of the Region, applied health research is in the stage of learning to walk. Later, complexity can be added. If six or ten such studies are supported, the investigators should be brought together to learn from listening to each other's experience. After several years, decision could be made on next steps in support of research in the Region.

~~E. FINDINGS, CONCLUSIONS AND FURTHER NEEDS~~

This section of the Report highlights, assesses and interprets the findings that are detailed in the body of the text. Activities aiming toward achievement of the four Project Objectives are re-grouped under three headings which are pertinent to the goal of leaving residual strengths in the Region. These are:

1. Capability in development of health personnel.
2. Capability in Public Health Management.
3. Current health emphases.
 - a. Expanded Programs of Immunization
 - b. Primary Health Care
4. The SHDS Structure and Operation

In addition, attention is given to the workings of the mechanism established to steer the Project along its difficult course through the rapids of international, Regional and national bureaucracies.

The assessments of the Project elements follow a set of evaluation components adapted from the WHO Evaluation Guidelines (HPC/DPE/78.1). With particular reference to the SHDS Project, the components are defined as below.

Progress: The SHDS activities, their types and amounts (e.g. number of consultations made);

Relevance: The appropriateness of activities to current public health philosophy and readiness and needs in the Region (e.g., EPI and PHC);

Quality: Attainment of standards (e.g., degree of expertise of consultants; scope of training content of workshops);

Effectiveness: Attainment of immediate objectives (e.g., numbers of children immunized; numbers of persons trained);

Efficiency: Relationship of results to effort (e.g., appropriateness in selection of trainees; costs);

Impact: ~~Secondary or ultimate changes in the desired direction~~
(e.g., reduction in mortality; achievement of Regional or country self-sufficiency in health manpower training).

Needs: Selectively, comments are also made on continuing and future needs of high priority in forward looking planning for the Region. Criteria of high priority include:

1. being in keeping with current public health aims (e.g., PHC);
2. being applicable in broad geographic areas and affecting large populations (e.g., infant diarrhea);
3. having reasonable feasibility (e.g., prevention of tetanus of the newborn);
4. having strategic or crucial health element that potentiates larger endeavors or objectives (e.g., malaria and economic development; effect of childhood illness on physical and intellectual growth and development); and
5. promise of high cost effectiveness (e.g., in-country technical cooperation for strengthening of national training systems).

1. Capability in Development of Health Personnel

The promotion of indigenous capability to develop and maintain adequate cadre of health personnel in the Region was approached through a two-pronged attack -- the strengthening of Regional training institutions and steps toward the development of national training systems. SHNS worked with five Regional training institutions -- three for nurses and two for a more varied list of health personnel.

A. Nursing education at the CESSIs in Dakar and Yaounde and at Cuttington College in Liberia and three Regional workshops:

Progress: Huge amount of inputs at the nursing institutions and some additional at outside workshops.

Relevance: Highly relevant emphasis on PHC and on role of nursing in supervision.

Quality: High on the whole

Effectiveness: ~~High at one nursing institution, less so at the~~ other two with respect to curriculum modification. 186 students from 15 SPDS Region countries enrolled; for two years study at one of the three nursing schools, 1978-81; 42 nurses from the Region attended the three Regional workshops.

Efficiency: Low in the one institution where consultant's time was diverted to classroom teaching.

Impact: Better trained students, more aware of PHC. Insufficient time has elapsed to assess their job placement and influence on health services and on national level nursing education in the three countries.

Needs: Immediate need to assist current long term supported nursing students to complete their planned study after 1982; continuing need for consultation and other supports for the three nursing institutions, including fellowships for Master's level education of faculty staff. Future extension to promotion of national level workshops for nurses on supervision of VHVs; broad review by Regional agencies and groups on delineation of roles of nurses in PHC and implications thereof for job designation and professional education.

The entire question of development of nursing in the Region needs a new look, including facing such questions as listed below:

- Relative emphasis on basic versus post-basic nursing training.
- Pre-training requirements, professional and academic titles and corresponding job status.
- Nursing specialization - tutoring, administration, etc.
- Relationship to health education, nutrition, data collection systems, etc.
- Roles in training and supervision of various types of clinic and community health workers.
- Categories of sub-professional nursing workers.
- Nursing and midwifery.
- Regional nursing bodies and their roles

B. Resources for training of health personnel at the RTCs at Lome and Lagos:

Progress: Tremendous volume of inputs into the two RTCs by short term consultation, material supports and fellowships. Contribution to total 33 workshops and courses focusing

on planning and management (11), PHC training (19),
and communicable disease control (3).

Relevance: Appropriate emphasis on PHC, techniques of design and
conduct of training courses for a number of disciplines.

Quality: High quality workshop design, range of pedagogic methods,
interaction with participants.

Effectiveness: 478 participants from the Region attended the 33
courses or workshops (222 participants from
outside the Region).

Efficiency: Large product from the amount of time invested.

Impact: The RTCs now have approximately 41% larger annual student
body in the Region. Ministries of Health have requested from
the RTCs assistance for in-country training activities.
RTC staff and others in the Region have acted as workshop
facilitators and consultants and constitute a valuable
resource toward Regional self-sufficiency in health manpower
development.

Needs: Continuing support to RTCs in fellowships, materials and
especially in larger faculty representing more disciplines,
among other purposes, to do outreach into countries for
running training workshops there and for developing
national training systems adequate to produce the large
cadre of VHWs and supervisors required for achieving
national coverage with PHC by the year 2000;

In larger countries, establishing training centers or
making existing educational institutions more available
and relevant to the personnel needs of public health agencies.

2. Capability in Public Health Management

Progress: SHDS contributed to 21 workshops and courses in three
Regional centers (11 held at RTCs) and in other locations;
In the earlier part of Phase II, SHDS gave considerable
staff and consultation time to the Dakar WHO Centre Program;
SHDS contributed to WHO development of a network of
management teaching institutions in Africa.

Relevance: Highly relevant - without better, more systematic management,
health objectives cannot be met, even with increased
resources and outside help; good management is particularly
indicated to make effective use of limited resources.

Training was addressed strategically at several levels --
ministerial, with an intersectoral approach, mid-level and
supervisory. Good management is essential if national
coverage is to be achieved in EPI and for the WHO goal
for PHC by the year 2000.

///

Quality: All reactions indicate high quality in selection of subject ~~materials and in manner of conduct of sessions so as to involve~~ and stimulate both high level officials and mid-level participants.

Effectiveness: 287 participants from the Region attended the 21 workshops/courses (129 attended the 11 planning and management workshops/courses at two RTCs); the selection of persons was gratifyingly at a high level of responsibility in health administration; interest was well maintained throughout the courses.

Efficiency: Costs for some of the top-level intersectoral workshops were higher than average because of the high status of the participants, but well worth the difference to reach this critical group.

Impact: Participants retained enthusiasm and interest after returning to their respective countries and positions. Requests are being received for attendance at future similar workshops. Ministers have requested assistance in holding comparable training in their own countries for their administrative and supervisory personnel and adapted to their specific program problems.

Needs: The Region has made considerable progress during Phase II toward self-sufficiency in giving management training in the health field and is ready to organize for intensive work at the country level. WHO is setting up a network of about a dozen training institutions with a Secretariat to coordinate and increase the resources of the institutions and particularly to strengthen their application of management principles and method to the health field.

Full-time and part-time consultation support is still needed to meet the demands for increased amount of management training, to cover the attrition rate among persons from the Region already at consultant level and to help adapt the training courses to the different issues at national level.

3. Current Health Emphases

A. EPI is one of the two interventions (the other being oral rehydration therapy) most likely to affect a significant, fairly prompt reduction in infant mortality.

Progress: The SHDS activities in Objective III, which includes EPI, have been multi-varied and of high volume. Three full-time epidemiologists were based in as many countries.

Three full-time operations officers were on the job in as many DTAs for all of Phase II.

14 workshops were held in relation to communicable disease control considerations such as EPI management and personnel training and disease surveillance.

Relevance: EPI is one of the most important components of current world health strategy.

Quality: Under the supervision of CDC, the activities in Objective III were maintained at the highest scientific level with prompt inclusion of new development.

Effectiveness: The data on immunization achievements in the DTAs are given in the Report.

Immunization levels reached or came close to reaching target objective in the majority of the DTAs.

294 participants from the Region attended the 14 workshops and courses.

Counterparts were trained for the three national operations officer positions. Some epidemiologists within the Region have worked with or been trained in short term programs by CDC technical staff. Two national epidemiologists had long-term training experiences with SHDS epidemiologists.

Impact: Significant reductions in childhood morbidity and mortality for certain EPI target diseases have been realized in almost all of the zones.

Needs: Substantial human and financial resources are required from the countries and cooperating agencies for building EPI programs in the countries. For the SHDS DTAs, continuing technical needs vary. The rapid progress must be followed by sustained interest. Within the other 17 countries, technical assistance, training, equipment and operational funds must be increased if the goal established for the year 1990 of ensuring for all target age children accessibility to EPI services is to be attained. Decisions and plans are to be formulated for training adequate epidemiological talents. Some of the alternatives include: long-term degree program development in Africa, practical on-the-job training for 1-2 years with experienced epidemiologists for qualified individuals followed by necessary academic preparation outside the Region -- or the two phases in reverse order; or short term training for medical and nursing school graduates. We believe all of these approaches are reasonable, but the latter alternative should not take priority over the creation of fully trained qualified epidemiologists.

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~~b. PHC is the major thrust of world health authorities throughout~~
the world. All four SHDS objectives focused on or included elements of PHC.

Progress: As stated above, workshops and courses were held under Objective II to develop Regional capability in development and maintenance of health personnel. Some of these, especially TOT meetings, gave particular attention to the training of VHWs for PHC; workshops were held on research design and methods for answering questions about PHC.

Impact: It is too soon to expect significant changes. Few governments have yet established national training systems, which must be done to reach down to the supervisory level and the VHWs themselves. Pre-service training is of course a sine qua non for villagers with little or no previous experience in health work. But training alone without on-going on-the-job supervision would not attain an adequate quality or reliability of service. No country in the region has satisfactorily solved the supervision problem. This is a critical matter that warrants intensive study and analysis, planning and management.

There are many other unanswered questions in PHC, including such vital matters as methods of remuneration for VHWs, consistent supply of medications and scope and types of tasks that are to be carried by any one worker. Solutions found in any one country would by adaptation be useful for the entire Region.

Need, therefore, will exist for some time for large amounts of assistance to countries for training, management, clinical considerations and research in PHC.

4. SHDS Structure and Operation

Progress: The SHDS structure involves Boston University through a contract with AID and by agreements with WHO/AFRO and CDC. University activities are directed from Boston and Abidjan. AID relationships occur through Washington and Abidjan (REDSO), with increased responsibilities having been passed to the latter during Phase II.

Direct relationships with Governments are made by the Boston University group in Abidjan and by WHO/AFRO and REDSO through their WPC/NWC and Missions, respectively.

Two committees, a Project Coordinating Committee (PCC) and a ~~Project Review Committee (PRC)~~ were established to help involve Governments of the 20 countries in Project planning. The PCC met in 1977 and once more during Phase II; the PRC met four times 1978-81.

Relevance: The structure was appropriate to the needs of the Project and to the scope of activities and the roles allocated to each of the participating units.

Effectiveness: Mail communication is neither easy nor reliable in Africa, even with the benefit of official pouches. Telephone and telex used by SHDS helped considerably. The extensive personnel travel appropriate to the nature of the project and its implementation in 20 countries sometimes had to be increased still further because of the unavailability of other kinds of frequent exchange. Missions and MPC/MWC were helpful. Location of AID link at BFDSD added considerably in facilitation and intimacy in Project monitoring and planning.

Most opinions were favorable on the utility of the PCC and PRC meetings, though the latter occurred so infrequently. The Evaluation Team feels that the value of the committees' contribution could be enhanced by a newsletter which has been started and by other communication between meetings.

Efficiency: Cost of the Project is high, some of it inherent and unavoidable, such as fellowships and vaccine. Some costs are determined by the pattern of country health services, such as the degree of mobility required in an EPI. Large expenditures are required to cover extra-Regional personnel and consultants, extra travel incidental to the locations of home base of the consultants, and institutional overhead charges.

Impact: Relationships between SHDS/Abidjan and WHO/AFRO were harmonious and productive. Differences arose between SHDS/Abidjan and AID/Washington about approval for certain activities, particularly the extent of in-country work. Collegial relationship existed with governments.

Needs: Arrangements are already in process for extending the use of SHDS 1982 funds into 1983 for certain specified purposes and duration, such as continuing fellowships for students abroad part way through Master's degree study.

AID and WHO/AFRO will need to confer and call in other agencies if deemed necessary to consider ways of minimizing immediate dislocation effects at the end of Phase II. This concerns, principally, support to nursing institutions and DTAs.

For the long term future, there are many needs. In general, the shift of support emphasis can be from the Regional to the country level, with certain residual need for assistance to the Region at that level, especially through short-term consultation. Particularly, indigenous research capability needs external bolstering.

The amount and range of external support will influence answering the question of what structure would be most likely to meet the needs of technical consultation, evaluation and coordination. For AID, the base in Abidjan would be advantageous.

Efficiency: It appears that the SHDS Project might have had a better data system, as it took over six months for the Evaluation Team to collect basic project information, such as the number of courses and workshops sponsored, for the Evaluation. AID/W had recently provided a management information specialist from the U.S. Census Bureau to assist SHDS in improving their data system; however, it is too soon for the fruits of this effort to become apparent. SHDS has also recently purchased a mini-computer to assist them organize administrative information as well as other data.

Admittedly, SHDS is involved with several bureaucracies and institutions located in various locales, each with their own data systems. Nevertheless, it behooves all development projects to ensure that the activities they are involved in are carefully documented and the data readily available for utilization.

In general, SHDS quite satisfactorily ran a complex operation of workshop schedules, visiting consultants, staff travel, committee meetings and demands for implementation plans, progress reports and budget.

ACRONYMS

AID	Agency for International Development
AID/W	Agency for International Development/Washington
APHA	American Public Health Association
BU	Boston University
CCCD	Combatting Childhood Communicable Diseases
CDC	Centers for Disease Control (United States)
CEDH	Center for Educational Development and Health
CESSI	Centres d'Enseignement Superieur Soins Infirmiers
CHP	Country Health Programming
CIRES	Centre Ivoirien de Recherche Economique et Sociale
CUC	Cuttington University College
CUSS	Centre Universitaire des Sciences de la Sante
DTA	(EPI)-Demonstration Training Areas
DTZ	(EPI) Demonstration and Training Zones
EPI	Expanded Program of Immunization
MOH	Ministry of Health
OCCGE	l'Organisation de Coordination et de Cooperation pour la lutte contre les Grandes Endemies en Afrique de l'Ouest
OCEAC	l'Organisation de Coordination pour la lutte contre les Endemies en Afrique Centrale
PASA	Participating Agency Service Agreement
PCC	Project Coordinating Committee
PHC	Primary Health Care
PRC	Project Review Committee
REDSO	Regional Economic Development Services Office
REDSO/WA	Regional Economic Development Services Office/West Africa
RTC	Regional Training Center
SHDS	Strengthening Health Delivery Systems

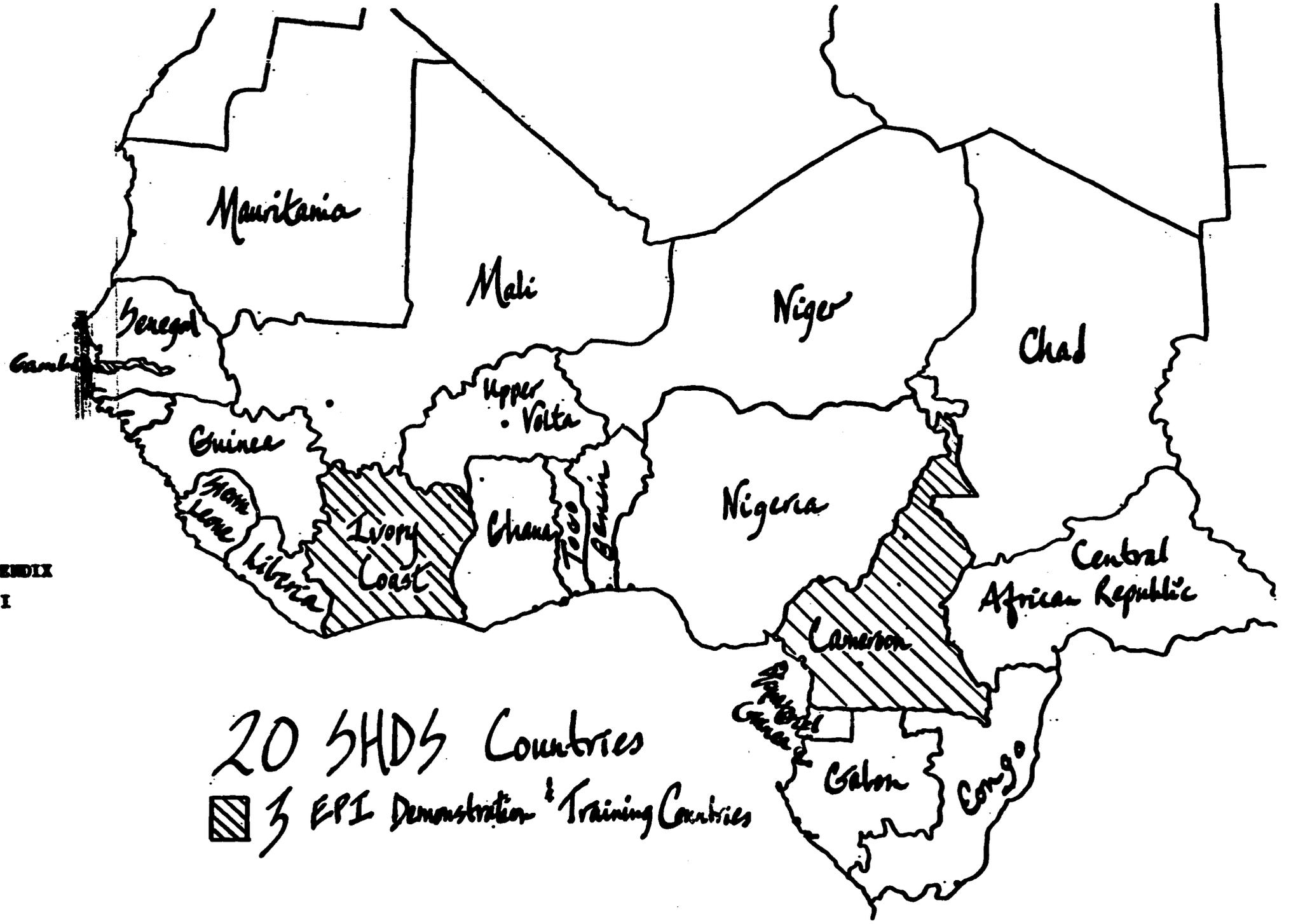
ACRONYMS (Continued)

TNTHA	Tubman National Institute of Medical Arts
TOT	Training of Trainers
TT	Tetanus toxoid
UNICEF	United Nations International Children's Emergency Fund
USAID	United States Agency for International Development
VHW	Village Health Worker
WHO	World Health Organization
WHO/AFRO	World Health Organization/Africa Regional Office
WPC/NWC	World Health Organization, Program Coordinator/National World Health Organization Coordinator

APPENDICES

1. Map of SHDS Region
2. Statistics on 20 SHDS Countries; Basic and Health Indicators
3. People and Places Visited by Evaluation Team
4. Scope of Work for Evaluation Team
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7. PASA with CDC
8. SHDS Project Background
9. Map of SHDS Cooperating Institutions
10. Sample Project Budget, 1981
11. SHDS Project Applied Research
 - A. Procedure for submission of research proposals for funding
 - B. Criteria for selection of projects for funding

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20 SHDS Countries
 ▨ 3 EPI Demonstration & Training Countries

APPENDIX
 I

APPENDIX II

STATISTICS ON 20 SHDS COUNTRIES

BASIC AND HEALTH INDICATORS^{1/}

<u>Country</u>	<u>International Language</u>	<u>Mid-Year Population 1979 (in millions)</u>	<u>Population Projection for Yr. 2000 (in millions)</u>	<u>Per Capita GNP \$ 1979</u>	<u>Adult Literacy 1976</u>	<u>Life Expectancy at Birth 1979</u>	<u>People per Doctor 1977</u>
Benin	French	3.4	6.0	250	7%*	47	26,880
Cameroon	French/English	8.2	14.0	560		47	16,500
CAR	French	2.0	3.0	290		44	17,610
Chad	French	4.4	7.0	110	15%*	41	41,940
Congo	French	1.5	3.0	630		47	7,290**
Eq. Guinea	Spanish	0.4					
Gabon	French	0.6	1.0	3,280	12%*	45	3,029
Gambia	English	0.6	1.0	250	10%*	42	15,171**
Ghana	English	11.3	21.0	400		49	9,920
Guinea	French	5.3	9.0	280	20%*	44	16,630
Ivory Coast	French	8.2	15.0	1,040	20%	47	15,220**
Liberia	English	1.8	4.0	500	30%	54	9,260**

1/ Accelerated Development in Sub-Saharan Africa, The World Bank, Washington, D.C., 1981

* Adult Literacy: Estimates so marked are for years other than 1976, but generally not more than two years from 1976

** People per Doctor: Figures so marked are for years other than 1977.

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STATISTICS ON 20 SHDS COUNTRIES

BASIC AND HEALTH INDICATORS

<u>Country</u>	<u>International Language</u>	<u>Mid-Year Population 1979 (in millions)</u>	<u>Population Projection for Yr. 2000 (in millions)</u>	<u>Per Capita GNP \$ 1979</u>	<u>Adult Literacy 1976</u>	<u>Life Expectancy at Birth 1979</u>	<u>People per Doctor 1977</u>
Mali	French	6.8	12.0	140	10%	43	25,150
Mauritania	French	1.6	3.0	320	17%*	43	15,160
Niger	French	6.2	10.0	270	8%*	43	42,720
Nigeria	English	82.6	161.0	670		49	15,740**
Senegal	French	5.5	10.0	430	10%*	43	15,710
Sierra Leone	English	3.4	6.0	250		47	
Togo	French	2.4	4.0	350	18%	47	17,980
Upper Volta	French	5.6	10.0	180	5%	43	49,810**

1/ Accelerated Development in Sub-Saharan Africa, The World Bank, Washington, D.C., 1981.

* Adult Literacy: Estimates so marked are for years other than 1976, but generally not more than two years from 1976.

** People per Doctor: Figures so marked are for years other than 1977.

APPENDIX IIICAMEROUN: PERSONNES VISITES PAR L'EQUIPE D'EVALUATION(23-29 NOVEMBRE, 1981)Ministère de la santé

Prof. Zoungkayie J.
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M. Mafiamba P.C.

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Dr. M. Kamwa

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Secrétaire Général
Directeur des Etudes de la Planification
et des Statistiques
Directeur de la médecine préventive et
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Chef d'équipe PEV, Yaoundé
Médecin chef, Eseka

CUSS

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Directeur-adjoint
Professeur

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Formatrice d'infirmiers pour l'OMS
Formatrice d'infirmiers pour l'OMS
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Comité de santé villageois, Village Simbok

CONGO: PERSONNES VISITES PAR L'EQUIPE D'EVALUATION

La réunion du Comité de Coordination du Projet, Yaounde, 1981

Dr. Gerald Ondaye

NWC

COTE D'IVOIRE; PERSONNES VISITEES PAR L'EQUIPE D'EVALUATION(11-16 DECEMBRE, 1981)Ministère de la santé

M. Lenissongui Coulibaly
M. T. Coulibaly

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Chef du Cabinet

Dr. J.P. Baechle
M. Traora Salifou

Médecin chef du secteur rural d'Abengourou
Responsable PEV, Abengourou

Ecole Nationale des infirmiers et sages-femmes

Dr. Casanelli d'Istria
M. Viallet Diomanda
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Professeur pour infirmiers et d'obstétrique
Professeur pour les sages-femmes et PH
Directeur de la Formation et du personnel
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Institut National de la Santé Publique

Prof. N. Coulibaly

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Dr. Anne Marie Kimball

Directeur, RSSP
Directeur-Adjoint, RSSP
Administratrice, Boston/RSSP
Consultante d'infirmier
Directeur-Adjointe, RSSP

GAMBIA: PEOPLE VISITED BY EVALAUTION TEAM

(JANUARY 28-FEBRUARY 1, 1982)

Ministry of Health

Mr. Singhateh
Dr. N'Jie
Dr. Philip Gowers
Kebba Jobe
Dr. Jack
Miss Clara McMason
Dr. Musa Marena
Dr. Karamo Sayant
Mr. Mamadou Newlands
Staff
Jallow Ceesay
Mr. Smart
Mrs. R. M'Bye
Mrs. A.B. Stafford
Miss Muriel Fye
Sister Joel
Dr. I. Schmiadeberg

Under Secretary and Acting Permanent Secretary
Acting Director, Health and Medical Services
Medical Officer
EPI - Counterpart to SHDS officer
EPI - Counterpart to SHDS Epidemiologist
Chief Health Officer
PHC Coordinator
Medical Officer, Mansakonko
Senior Nurse Dispenser, Health Center
Staff/MOH, Kalasi/Bondori
VHW, Sikunda
Trainer of VHW, Mansakonko
Trainer of VHW, Mansakonko
Trainer of VHW
PH Tutor, Member SHDS N. RI., Committee for Gambi
Nurse Educator
Reg. Medical Officer

WHO

Dr. Akim
Mrs Akrofi

WPC
Nurse Educator

UNICEF

John Spring

Representative for Gambi

AID

Keith Simmons
Cynde Robinson

Project Manager, Health/Population/Nutrition
Assistant Project Manager, Health/Population/
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Program Officer

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Operations Officer, SHDS
Consultant on EPI Cost Study

Project Concern

John Wahlund

Training Specialist

MRC

Mr. Smith
W. Brierly

Administrator
Parasitologist

GAMBIA

INTRA AND UCSF

Norma Wilson

Nurse Training Consultant

HAUTE VOLTA: PERSONNES VISITES PAR L'EQUIPE D'EVALUATION

(14-16 JANVIER, 1982)

Ministère de la santé

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Dr. Wedraogo Dadier

Dr. Lankarda

M. A. Ouedraogo

Responsable
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de la santé
Coordonnateur des soins de santé,
Chef de poste de santé de TOCCE,
Infirmier dispensaire à TOCCE,
VHW, TOCCE
Service de la coordination des SSP

OCCGE

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Dr. Isak Mamby Touré

Secrétaire Général
Chef de biologie, Centre de Muraz

CDC/RSSP

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Epidémiologiste

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Dr. Martin Samos
Dr. André Dalas
Dr. N.C. Doumaba
Dr. E.M. Samba

WPC
Epidémiologiste
OMS/Personnel
Directeur du programme de contrôle de
l'onchocercose

USAID

Dr. Oliver Montgomery Harper
M. Steve Lucas

Responsable de santé
Contractual, Projet d'hydrologie rurale

AFMP

Dr. Philip Stoechal
Dr. Martin Schlumberger

AFMP
Consultant, Bobo Dioulasso

LIBERIA: PEOPLE VISITED BY EVALUATION TEAM(JANUARY 18-21, 1982)Ministry of Health

Mrs. Martha Belleh	Minister of Health
Mrs. R. Marshall	Assistant Minister, SHDS Committee
Mrs. F. Giddings	Deputy CNO, SHDS Committee
Dr. Ellis	Deputy Minister, SHDS Committee
Dr. Massequoi	Preventive Medicine
Mr. Wilson	SHDS Committee
Ms. Scholastica Ninley	Manpower Planning Officer
Ms. Caroly Taylor	Statistic Analyst
Mr. John M. Prall	Director, Health Statistics Division
Dr. Kamala	SHDS Committee
Mrs. M. Yaidoo	CNO, SHDS Committee
Mr. Jack Bena	EPI, SHDS Committee
Mr. James Goanah	Coordinator EPI, SHDS Committee

Cuttington College

Dr. Henry Kwakwa	Administrative Dean
Dr. Evelyn S. White	Academic Dean, Nursing Division
Mr. Christopher Kandakai	Dean of Student Services
Mrs. Charlotte Casher	Registrar
Mr. Henry Hali	Chairman, Science Division
Mrs. Elaine Wolo	Chairperson, Education Division
Mrs. Hannah Kar	Instructor, Nursing Division
Mr. Samuel Koku	Instructor, Nursing Division
Mrs. Sarah Amara	Director, Phabe Training Programs
Mrs. Elizabeth Mulbah	Chairperson, Nursing Division
Dr. Gwenigala	Director, Phabe Hospital

WHO

Dr. Wilfred Sai Boayva	NWC
Dr. Chilemaa	WHO staff

AID

Dr. Alan Foosa	AID Health Development Officer
Ms. Evalyn McCloud	Program Officer
Mr. R. Garufi	Director
Mrs. Kate Jonas-Patrons	IDI Health Officer

U.S. Embassy

William L. Swing	Ambassado
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Care

Dr. J. Stephen Robinson	Health Advisor, CARE/Liberia
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SHDS

Dr. Charlotte Ferguson	SHDS Field Consultant
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MAURITANIE: PERSONNES VISITES PAR L'EQUIPE D'EVALUATION(7-12 FEVRIER, 1982)Ministère de la santé

Dr. Mouhamed Hacen

M. Mahmouden

M. Fall Mika

M. Senghott

M. Kane

M. Alouwa

Mme. Yacine

M. Babacar Ould Mouhamed

Dr. J. J. Mascart

M. André Kitoko

M. Theophile Gnambodoua

M. Diouf Ibrahima

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Mme. Marie Elizy Carlier

M. Koné Nody

Mme. Aminata N'Dao

Abdel Fetah Saleh

Kane Ousmane

Mohamed Ould Massaoud

Dr. Sidatt

Directeur Général de la Santé et

Directeur du Projet TRARZA

Formateur, Service MEDERDRA

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Directeur Adjoint PEV

Chef Service des Etudes et de la Planification

Infirmier, Chef de Poste, Service Madardra

Sage-Femme, Service Madardra

ASC, Service Abandah

Hôpital Régional, Rosso

Ingénieur de la Santé

Infirmier obstétricien

Administrateur du Projet TRARZA

Agent de santé de village Matugay

Chef de la PMI du 5ème arrondissement

Directeur, Ecole d'infirmiers

Ecole d'infirmiers

Ecole d'infirmiers

Ecole d'infirmiers

Ecole d'infirmiers

Directeur, Centre National d'Hygiène

OMS

Mme. A. Bosc

Dr. Lekie Botea

M. T. Gnambodoua

Dr. Tahirou Bana

M. Ayoub

Infirmière, Formatrice de sage-femmes

Epidémiologiste

Infirmier de Santé Publique

WPC

Conseiller de Santé Publique

USAID

M. B. Hirsh

M. Alan Reed

Directeur, secteur des projets

Responsable des programmes

Peace Corps

Ann Bundy

Kathy Teer

Volontaire

Volontaire

Projet rural médical

Mme. Mona Y. Greiser

Conseillère de Santé Publique

NIGER: PERSONNES VISITEES PAR L'EQUIPE D'EVALUATION**(10-13 JANVIER, 1982)****Ministère de la santé****Chef de Bataillon Moumouni Adamou Djermakoye, Ministre de la santé et des Affaires Sociales****Dr. Daga Magagi
M. Issoufou Ali Kiaffi
M. A. Kadri
M. Abdoulaye Maiga
M. Ousseini Garba****M. Alzouma Bazi Cassi
M. Hassane Sonmoula
Mme. Agbessi Laure
Dr. Loco Lazare****Dr. Kadri Tankary
Dr. B. Yansambou
M. Seydou Mahamane
2 ASV/2 Accoucheuses
traditionnelles****OMS****Dr. John Wright****USAID****M. Myron Golden****Africare****Dr. Shillingford****Secrétaire général
Responsable du développement des soins
Responsable du service du développement des soins
Directeur de la Formation en santé et nutrition
Directeur de l'Ecole Nationale de la Santé
Publique (ENSP)
Directeur-Adjoint, ENSP
Directeur-Adjoint, ENSP
Directeur des Affaires Sociales et de PMI
Directeur-Adjoint du service d'hygiène et de la
médecine mobile
Directeur du développement des soins
Directeur du Service de Santé de Niamey
Secouriste au dispensaire de Kolo
Kolo, Libore, Toussougou****NWC****Responsable de programmation****Chef d'équipe**

NIGERIA: PEOPLE VISITED BY EVALUATION TEAM(DECEMBER 1-4, 1981)Ministry of Health

Dr. Gaby Williams	Acting Director, PH Services
Dr. J. Ade Laoye	Assistant Director, Health Education Unit
Dr. A.O. Sorungbe	Director, Health Center Onikan Health Center
Dr. Odunsi	Deputy Director, Health Center " " "
Dr. Chandru	Acting Director, Badagry Hospital, Badagry
Dr. Jarin	Senior Medical Officer, Badagry Hospital, Badagry
Dr. Ogubanka	Medical Officer of Health, Badagry Hospital
	Midwife/Maternity, Pota Village
Mr. Tudonu	VHW, Pota Village
Mr. P.S. Agannanow	VHW, Iloga Village
Mr. S.O. Noah	VHW, Iloga Village
Dr. J. Ade Laoye	Assistant Director, Lagos, Onikan

Yaba School Health Technology

Dr. M.O. Oduwola	Principal
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University of Ibadan

Prof. Oduntan	Head, Department of Preventive & Social Med., Ibadan
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University of Ife

Prof. Adeniyi-Jones	Visiting Professor and Consultant to MOH
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WHO

Prof. Shehu	NWC
Dr. Adamian	Staff - Epidemiologist
Dr. Donald Johnson	Staff - Health Educator
Mr. Shresta	Staff
Dr. G. Mumube	Staff - Virologist
Dr. A.H. Fernandez	Staff
Mrs. Adebo	Consultant at RTC
Mrs. Anu Adegoroye	Consultant Nurse at RTC
Mr. John Wesley Nyirenda	Participant RTC Lagos course (Malawi)
Mrs. Patricia Thande Kesia Simblana	Participant RTC Lagos course (Swaziland)

RTC Lagos

Dr. H. El Neil	Coordinator of Studies
Mr. Youmossi	Administrator RTC

U.S. Embassy

Mr. Carl Cundiff	Economic Counselor
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REPUBLIQUE CENTRE AFRICAINE:

PERSONNES VISITES PAR L'EQUIPE D'EVALUATION

La réunion du Comité de Coordination du Projet, Yaoundé, 1981

Dr. Simon Feikoumon

Ministère de la Santé

SENEGAL: PERSONNES VISITES PAR L'EQUIPE D'EVALUATION(2-6 FEVRIER, 1982)Ministère de la santé

M. Mamadou Diop	Ministre de la Santé
Dr. Doudou Ba	Directeur de la Recherche et de la Planification
Dr. Helies	Epidémiologiste, PEV
Mlle. AnneMarie Mane	Chef, Directrice des Centres et Postes de Santé
Dr. Kano	Médecin régional, Kaolack
M. Balla Moussa Lane	Infirmier auxiliaire, Mbadakhoume
Charif Youmous Diouf	Inspecteur régional
M. Sangare Mboup	Inspecteur des postes de santé, Kaolack
Mme. Diop Djarlatou	Inspectrice pour la région du Nord
Dr. A. Ndiaye	Directeur du centre hospitalier Guinguineo
ASV	Case de santé, Mbaboumi

CESSI

Mlle. M. Pelligrin	Directrice
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CIE

Dr. Nicole Guarin	PEV
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OMS

Dr. Elom	WPC
Dr. Badarou	Coordinateur de Projet
Mlle. J. Perron	Formatrice d'infirmiers

USAID

Dr. Michael White	Responsable de santé
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UNICEF

M. P.L. Audat	Directeur
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SIERRA LEONE: PEOPLE VISITED BY EVALUATION TEAM
(JANUARY 22-27, 1982)

Ministry of Health

F.M. Braima Sawl	Permanent Secretary
Dr. Belmont Williams	Chief Medical Officer
Dr. Moira Browne	Deputy Chief Medical Officer
Matron Johnston	Chief Nursing Officer
Dr. E.A. Juxon-Smith	Provincial Medical Officer
Dr. M.L. Wright	Consultant/Pediatrician
Mr. Kuba	Nurse Dispenser, Mapaki Health Center
Mohamed A.R. Sama	Nurse Dispenser
Health Development Committee Members, Masabong Village	
Mrs. Felicia Moseray	Trainer TBAs/VHWs
Matron Randall	Supervisor, Jenna Wright Clinic
Gladys Carrol	Nutritionist
Dr. Zubairu	Field Medical Officer
Chris Gilbert	Secretary
Dr. Clifford Kamara	District Medical Officer
Dr. Kebbi	Second Medical Officer
Dr. A.S. Kaml	Medical Officer
Isatu Salsay	TBA, Calaba Town
Sister Vandy	Field Supervisor
Matron Osborne	School of Nursing
Mrs. Evelyn Sarah Kawa	PH Nurse tutor
Alana Taylor	School of Nursing, Tutor
Cynthia C.H.H. Pratt	Senior Nurse
Mrs. Aminata Kargbo	Deputy, Tropical Disease, School of Nursing
Nancy Bangourah	School of Nursing

WHO

Dr. Anthony P. Bulengo	Medical Officer
Dr. Marcella Davies	NWC
Dr. Sukumar Choudhury	Director, School for Health Technology
Dr. Seneviratne	Intercountry Epidemiologist

UNICEF

William Fellows	Representative
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U.S. Embassy

Ms. Theresa Ann Healey	Ambassador
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USAID

Charles Uphaus	Agriculture Officer
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Peace Corps

Dr. Steven S. Krotzer	Staff Physician
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SIERRA LEONE

Care

Charles F. Laskey
Margaret Gorecki Tsitouris

Country Director
LEARN Project

Primary Health Care Project

Fr. John Zampese
Sister Admira Davis

Director/Sierra Leone, Makani
Nurse

TOGO: PERSONNES VISITES PAR L'EQUIPE D'EVALUATION(5-10-DECEMBRE 1981)Ministère de la santé

Dr. Barandao Bakale Togma
 M. N'Djalawa
 Dr. Karsa Tchasseu
 Dr. K.M. Kove

Directeur des Services de Santé de base
 Attaché au Cabinet
 Médecin chef, Service des épidémies et FEV
 Médecin-assistant au Centre de Santé de Notse

RTC de Lomé

Prof. Dalmaida
 M. Ben-Lamine Hamouda
Eglise Evangéliste du Togo

Coordonnateur
 Formateur de santé

M: Sekie
 M: Aklamanou
 M. Hountodzi Komi

Pasteur, Notse
 Inspecteur des VHW, Notse
 Cathéchiste VHW, Notse

Gouvernement du Togo

M. Baputo M'Dina

Préfet

Benin Water Prov.

Mlle. Sarah Frye

Responsable du Projet

USAID

M. Rudolph Thomas
 M: Robert Ritchie

Responsable des ressources humaines
 Responsable des programmes

RSSP

Dr. Sif Eriksson
 Mm. Guadado Dicko

Consultants
 Consultants

APPENDIX IV

Scope of Work and Plan for Evaluation

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EVALUATION TEAM

1. Members of the evaluation team:

Dr. S. M. Wishik : Team Leader
Ms. M. Duffy : AID/REDSO
Ms. Aena Konde : WHO/AFRO

SCOPE OF WORK AND PLAN FOR EVALUATION (Draft - 13 October 1981)

2. The scope of work and plan for evaluation will conform to the agreement made in Brazzaville in June 1981 (WHO/ICP SPM 013) and which was further outlined in a cable of 2 July 1981 (Abidjan 06721) from REDSO to Washington.

3. The work schedule is as follows:

September and October 1981

- briefing of team leader in Washington, Boston, Abidjan, Brazzaville and Atlanta;
- briefing of team in Abidjan;
- collection of information on training institutions and participants;
- collection and review of documents;
- collection of information by interviews at SHDS, WHO/AFRO and REDSO;
- writing of draft of scope of work and plan for evaluation;
- dissemination of draft to agencies and PCC members.

November 1981

- review of documents, extraction and organization of available data;
- discussion of draft of scope of work and plan for evaluation at PCC meeting and revision to final form.

November and December 1981

- visits of team to four countries.

December 1981 and January 1982

- continued analysis and organization of information.

January and February 1982

- visits of team to six countries.

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UNITED STATES: PEOPLE VISITED BY EVALUATION TEAM(SEPTEMBER 17, 1981 and MARCH 5, 1982)USAID/Washington

Mr. Donald Miller	Director, Office of Regional Affairs, AFR/RA
Mr. James Cumiskey	AFR/RA
Dr. James Shepperd	AFR/DR
Dr. Joseph Stockard	AFR/DR
Ms. Joy Riggs-Perla	AFR/DR
Turra Bathune	AFR/Dr/HN
G. De Luca	AFR/DR/HN
Mr. Noel Marsh	AFR/RA
Dr. Mary Anne Cusack	AFR/EHR
Ms. Rosslyn King	S&T/Health
Dr. Donald Ferguson	S&T/Health
G. Post	Liberia

Bureau of Census

Ms. Wanda Kelly	Statistician
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Boston University, Boston, Massachusetts

Dr. Richard Egdhal	Director, Health Policy Institute
Dr. Robert Mayfield	Provost and V.P. for External Affairs
Mr. Ken Bloem	Assistant Academic V.P. for Health and Assistant Director, Medical Center
Mr. Paul Clemente	Fiscal Affairs Manager of Health Policy Institute
Mr. Neil Meltzer	Assistant to Dr. Egdhal
Dr. Ann Brownlee	Coordinator, Planning and Evaluation, SHDS

CDC/Atlanta, Georgia

Dr. Stan Foster	Director, International Health Program Office
Mr. Robert Baldwin	SHDS Project Manager
Ms. Annie Voigt	Health Educator
Dr. Donald Hopkins	Assistant Director for International Health
Dr. William Griggs	Assistant Director for International Health

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February and March 1982

- formulation of draft of evaluation report.

March 1982

- discussion of draft of evaluation report at meeting of Evaluation Committee;
- preparation of final evaluation report

Early April 1982

- submission of evaluation report to AID and WHO

April 1982

- translation and distribution of report

June 1982

- review of report at meeting of PRC.

SUBJECT FOR EVALUATION

4. The subject of the evaluation, Phase II (1978-1982); includes contract with Boston University (AID-AFR-C1414 - 27 July 1978), PASA with the Centers for Disease Control (CDC) (4 August 1978), and an agreement with WHO/AFRO (27 September 1977). The evaluation will cover the first four years of Phase II implementation (1978-1981).

5. The evaluation will give primary attention to activities funded by AID. Since all the mentioned participating agencies and others contributed their own funds and resources in intimate association with the SHDS activities, it is at times impossible to identify separately the specific consequences of respective inputs, nor would such compartmentalization bear a realistic relationship or bring constructive assessment to the integrated endeavour. Separate inputs will be specified, however, such as when AFRO uses AID funds or its own and when contributions are made by country governments or by Boston University.

6. The purpose of the SHDS project is "to develop and strengthen affordable health delivery systems in West and Central Africa". Conceivably, health services could be strengthened by various approaches, such as by raising the literacy rate of a country or by improving transportation. The major focus of the project activities has been cooperating in the achievement in the Region of an ongoing system for developing and maintaining needed health personnel. The underlined words deserve highlighting:

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Ongoing: The Region should continue moving toward reasonable self-sufficiency in human resources for health services.

System: Activities for training and improvement of health manpower should not be irregular, haphazard or ad hoc, but the components should in most part add up to a logical interrelated hierarchical system appropriate to the geography, resources, readiness and needs of the Region.

Developing: Because of insufficiencies in the Region of manpower appropriately prepared for current public health approaches, there is a training backlog that must be overcome. In the process of doing so, the structure, magnitude, emphasis and sources of training endeavours may be different from what might constitute a future desired and suitable pattern.

Maintaining: As the Region nears self-sufficiency in health manpower, attention, in addition to basic training, will be given increasingly to replacing turnover of staff and to keeping personnel abreast of new developments in public health philosophy and methods. It is likely that more emphasis will be put on supervision and continuing education. A structure for such a maintenance phase should exist.

Needed Health Personnel: The WHO definition of health and the present day concepts about development carry implications for a broad cadre of disciplines and groups sharing and contributing to health promotion and care. In keeping with global decisions and thinking, the SHDS project during Phase II has followed the reorientation within the Region toward primary health care (PHC). In this evaluation, the earlier project phraseology about "affordable health systems" will in general be viewed with respect to and emphasis upon PHC.

With the exception of certain aspects of Objective III (immunization activities), the SHDS project is not directly involved with the delivery of health service. For all the four objectives, however, it aims to help produce the personnel who would contribute to creating, designing, operating and working in health services. Such a manpower training system should pertain to all levels - planning, management, training, supervision and direct service - and to various types of specialists at each level, according to the stage of development of PHC in each country.

7. In the evaluation of the SHDS project, critical attention will be given to each of the above features as determinants of the project's scope of work and as evidence of its impact.

ADMINISTRATION AND FINANCING

8. The evaluation will include study and analysis of the nature, strengths and problems of the administrative structure of the project and of relation-

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ships among the collaborating parties. Sources and amounts of funding and distribution of expenditures will be reviewed and reported upon.

SOURCES OF INFORMATION AND DATA (among others)

9. They are as follows:

- Questionnaires to training institutions and workshop participants.
- Written agreements, implementation plans, committee meeting minutes, progress and evaluation reports and other documents.
- Briefing meetings and interviews at AID and WHO.
- Interviews with SHDS and CDC personnel in Africa, Boston and Atlanta.
- Interviews with staff of training centres, workshop facilitators and participants.
- Interviews with government health officials.
- Review of curriculum, materials and workshop reports.
- Observations at training centres, demonstration/training areas, PHC projects and other health services.

EVALUATION FRAMEWORK

10. The evaluation will be carried out by objective and by country.

10.1 In line with WHO guidelines, particular attention will be given to the following parameters: relevance, progress, effectiveness, efficiency and impact - adapted to the nature of different parts of the SHDS project. For Objectives I (planning and management), II (skills and utilization of personnel) and IV (training in applied research).

Relevance: Interest, attendance and reactions of participants and government health officials and planning bodies in training activities.

Progress: Number, types, distribution, quality and contents of workshops and courses. Number and country distribution of participants.

Effectiveness: Job placement and performance of participants. Influence upon, establishment of, or evidence of movement toward national or sub-national training institutions, systems or courses. Use of former participants as consultants, facilitators or in other training capacities.

Efficiency: Attempt to relate amounts, types and cost of project inputs to progress and effectiveness.

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Impact: Evidence or suggestion of relationship of SHDS project activities to development or changes in PHC or other health services in countries in the Region.

For Objective IV (applied research): Relevance, design and feasibility of the one project recently approved in the Ivory Coast; and possibly of others approved during this evaluation process. Opportunities for useful applied research in relation to PHC and the training of personnel concerning PHC. Administrative considerations in making grants for applied research.

For Objective III (disease surveillance and demographic data systems) Somewhat different approaches will be used for evaluation of the two components of Objective III - the three epidemiologists and the EPI work; and the three demonstration/training areas.

For the epidemiologists (among other aspects): Roles at affiliated centres (OCEAC, OCCGE): activities in and outside of the respective base countries; types of consultations and investigation of outbreaks; surveillance systems and data collected; counterparts trained; indications for other epidemiologic work in the respective subregions.

For the demonstration/training areas: advantage will be taken of the intensive evaluations done of these activities. Information and data in those evaluations and otherwise obtained from documents, interviews and observations will be formulated into such categories as the following:

Inputs: Personnel time and activities; equipment, supplies, etc.; measles vaccine distributed (attention will also be given to measles vaccine distributed by SHDS in other countries).

Progress: Counterparts in training; amounts of vaccine - evidence of utilization; areas and population covered.

Effectiveness: Numbers and ages of children immunized; control of particular outbreaks.

Efficiency: Estimates of unit cost per achievement.

Impact: Morbidity and mortality trends.

A critique will be presented on:

The relationship between Objective III and Objectives I, II, and IV.
The relationship between EPI and PHC. Considerations in relationship between a CCCD programme and PHC.

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COUNTRY ASSESSMENT

10.2 For each of the 20 countries in the SHDS project, attempts will be made to track developments from point of inputs at regional centres or workshops to country replication and adaptation; and beyond into sub-national training activities for the strengthening of PHC and related services. Data under parameters similar to those used in the evaluation framework by objectives will be pulled together by countries so that a separate vignette for each country related to their participation in SHDS can be seen, encompassing documentation on background, activities, status and prospects. For the Region as a whole (20 countries together) a similar but summary picture of documented developments and status will be presented.

GENERAL COMMENTARY ON THE SHDS PROJECT

11. Overall opinion on relevance, quality, contributions and cost efficiency of the SHDS project.

12. These will include:

- Needs and degree of readiness for next steps within the Region.
- Priority indications for types, locations and amounts of continued external support in the immediate future.

APPENDIX V

AGREEMENT*

FOR

**PHASE II OF THE PROJECT FOR THE STRENGTHENING OF
PUBLIC HEALTH DELIVERY SYSTEMS IN CENTRAL AND
WEST AFRICA**

BETWEEN

THE UNITED STATES OF AMERICA

AND

THE WORLD HEALTH ORGANIZATION

Date: September 27, 1977

*** There are six Implementation Letters to this Project Agreement.
Copies may be obtained from AID or WHO/AFRO.**

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AGREEMENT FOR
PHASE II OF THE PROJECT FOR THE STRENGTHENING OF
PUBLIC HEALTH DELIVERY SYSTEMS IN CENTRAL AND
WEST AFRICA

This AGREEMENT is made and entered into on the 27th day of September, 1977, by the United States of America, acting through the Agency for International Development (hereinafter referred to as "A.I.D.", and the World Health Organization (hereinafter referred to as "WHO").

I. Purpose of Agreement

The purpose of this Agreement is to provide an extension of cooperation with WHO and Participating African States for the carrying out of Phase II of the Project for Strengthening Public Health Delivery Systems in Central and West Africa.

II. The Project

A. The Project, which is further described in Annex 1, will consist of the continuation of a collaborative effort between the Africa Regional Office of the World Health Organization ("WHO/AFRO") and the Agency for International Development ("A.I.D.") to develop and strengthen health delivery systems in West and Central Africa. Twenty West and Central African states ("Participating African States") will participate in some or all aspects of the Project. The Project, described by objectives, will include the following:

1. Improvement of national and regional health planning and management.
 2. Increasing skills and improving utilization of health personnel providing generalized health services at supervisory and local levels.
 3. Improvement of regional and national disease surveillance and health/demographic data systems and integration of these systems into national health planning delivery systems.
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4. Demonstration of low-cost (affordable) health delivery systems.

8. Within the limits of the above definition of the Project, elements of the amplified description in Annex 1, including the Project Budget, may be changed by written agreement of the authorized representatives of the Parties named in Article VIII, without formal amendment of this Agreement.

C. A.I.D.'s contribution to the Project will be provided in increments, the initial one being made available in accordance with Article IV of this Agreement. Subsequent increments will be subject to availability of funds to A.I.D. for this purpose, and to the mutual agreement of the Parties, at the time of a subsequent increment, to proceed.

D. Funds provided pursuant to Agreement will be utilized in three ways. A portion will be utilized by WHO/AFRO to cover costs for technical services, training, commodities and other budget items procured in Africa. Two other portions will be implemented directly by A.I.D., with the approval of WHO/AFRO, for technical services, training, commodities and other budget items procured primarily in the United States from a U.S. contractor and from the Center for Communicable Disease Control of the U.S. Government.

III. Contribution of A.I.D.

A. For the purpose of collaborating with WHO and the Participating African States in the carrying out of the project; there is hereby granted by A.I.D. to an amount not to exceed One Million Six Hundred Ninety-eight Thousand Seven Hundred Seventy-eight United States Dollars (\$1,698,778).

B. Except as A.I.D. may otherwise agree to, in writing, funds provided under this grant will be used in accordance with the detailed Project description in Annex 1 and the Project budget attached to Annex 1.

IV. Disbursement of Funds

A. Disbursement of funds granted under Article III of this Agreement may be made directly by A.I.D. Disbursement of the funds may also be made through such other means as the Parties may agree in writing.

B. If funds provided under this agreement are introduced into any Participating African State by A.I.D. or any public or private agency for purposes of carrying out obligations of A.I.D. hereunder, the Grantee will make such arrangements as may be necessary so that such funds may be converted into currency of the particular Participating African State at the highest rate of exchange which, at the time the conversion is made, is not unlawful in the particular Participating African State.

V. Conditions Precedent

A. Prior to the disbursement of funds under this Agreement for activities in a Participating State, WHO will obtain the agreement of the Participating State in which this project will be carried out in order to assure the following:

1. If A.I.D. or any public or private organization furnishing commodities through A.I.D. financing for operations hereunder in any of the Participating African States, is, under the laws, regulations, or administrative procedures of such State, liable for customs duties and import taxes on commodities imported into that country for the purpose of carrying out this Agreement, such State will pay such duties and taxes unless exemption is otherwise provided by an applicable international agreement.

2. If any personnel (other than citizens and permanent residents of the Participating African State) whether United States Government employees, or employees of public or private organizations under contract

~~with A.I.D., or a Participating African State or any other agency authorized by a Participating African State who are present in such Participating African State to provide services which A.I.D. has agreed to furnish or finance under this Agreement, are, under the laws, regulations, or administrative procedures of such State (i) liable for income or social security taxes with respect to income upon which they are obligated to pay income or social security taxes to the Government of the United States, (ii) liable for property taxes on personal property intended for their own use, or (iii) liable for the payment of any tariff or duty upon personal or household goods brought into the Participating African States for their own personal use, such State will pay such taxes, tariff, or duty unless exemption is otherwise provided by any applicable international agreement.~~

VI. Undertakings of WHO

The WHO Regional Office in Brazzaville hereby agrees to contribute to the carrying out of Phase II of the Project, inter alia, as follows:

1. The WHO Regional Office and their representatives, will serve as the base for project operations under the grant and provide support and services to project operations as provided for in Annex 1.
2. The WHO Regional Office will organize and provide the secretariat for the Project Coordination Committee and the Project Review Committee.
3. The WHO Regional Office agree that they will use their best efforts to ensure that the development of low cost effective health delivery systems is accorded top health priority by the Participating African States, that those States contribute to project costs as appropriate, that those States employ participants trained under the project in appropriate health activities, and that the Governments of countries in which the regional training centers are located maintain their financial support for the physical facilities.

4. WHO will designate a liaison officer who will, in consultation and coordination with the A.I.D. project health officer, assist as necessary in the carrying out of the Project.

VII. Program Coordination, Management and Review

A. For purposes of program coordination, management and review, the Project Coordination Committee and the Project Review Body, originally established under Phase I of the Project, will continue to function. These groups will be comprised of such representatives of the Parties, Participating African States, or others, as the Parties may agree.

B. The Project Coordination Committee will oversee and direct technical and administrative coordination, evaluation and program revision, and report on progress.

C. The Project Review Body will review and confirm the Project Coordination Committee's recommendations and apprise interested parties of the Project's progress.

VIII. Miscellaneous Provisions

A. A.I.D. will, from time to time, issue implementation letters that will prescribe the procedures applicable under this Agreement in connection with implementation of this Agreement.

B. A.I.D. and WHO shall consult as frequently as necessary concerning the execution of this Agreement and the implementation of the activities of this Agreement.

C. This Agreement may be revised in writing by mutual consent of the Parties.

D. Unless otherwise specified in writing by A.I.D., the procurement of commodities financed with the A.I.D. contribution provided in Article

~~III of this Agreement shall be subject to the A.I.D. procurement~~
regulations contained in A.I.D. Regulation No. 1.

E. Unless otherwise specified by A.I.D. in writing, title to all property financed by A.I.D. pursuant to this Agreement shall be in the Participating African State in which the property is located.

F. Any property furnished pursuant to this Agreement shall be devoted to the project until completion of the project and thereafter shall be used so as to further the objectives of the project. As between A.I.D. and WHO either party shall offer to return to the other, or to reimburse the other for any property which it obtains through financing by the other party pursuant to this agreement which is not used in accordance with the preceding sentence.

G. No portion of the funds granted by A.I.D. under this Agreement shall be disbursed after five (5) years from the effective date of this Agreement, unless such date is extended by A.I.D. in writing, and any funds granted hereunder by A.I.D. which remain undisbursed on that date shall revert to A.I.D.

H. A.I.D. shall expend funds and carry on operations pursuant to this Agreement only in accordance with the applicable laws and regulations of the United States Government.

I. The parties shall have the right at any time to observe operations carried out under this Agreement. Any party, during the term of the grant and three years after the completion of the project, shall further have the right to examine any property procured through financing by that party under this Agreement, wherever such property is located.

J. (1) Financial records, including documentation to support entries on accounting records and to substantiate charges to this Grant shall be kept in accordance with Grantee's usual accounting procedures,

which shall follow generally accepted accounting principles. All such financial records shall be maintained, and be required to be maintained, for at least three years after final disbursement of funds under this Grant. The Grantee semi-annually shall submit a report on the expenditures incurred under the Grant to the authorized representative of A.I.D. or to the Controller General of the United States. It is understood that the Voluntary Fund for Health Promotion will be audited in accordance to A.I.D. (2) If A.I.D. determines that any disbursement or expenditure by WHO and charged to this grant was not made, used, or applied in accordance with the terms of this Agreement, WHO agrees to refund to A.I.D. within 30 days after receipt of a request therefore, the amount thereof, provided that A.I.D.'s request is made not later than five (5) years after final disbursement under this grant.

K. A.I.D. and the WHO shall keep each other currently informed as to the status, including the planning and implementation of the project, and will submit such reports relating thereto as any party may request or as otherwise may be appropriate.

L. Either party may terminate this Agreement by giving the other Party thirty (30) days written notice of intention to terminate it. Termination of this Agreement by A.I.D. or WHO shall terminate any obligations of any of the parties to make contributions pursuant to this Agreement; except for payments which they are committed to make pursuant to non-cancellable commitments entered into with third parties prior to the termination of the Agreement. It is expressly understood that all other obligations under this Agreement shall remain in force after such termination.

M. Upon completion of the project a completion report shall be drawn up, signed by appropriate representatives of A.I.D. and WHO, and

submitted to A.I.D. and WHO. The completion report shall include a summary of the actual contributions to the project by each party to this Agreement, and shall provide a record of the activities carried out, the objective achieved and related basic data. A.I.D. and WHO shall furnish the other with such information as may be needed to determine the nature and scope of operations under this Agreement to evaluate the effectiveness of such operations.

N. WHO agrees to take such steps as may be necessary to facilitate entry and travel in Participating African States for purposes of allowing persons to perform duties, functions, and services as contemplated under this Agreement.

O. Except as A.I.D. may otherwise provide in writing, the services, equipment, and materials financed hereunder shall be of United States or African developing country source and origin. Preference will be provided to recruiting personnel from Africa. Details and any exceptions will be described in implementation letters.

P. WHO agrees to execute an assignment to A.I.D., upon request, of any cause or action which may accrue to WHO in connection with or arising out of a contractor's performance or breach of performance of any contract financed in whole or in part out of funds provided by A.I.D. under this Agreement.

Q. Transportation by air, financed under this Agreement, of persons or property, will be on carriers holding United States certification to the extent service by such carriers is available. Details on this requirement will be described in an Implementation Letter.

R. Any notice, request, document or other communication submitted by either Party to the other under this Agreement will be in writing or by telegram or cable, and will be deemed duly given or sent

when delivered to such party at the following addresses:

To WHO: Regional Director
 Regional Office for Africa,
 World Health Organization
 P.O. Box 6, Brazzaville
 Republic of the Congo

Alternate address for cables:

UNISANTE, BRAZZAVILLE

To A.I.D.:

Director, Office of Regional Affairs
Bureau for Africa
Agency for International Development
Washington, D.C. 20523

All such communications will be in English, unless the Parties otherwise agree in writing. Other addresses may be substituted for the above upon the giving of notice.

S. For all purposes relevant to this Agreement, WHO will be represented by the individual holding or acting in the office of Regional Director, Regional Office for Africa, World Health Organization, and A.I.D. will be represented by the individual holding or acting in the office of Director, Office of Regional Affairs, Bureau for Africa, A.I.D., each of whom, by written notice, may designate additional representatives for all purposes other than exercising the power under Article II, B to revise elements of the amplified description in Annex I.

T. This Agreement is prepared in both English and French. In the event of ambiguity or conflict between the two versions, the English language version will control.

IN WITNESS WHEREOF, WHO and the United States of America, each acting through its duly authorized representative, have caused this Agreement to be signed in their names and delivered as of the day and year first above written.

THE WORLD HEALTH ORGANIZATION

BY: Comlan A.A. Quenum, M.D.

TITLE: Regional Director
Regional Office for Africa

DATE: September 27, 1977

UNITED STATES OF AMERICA

BY: Goler T. Butcher

TITLE: Assistant Administrator
Agency for International Development

DATE: September 27, 1977

COST REIMBURSEMENT CONTRACT* WITH AN EDUCATIONAL INSTITUTION

AGENCY FOR INTERNATIONAL DEVELOPMENT NEGOTIATED CONTRACT NO. AID/afr-C-1414

NEGOTIATED PURSUANT TO THE FOREIGN ASSISTANCE ACT OF 1961, AS AMENDED, AND EXECUTIVE ORDER 11223	TOTAL ESTIMATED CONTRACT COST \$3,599,341
CONTRACT FOR: Strengthening Health Delivery Systems ff	CONTRACTOR (Name and Address) Boston University Boston University Medical Center
PROJECT NO: 698-0398	NAME: 80 East Concord Street
ISSUING OFFICE (Name and Address) Agency for International Development Office of Contract Management Regional Operations Division-Africa Washington, D.C. 20523	STREET ADDRESS: Boston, MA. 02118
	CITY, STATE, AND ZIP CODE
	COGNIZANT SCIENTIFIC/TECHNICAL OFFICE Office of Africa Regional Affairs (AFI)
ADMINISTRATION BY: AID Washington, D.C.	ACCOUNTING AND APPROPRIATION DATA PIO/T NO. 698-0398-3-6177458 APPROPRIATION NO. 72-11X1024 ALLOTMENT NO. 424-61-698-00-69-71
MAIL VOUCHERS (Original and 3 copies) TO: Agency for International Development FM/PAD Washington, D.C. 20523	EFFECTIVE DATE: 1 April 1978
ESTIMATED COMPLETION DATE: 30 April 1980	PROJECT MANAGER: E. Yates AFR/RA

The United States of America, hereinafter called the Government, represented by the Contracting Officer executing this Contract, and the Contractor, an educational institution chartered by the State of Massachusetts with its principal office in Boston, Massachusetts, agree that the Contractor shall perform all the services set forth in the attached Schedule, for the consideration stated therein. The rights and obligations of the parties to this contract shall be subject to and governed by the Schedule and the General Provisions. To the extent of any inconsistency between the Schedule and the General Provisions and any specifications or other provisions which are made a part of this contract, by reference or otherwise, the Schedule or the General Provisions shall control. To the extent of any inconsistency between the Schedule and the General Provisions, the Schedule shall control.

* There are 14 Amendments to this contract. Copies may be obtained from AID or Boston University.

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This Contract consists of this Cover Page, the Table of Contents, and the Schedule consisting of 13 pages, the General Provisions (Form AID 1420-23C), dated 1 July 1976, and the Additional General Provisions (Form AID 1420-23D), dated 1 July 1976.

NAME OF CONTRACTOR
Boston University

UNITED STATES OF AMERICA
AGENCY FOR INTERNATIONAL
DEVELOPMENT

BY (Signature of authorized individual)

BY (Signature of Contracting Officer)

TYPED OR PRINTED NAME
Robert N. Jordan

TYPED OR PRINTED NAME
James A. Anderson

TITLE: Assistant Treasurer

CONTRACTING OFFICER

DATE: 4/24/78

DATE: 4/27/78

AID 1420-23A (4-73)

~~Contract No. AID/af-C-1414~~

**SCHEDULE
COST REIMBURSEMENT CONTRACT WITH
AN EDUCATIONAL INSTITUTION**

TABLE OF CONTENTS

SCHEDULE

The Schedule, on pages 1 through 13, consists of this Table of Contents and the following Articles:

- ARTICLE I - STATEMENT OF WORK
- ARTICLE II - KEY PERSONNEL
- ARTICLE III - PERIOD OF CONTRACT SERVICES
- ARTICLE IV - ESTIMATED LEVEL OF EFFORT
- ARTICLE V - ESTIMATED COST AND OBLIGATED AMOUNT
- ARTICLE VI - BUDGET
- ARTICLE VII - LOGISTIC SUPPORT
- ARTICLE VIII - NEGOTIATED OVERHEAD RATES
- ARTICLE IX - ALTERATIONS IN CONTRACT

GENERAL PROVISIONS

1. The General Provisions applicable to this contract consist of form AID 1420-23C entitled "General Provisions - Cost Reimbursement Contract with an Educational Institution," dated 1 July 1976, which includes provisions 1 through 38; and form AID 1420-23D entitled "Additional General Provisions - Cost Reimbursement Contract with an Educational Institution," dated 1 July 1976, which includes provisions 1 through 17.

ARTICLE I - STATEMENT OF WORK**A. Objective**

The objective of this project is to continue a collaborative effort to help develop the capability to plan, implement and manage effective and economically feasible health delivery systems in West and Central Africa. This goal will be achieved by pursuing the following objectives: (1) improve national and regional health planning and management capabilities; (2) increase the skills and improve the utilization of health personnel at supervisory and local levels in order to provide effective generalized health services; (3) improve the effectiveness of national and regional disease surveillance, health and demographic data collection systems; and (4) develop training, service and research demonstration models for low-cost health delivery.

B. Description of Services**1. Strengthening Health Delivery Systems (SHDS) Project Office**

The contractor will be responsible for coordination and implementation of the Strengthening of Health Delivery Systems (SHDS) project by establishing and staffing an SHDS project office in Abidjan. The SHDS Project Office will be staffed by a Project Director and two Assistant Directors and will be operated under the general policy direction of the Regional Office for Africa of the World Health Organization (WHO/AFRO) and the Project Coordinating Committee. The activity will operate within the general guidelines of the Project Paper as revised by the Project Review Committee in Brazzaville in July 1977 (and which will be further revised from time to time).

The SHDS Project Director will be responsible for the daily management of the SHDS project and will coordinate plans and activities directly with WHO/AFR headquarters and through WHO Country Representatives, with host government officials and training center directors to assure proper utilization of the SHDS project in the development of bilateral health programs. The contractor will assign a senior American public health physician as SHDS Project Director who has experience in Francophone and Anglophone Africa.

The SHDS Project Office will have two major divisions, one for teaching, training and national program development and the other for disease surveillance and delivery system development and support. Two American Assistant Directors will be recruited and assigned to the SHDS Project Office, one for each division. Two functional subdivisions of the Division of Teaching, Training and National Program Development are planned. The first subdivision covers the regional training sites that the project will assist (Lagos, Lome, CESSI Dakar, CESSI Yaounde, and the Dakar National Health Planning and Management Center.) The second subdivision covers the ongoing responsibility of continued national program development. The Assistant Director for Teaching, Training and

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National Program Development will have the responsibility of monitoring SHDS' activities at the regional training sites, will participate in and help develop in-country training and health planning activities and will cooperate with UNICEF in improvement of regional transportation and regional purchasing capability. The lines of authority and responsibility will be directly with the Project Director on the one hand and with the individual Director of each of the previous mentioned five regional centers. The Assistant Director will have experience and background in health training methodology.

The Division of Disease Surveillance and Delivery Systems Development Support will have two subdivisions: (1) disease surveillance and (2) low-cost health delivery system development. The disease surveillance activity will be carried out by the U.S. Communicable Disease Center (CDC) in coordination with the SHDS Project Office. The activity will emanate from three sites (Cameroon associated with OCEAC, northern Ivory Coast associated with OCCGE, and Accra) and will involve coordination with the six CDC epidemiologists and operations officers. Low-cost health delivery systems development will relate to the Centre Universitaire des Science de la Sante (CUSS) in Yaounde and/or other low-cost health delivery system prototypes. Because of the existing and future possible US AID inputs, close liaison will be maintained with country and regional US AID Representatives. The lines of authority and responsibility of this Assistant Director will be directly to the Project Director. This Assistant Director will be an experienced epidemiologist.

The contractor will recruit an African SHDS project office staff which will be directed by an administrator and will consist of an administrative assistant, accountant-bookkeeper and one stenotypist, three secretaries, two chauffeurs and a guard.

The contractor will locate and rent functional but simple office space adequate for the SHDS Project Office. Furniture and equipment for the additional staff will be procured.

Primary direction and support for the SHDS project will be in Africa. The contractor will provide limited technical and logistic backup for the SHDS Project Office, as requested within budgetary limitations.

2. Public Health Planning and Management (Objective 1)

The overall goal of Objective 1 is to strengthen and improve the capability to plan, implement and manage effective and economical health delivery systems in twenty Central and West African countries. The more specific objective is to improve and expand the training capabilities of the WHO-sponsored project at the Dakar Planning and Management Center in Dakar, Senegal, and, primarily using the staff of that Center, to assist national governments with health planning and management problems.

In order to achieve this objective the contractor working through the SHDS Project Director and in coordination with WHO/AFRO, Ministries of Health and other donors will assist the Center staff to: (1) develop and conduct workshop/seminars at the Center in planning and management for

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senior and middle level African Health Officials, i.e., doctors, planners, economists, etc.; (2) develop and conduct refresher courses at the Center for middle level management and middle level management and administrative personnel; (3) supervise resident internships at the Center for health sector planners and senior managers; (4) conduct intercountry workshops in various African countries to serve senior health officials; (5) provide services by the Center staff and limited consultant services from the U.S., as requested by participating countries, as a follow up on trainees and to assist in developing planning units.

The specific activities by the contractor to be undertaken in 1977 and 1978 at the Dakar Planning and Management Center in coordination with WHO will include: (1) annual 6-week workshop in health planning for approximately 20 central health administrators; (2) 2- to 3-week course in administration of regional and district health services for 20 intermediate level health workers in 1978; (3) 3-week course in district and regional health services management for regional health services administrators in 1978.

Outreach activities of the Dakar Center, assisted by consultants provided by the contractor as necessary, will include (1) conducting four intercountry workshops to serve ministerial level health officials who are unable to attend courses at the Dakar Center; (2) developing curriculum in planning and management for other regional training centers; (3) providing consultant services, if requested by participating countries, both to follow up on trainees and to assist in developing national planning units.

The contractor will procure limited teaching equipment, films, office machines, books, air conditioner and refrigerator from the U.S. and arrange for travel of any American staff and special planning and management meetings for the purpose of developing curriculum and conducting workshops.

It is anticipated that the additional technical services of an epidemiologist, demographer/statistician and sociologist will be provided from African staff recruited by WHO/AFRO in consultation with the SHDS Project Director. It is possible that the epidemiologist will not be found in Africa, and, therefore, the contractor may be asked (and therefore plan) to recruit that staff member as well as to provide approximately six consultant/months of services during the first two years. All travel and stipend support for Africans, payment of African staff and interns, remodeling and purchase of African acquired equipment will be provided by WHO/AFRO.

3. Regional Health Personnel Training Centers (Objective II)

The overall goal of Objective II is to increase the skills and improve the utilization of health personnel providing generalized health services at the supervisory and local levels.

The specific objective is to broaden and upgrade the curricula in four regional health training Centers for physicians, nurses, nurse/midwives

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and auxillary health workers in the delivery of primary health care and to provide follow-up support to graduates in planning national programs.

The contractor will (1) identify, plan and develop appropriate curricula (including nutrition and family planning) in primary health care (public health) for physicians; nurses (A level health workers) and nurse/midwives and auxillary health workers (b level health workers) at the Lome, Togo Regional Health Training Center in 1978 and the Lome and Lagos, Nigeria Centers in 1979 in collaboration with the staff of those Centers; (2) existing curricula at the CESSI post-basic nursing training centers at Dakar and Yaounde and collaborate with CESSI officials in improving curricula and training methodologies for nurses in national health planning, planning and administrative of public health nursing care and planning and implementation of training programs. The work will be performed under the general direction of SHDS Project Office who will act on behalf of the WHO/AFRO. It is expected that the national governments will cooperate by sending appropriate personnel to the above Centers for training who on return to their respective countries will be able to assist in developing national health training programs.

a. Regional Training Centers in Lome and Lagos

One aspect of carrying out the above work will be to develop prepackaged instructional materials in primary health care at the Lome Regional Training Center. The materials will be developed in terms of African health training needs and pretested in the field. The short-term (six-months) services of a five person design team will be provided to assist the instructional staffs of the Center in the development and testing of the prepackaged instructional material. The contractor will, to the extent required, provide up to six months in short term consultant services to assist in a short-term refresher training course in public health and to assist the instructional staff at the Lome Center to provide follow-up support in establishing national programs in primary health care for C level health workers.

The contractor will provide limited teaching equipment, films and books from the U.S. It is anticipated that the technical services of instructors will be recruited by WHO/AFRO from Africa.

b. Centre d'Enseignement Superieur en Soins Infirmiers
(Center of Higher Instruction in Nursing Care)

The contractor will assist the Directors of the CESSI programs in Dakar, Senegal and Yaounde, Cameroon in developing and/or revising curricula in national health planning, planning and administration of public health nursing care and obstetrics, nutrition and family planning, and planning and implementation of training programs. In addition, the contractor will assist in institutionalizing a program at the CESSI's in continuing education in public health (refresher courses) for graduates of the CESSI's; assist in evaluating the CESSI

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programs in relation to curricula and the needs of the graduates; assist in developing and providing consulting services by the CESSI staff for national nursing personnel; and assist in strengthening the research in public health in the CESSI curricula. The contractor will provide up to six months of short-term consulting services to assist in achieving the above.

The contractor will procure equipment and supplies and books for both CESSIs in the United States.

During each of 1978 and 1979 the contractor will arrange two 2 year fellowships in public health nursing education graduate study in the U.S. in order to expand the African staff at these institutions upon the completion of training.

c. Developing an Anglophone Training Institution

The contractor, through short-term consultants, will explore the feasibility of developing an Anglophone regional health training institution to provide the types of training and activities provided by the CESSIs and serve as a sub-regional training center for Liberia, Sierra Leone and Gambia. Such a Center might be established through the facilities of Cuttington College and the Tubman National Institute of Medical Arts in Liberia. The contractor, in cooperation with the SHDS Project Office will consult with the Government of Liberia, WHO and A.I.D. when completed.

As an interim measure the contractor will provide two graduate fellowships in each of 1977 and 1978 for senior level nursing personnel from Liberia, Sierra Leone and Gambia for training in the United States for faculty development; and will assist in developing annual sub-regional workshops in post-basic nursing.

4. Disease Surveillance and Health/Demographic Data Systems
(Objective III)

The contractor's responsibility for training and demonstration under this objective will be limited to coordination of the activities of the U.S. Communicable Disease Center (CDC) PASA team funded under this project with the other activities of the project. Coordination will be carried out primarily through the SHDS Project Office in Abidjan. No technical or logistic support is envisaged.

The contractor, through the SHDS Project Office, will be responsible for coordinating the country and regional demonstration and training requirements for measles vaccine based upon planned annual requests. The SHDS Project Office will assist WHO/AFRO in acquiring measles vaccine from other donors for programming through this project and to work with participating countries to develop the capability to procure vaccine directly by the end of the project.

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5. Low Cost Health Delivery System Models (Objective IV)

The overall goal of Objective IV is to assist developing a prototype low-cost (affordable) integrated health delivery system in one or more of the participating countries. The contractor should study various prototypes of health delivery systems which may serve as both a model for replication and as a subregional operational research and training center. One possibility is the University Center for Health Services (CUSS) in the Cameroon which is establishing an Institute of Postgraduate Studies. The contractor will undertake additional consultation with the Government of Cameroon, CUSS, WHO/AFRO and A.I.D. as well as other countries and present detailed plans for implementation of Objective IV to the Project Coordination Committee for action. Research grants to Africans on alternative and comparative methodologies of low-cost delivery systems may be awarded. An annual workshop on preferred approaches to primary health care in tropical African countries will be organized to assist in exchange of information and developing the prototype program. Limited consultant services will be provided to assist in developing the detailed plan.

6. Administrative Management

The primary responsibility for the SHDS project is assumed jointly by WHO/AFRO and the SHDS Project Director (contractor chief of party) through a Coordinating Committee composed of four representatives of the participating countries (two from countries of French expression and two from countries of English expression) and other donor organizations. Additionally, WHO/AFRO will assign a Liaison Officer to the SHDS Project Office and has delegated responsibility for day-to-day coordination to the country representatives in the participating countries.

The Regional Office for Africa of the World Health Organization (WHO/AFRO) has primary liaison responsibility between the 20 countries and the project staff. Therefore, the geographical proximity of SHDS and WHO/AFRO to the countries, and the programmatic responsiveness which can result, is basic to the leadership and direction of SHDS in and from Africa.

Other cooperating organizations for this project are the Organization for Coordination of the Control of Endemic Disease in Central Africa (OCEAC) located in the Cameroon, and its sister organization OCCGE located in Upper Volta. Consultant services and technical backup in relation to disease surveillance and communicable disease control will be provided by the US Center for Disease Control (CDC) in Atlanta. Ministries of Health and other government agencies in those countries in which rural health delivery system field training centers and disease surveillance centers are located will participate directly in the implementation of these aspects of the project. WHO/AFRO will recruit and contract for all African staff, purchase all African-acquired equipment and services, and will arrange travel and stipends for Africans in training within Africa.

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ALL procurement of personnel and equipment and supplies will be from the U.S. unless otherwise agreed in writing by A.I.D.

C. Report Requirement

1. Project Work Plan: The contractor shall submit a detailed draft project work plan for the term of this contract within the initial six months of the contract. This project plan will encompass the individual work plans, manpower development (on-the-job and participant training) physical facilities, feasibility study activities.

The views of WHO/AFRO and A.I.D. shall be obtained and incorporated into a finalized version of the project work plan within 30 days after comments are received.

2. Mid-year Progress Report: The contractor shall submit by 30 October of each year a mid-year progress report showing achievements against the project work plan and identifying major problems and constraints encountered.

3. Annual Progress Report: The contractor shall submit by 30 April of each year an annual progress report which will be related to the project work plan and include a summary narrative description of activities, the main achievements, major problems encountered, recommendations for improvement and recommendations for activities in the next years.

4. Final Report: Sixty days prior to the completion of the contractor's project services, the contractor shall submit a draft final report incorporating a review of project accomplishments, problems encountered and recommendations for future activities in relation to specifically stated objectives or targets. If within 60 days of receipt of the draft final report no comments have been received from the WHO/AFRO and the A.I.D. the draft final report shall be considered as the final report. If comments are received from the WHO/AFRO and A.I.D., the comments shall be incorporated into a finalized version of the final report such finalized version to be submitted within 30 days of the completion date of the contractor's project services.

5. Report Distribution:

a. All draft and final reports covered by items 1 through 4 above shall be distributed as follows:

WHO/AFRO	- 3 copies
A.I.D. Project Officer, Abidjan	- 1 copy
A.I.D. Project Officer, AID/W	- 1 copy
A.I.D. Health Development Officer	- 2 copies
Contracting Officer	- 1 copy

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b. Copies of all final reports shall be sent to:

A.I.D. Reference Center
 Agency for International Development
 Washington, D.C. 20523 (2 copies)

As an Appendix to its final report, the contractor or grantee shall submit a brief summary outlining the extent to which minorities and women were used in carrying out the activity and the extent to which they were used as members of teams which were sent to the field.

ARTICLE II - KEY PERSONNEL

A. The key personnel which the Contractor shall furnish for the performance of this contract are as follows:

Dr. David M. French, Project Director

B. The personnel specified above are considered to be essential to the work being performed hereunder. Prior to making any change in the key personnel, the contractor shall notify the Contracting Officer reasonably in advance and shall submit justification (including proposed substitutions) in sufficient detail to permit evaluation of the impact on the program. The listing of key personnel may, with the consent of the contracting parties, be amended from time to time during the course of the contract to either add or delete personnel, as appropriate.

ARTICLE III - PERIOD OF CONTRACT SERVICES

The effective date is 1 April 1978. The estimated completion date is 30 April 1980.

ARTICLE IV - ESTIMATED LEVEL OF EFFORT

<u>No.</u>	<u>Position Description</u>	<u>Estimated Man-Months</u>
1	Project Director	24
2	Assistant Director	48
1	Office Manager-Field	24
1	Administrative Assistant-Field	24
9	Field Staff Nonprofessional	216
1	Campus Coordinator	22
1	Planning and Evaluation Coordinator	11
1	Public Health Advisor	5.5
3	Home Office Nonprofessional	66
1	Epidemiologist	22
1	Coordinator, Educational Development	4.8
Various	Consultants	148

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A six-day work week with no premium pay is authorized while in ~~Africa. The duty posts are Abidjan, Ivory Coast, Dakar, Senegal and Boston, Massachusetts,~~ but technicians will be required to travel, per Article I.

ARTICLE V- ESTIMATED COST AND OBLIGATED AMOUNT

The total estimated cost is \$3,599,341. The obligated amount is \$1,400,000. The contractor shall not exceed the obligated amount without prior written approval from the Contracting Officer. Further constraints are detailed in General Provision #9 entitled "Limitation of Funds."

ARTICLE VI - BUDGET

The following budget is illustrative in nature. However, the contractor shall not deviate from the amount established in any individual cost line item by more than 15% without the prior written approval of the Contracting Officer.

A. Budget

<u>Cost Line</u>	<u>Year #1</u>	<u>Year #2</u>	<u>Total</u>
Salary	\$ 322,287	\$ 411,371	\$. 733,658
Consultants	275,647	166,468	442,115
Fringe benefits	93,942	95,799	189,741
Overhead	197,573	206,996	404,569
Travel and transportation	162,796	128,662	291,458
Allowances	458,717	341,912	800,629
Other direct costs	185,131	165,935	351,066
Equipment and supplies	171,720	151,385	323,105
Participant Training	<u>21,000</u>	<u>42,000</u>	<u>63,000</u>
Total Estimated Cost	\$1,888,813	\$1,710,528	\$3,599,341

B. The contractor shall submit the proposed salary of any individual long-term employee not appointed as of the effective date of this contract to the Contracting Officer for prior approval.

C. Short-term assignments, considered consultants under this contract, that are performed by Boston University employees, shall not include consultant reimbursement at higher than these employees current salary rate. Consultants that are not Boston University employees are not entitled to fringe benefits.

~~Contract No. ATD/arr-G-144~~

D. The contractor may not collect housing and/or utilities allowance in excess of the official Department of State Living Quarters Allowance for long-term employees prior to issuance of a waiver of same.

ARTICLE VII - LOGISTIC SUPPORT

Contractor will negotiate with host country, with WHO/AFRO assistance, and with WHO/AFRO for all privileges desired and services rendered under this contract. No A.I.D. support or assistance will be provided. Contract personnel will not be liable for income or social security taxes with respect to income upon which they are obligated to pay taxes to the U.S. Government. Project equipment will be imported free of customs duties and taxes.

ARTICLE VIII - NEGOTIATED OVERHEAD RATES

Pursuant to the clause of the General Provisions of this Contract entitled "Negotiated Overhead Rates Postdetermined" a rate or rates shall be established for each of the contractor's accounting periods during the term of the contract. Pending establishment of final indirect cost rates for the initial period, provisional payments on account of allowable indirect costs shall be made on the basis of the following provisional rates applied to the base(s) which are set forth below:

	<u>Rate</u>	<u>Base</u>	<u>Period</u>
On Campus	62.74%	Salaries	From: April 1, 1978 To : April 1, 1980
Off Campus	33.5%	Salaries	From: April 1, 1978 To : April, 1, 1980

Postdetermined indirect cost rates for subsequent periods shall be established in accordance with the terms of the "Negotiated Overhead Rates - Postdetermined" clause of this contract.

ARTICLE IX - MISCELLANEOUS

A. Language Requirement

All long-term technicians shall have a French language proficiency of at least S-2, R-2 as established by the Department of State Foreign Service Institute.

B. Equipment

Lists of all equipment purchased under this contract will be submitted to WHO/AFRO and A.I.D. Project Manager.

APPENDIX VIIPASAPARTICIPATING AGENCY SERVICE AGREEMENTBETWEENTHE AGENCY FOR INTERNATIONAL DEVELOPMENTANDDEPARTMENT OF HEALTH EDUCATION & WELFARECENTER FOR DISEASE CONTROL

1. INITIAL STARTING DATE (Mo., Day, Yr.) March 1, 1978	2. PROJECTED COMPLETION DATE (Mo., Day, Yr.) February 29, 1980
3. CATEGORY <input checked="" type="checkbox"/> TDY <input checked="" type="checkbox"/> ASSIGNED	4. DURATION OF FUNDING <input checked="" type="checkbox"/> CURRENT YEAR <input checked="" type="checkbox"/> FORWARD FUNDING
5. PROJECT NO. AND TITLE 698-0398 Strengthening of Health Delivery Systems (SHDS) Phase II, Obj. III	6. <input checked="" type="checkbox"/> PASA ORIGINAL <input type="checkbox"/> PASA AMENDMENT _____
7. PASA NUMBER HZ/AR-0398-6-78	8. COUNTRY/AID/W OFFICE: Africa Regional
9. TYPE <input type="checkbox"/> REIM. <input checked="" type="checkbox"/> GRANT <input type="checkbox"/> LOAN	10. YEAR FY 1978/79

11. FUNDING

A. CITATIONS	(1) APPROPRIATION NO. 72-1181021.8	(2) ALLOTMENT NO. 848-61-698-00-69-81	(3) PIO/T/OBL. NO. 698-0398-2-6187655
B. AMOUNT	(1) INITIAL OR CURRENT \$925,000	(2) CHANGE (+ or -)	(3) NEW TOTAL \$925,000

* There are three Amendments to this PASA. Copies may be obtained from AID or CDC.

C. TOTAL PROJECT COSTS	(1) PRIOR YEARS (FOR CONTINUOUS PROJECTS)	(2) FUTURE YEARS (INCLUDE CURRENT FUNDING-BLOCKS B(1) OR B (3))	(3) ESTIMATED TOTAL
D. PRINCIPAL COST COMPONENTS (BLOCK B)	(1) SALARIES, DIFFERENTIAL AND BENEFITS	(2) TRANSPORTATION INCLUDING PER DIEM	(3) MISC. (4) OVERHEAD
E. SUPPLEMENTAL AID SUPPORT	(1) INITIAL OR CURRENT	(2) CHANGE (+ OR -)	(3) NEW TOTAL

12. STATEMENT OF PURPOSE

1. Summary

The overall objective of this PASA between A.I.D. and DHEW, Center for Control (CDC), is to secure the CDC's professional services needed to improve regional and national disease surveillance and health/demographic data systems in 20 Central and West African countries and to integrate these systems into the national health planning and delivery systems of these countries.

*Partial funding: Additional funding to be provided subject to availability of funds.

Budget Estimates

1978 Budget	\$ 852,000
1979 Budget	<u>1,425,050</u>
	2,277,050
Amount this PASA	<u>925,000</u>

Amount Subsequent Amendment(s) \$1,352,050

13. GOVERNING PROVISIONS: PURSUANT TO THE GENERAL AGREEMENT DATED MARCH 3, 1966 BETWEEN AID AND THE DHEW. THE AGENCY NAMED ABOVE AGREES TO PROVIDE THE SERVICES OUTLINED IN BLOCK 12 AMPLIFIED AS NEEDED BY APPENDIX A UNLESS OTHERWISE AUTHORIZED BY AID. ALL SERVICES SHALL BE OF U.S. ORIGIN. ANY APPENDICES ATTACHED HERETO ARE CONSIDERED PART OF THIS PASA.

14. SIGNATURES

NAME: Robert D. Fischer, M.D.
TITLE: Acting Director
OFFICE: Office of International Health
DATE: 8/2/78

NAME: J. William Auer
TITLE: Chief Participating Agency Branch
OFFICE: Contract Management, AID
DATE: July 7, 1978

15. APPENDICES

- APPENDIX A - SCOPE OF WORK
- APPENDIX B - BUDGET PLAN
- OTHER/REFERENCE:
WHO/USG Grant, Dated 9/27/77

16. NEGOTIATING OFFICERS

AID: CM/SOD/IIA: ERWillis
AGENCY: DHEW/CDC: JWeisfeld
JCooley

The more specific objective is to regularize surveillance and data gathering by the countries through training and demonstration on a sub-regional basis. This activity is Objective III of Phase II of the Strengthening of Health Delivery Systems Project 698-0398 (ICP/SHS/013) and will be implemented as a coordinated phase of that activity.

II. Scope of Work

A. In order to achieve the above goals, CDC will define disease surveillance needs and develop a practical workable system for the 20 participating Central and West African countries to meet these needs. This will include steps for planning, implementing, monitoring and evaluating immunization programs, including identification of critical areas requiring administrative, logistical and technological change from current practices. Work will be performed in coordination with SHDS Project Office in Abidjan, the WHO regional office in Brazzaville and WHO Country Representatives, and the national Ministries of Health and other national entities. The end of project status expected after five years is that the national governments will formulate national disease surveillance plans, carry them out, and report in accordance with an agreed regional system.

The following four specific activities will be undertaken:

1. Training and demonstration for disease surveillance, data gathering and disease control will be started in three subregional areas. Two areas will be set up (one in the Cameroon and one in Ivory Coast) with the cooperation of existing sub-regional epidemiological centers (OCEAC in Yaounde, Cameroon and OCCGE in Bobo-Dioulasso, Upper Volta). A third sub-regional area for anglophone West Africa will be established in Ghana with the cooperation of the Ghanaian Ministry of Health. All three areas will be used to develop an expanded immunization (multiple antigen) training and demonstration program for health personnel from West African countries. Area-specific feasible methods of multiple antigen administration including identification of target age groups will be developed through operational research and evaluation.

During the first year, CDC will plan and conduct at least two training courses on disease surveillance, including data collection, interpretation and response. Emphasis will be placed on utilization of proven epidemiologic and operational methods to achieve disease control.

2. CDC shall provide technical training information upon request to Regional Training Centers in Lome, Togo and Lagos, Nigeria, as well as the CESSI's in Dakar, Senegal and Yaounde, Cameroon. Information on disease surveillance, demographic data collection, nutrition surveys, and disease control will then be used by these centers to develop training programs offered to polyvalent health workers to enable them to improve the quality of primary health care at the village level.

3. CDC Medical Epidemiologists shall assist individual countries in evaluating the usefulness of their health surveillance systems. The type of information collected will be critically examined in terms of its potential utility. The transfer of surveillance data from reporting

centers to district, national, regional and WHO centers responsible for analysis and action will be evaluated. Based on such evaluations, recommendations will be made for improving data collection and analysis and increasing the quality of health delivery programs. Periodic surveillance reports will be prepared comparing inputs (e.g., immunizations) and outputs (e.g., changes in morbidity and mortality).

4. Improved laboratory facilities in selected areas shall be developed to provide back-up services to the regional disease surveillance activities. Services will be provided from existing laboratories in the OCCGE, OCEAC, as well as certain individual countries.

B. CDC, through use of short-time U.S. technicians, shall assist national governments to develop a coordinated laboratory system to provide back-up services to the disease surveillance and control systems.

C. One Medical Epidemiologist and one Operations Officer shall be assigned for each demonstration and training area in Africa. Four of the above persons are to be provided under this PASA in FY 78; two are to be provided from CDC's own resources.

D. Upon request by participating countries, consultation shall be provided to participating countries by the CDC field personnel to establish national training capabilities for expanded immunization programs and to develop country plans for surveillance and immunization.

E. CDC shall develop with each country an inventory of injectors and spare parts and will provide group training and designated individuals from each country in inventory, maintenance, and repairs of jet injectors.

F. CDC shall provide vehicles and equipment, such as refrigerators/freezers, injectors and spare parts for the programs in the three demonstration areas. Measles vaccine for the countries and the demonstration areas will be provided from other sources, including A.I.D.

III. Background Data

Project Paper on SHDS, dated September 21, 1977.

IV. Reports

1. Project Work Plan: CDC shall submit a detailed draft project work plan for the first two years of the activity within the initial six months of the contract. This project plan will encompass the individual work plans for each training area, manpower development (on-the-job and participant training) and assistance with other programs.

The views of WHO/AFRO and A.I.D. shall be obtained and incorporated into a finalized version of the project work plan within 30 days after comments are received.

2. Mid-year Progress Report: CDC shall submit by June 30 of each year a mid-year progress report showing achievements against the project work plan and identifying major problems and constraints encountered.

3. Annual Progress Report: CDC shall submit by December 31 of each year an annual progress report which will be related to the project work plan and include a summary narrative description of activities, the main achievements, major problems encountered, recommendations for improvement and recommendations for activities in the next years.

4. Final Report: Sixty days prior to the completion of CDC's project objectives or targets: If within 60 days of receipt of the draft final report no comments have been received from the WHO/AFRO and A.I.D., the draft final report shall be considered as the final report. If comments are received from the WHO/AFRO and A.I.D., the comments shall be incorporated into a finalized version of the final report. Finalized version to be submitted within 30 days of the completion date of the contractor's project services.

5. Report Distribution:

A. All draft and final reports covered by Items 1 through 4 above shall be distributed as follows:

WHO/AFRO	- 3 copies
A.I.D. Project Officer, Abidjan	- 1 copy
A.I.D. Project Officer, AID/W	- 1 copy
A.I.D. Health Development Officer	- 2 copies
Contracting Officer	- 1 copy
A.I.D. CM/SOD/IIA	- 1 copy

B. Copies of all final reports shall be sent to:

A.I.D. Reference Center	
Agency for International Development	
Washington, D.C. 20523	- 2 copies

As an Appendix to its final report, the Participating Agency shall submit a brief summary outlining the extent to which minorities and women were used in carrying out the activity and the extent to which they were used as members of teams which were sent to the field.

V. Logistic Support

A. Local support staff, office support, laboratory costs are authorized in Africa. Atlanta backstopping staff authorized.

B. Project equipment will be imported free of customs duties and taxes.

C. The following shall be arranged by CDC: office space, equipment, housing utilities/equipment, international and local transportation, travel arrangements, secretarial/interpreter services, medical facilities, and use of official vehicles.

VI. Equipment**A. Quantity:**

5	Vehicle and spare parts	\$75,000	Non U.S. procurement waiver signed
1	Vehicle and spare parts	15,000	U.S. procurement
24	Freezers	12,000	U.S. procurement
	injectors, needles, etc.	92,000	U.S. procurement
	Shipment	29,000	
	Office equipment and furniture	44,000	Africa procurement

B. Lists of all equipment purchased under this PASA shall be submitted to AID Project Officer.

VII: Language Requirements

French S-2, R-2

Language training may be arranged at FSI in Washington by CDC.

VIII. Privileges

A. Personnel serving under this PASA will be afforded the same commissary and other privileges as other AID direct-hire and PASA employees.

B. U.S. AID will assist with negotiations with host country for privileges normally provided to U.S. government personnel. CDC personnel will not be liable for income or social security taxes with respect to income upon which they are obligated to pay taxes to the U.S. Government. Project equipment will be imported free of custom duties and taxes.

IX. Guidance and Liaison**A. Relationships and Responsibilities**

CDC and WHO/AFRO will work out relationships in the various countries in which they operate in cooperation with the country WHO representatives and will keep A.I.D. Project Officer informed of progress and problems.

B. Cooperating Country Liaison Official

Dr. Adeniyi-Jones, WHO/AFRO
WHO Representatives in bilateral countries

C. AID Liaison Officials

1. Earl Yates, Project Officer, AFR/RA, AID/W
2. A.I.D. Project Officer, Abidjan, Ivory Coast
3. A.I.D. Officer in countries where contractor is working will be informed of activities.

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X. Other Requirements

A. Bio-data of technicians shall be submitted to WHO/AFRO who will secure African country clearances.

B. The Africa Bureau, AID, strongly encourages the use in this activity of minorities and women both as contracting or sub-contracting firms and institutions and as individuals. Thus, the Participating Agency is expected to carry out a positive program to identify and use such organizations and persons to the fullest possible extent.

C. CDC will keep local AID Project Officer and Country WHO Representative informed of travel plans.

D. No international travel originating in the U.S. should be undertaken without prior approval of CM/SOD/IIA.

SHDS Project Background

1966-FY 1972:

AID support of WHO action to eradicate smallpox and to reduce measles morbidity and mortality through a smallpox eradication and measles control program in 20 West and Central African nations. The Smallpox/Measles Program, financed by AID, is implemented by the Center for Disease Control.

1971:

The American Public Health Association (APHA) is contracted by AID to evaluate the Smallpox/Measles Program. The APHA team recommends a gradual phase-out of the successful project, and, as well, states in their evaluation report that additional international assistance in the health sector would do well to improve the actual health delivery systems. The three priority areas designated by the APHA evaluation team were: (1) improved organization of the health systems; (2) improved administration or operation of the health systems; and (3) rationalized requirements for manpower and training.

1971:

AID initiates discussion with WHO, FAC and UNDP officials of the concept of a major regional multi-donor project in West and Central Africa focusing on the improvement of health delivery systems.

March 1972:

A second AID-contracted APHA team recommends that the general purpose and more specific objective of a regional multi-donor health project should be to support the strengthening of the work of regional health organizations and institutions. This second APHA report states that AID would be most effective in strengthening health delivery capacity by supporting manpower development and training in the following areas: (1) health planning and management; (2) paramedical personnel; and (3) disease surveillance.

February and
October 1973:

AID and WHO sponsor meetings in Brazzaville and Lagos for representatives of 20 national governments, sub-regional organizations, and bilateral and multilateral assistance agencies.

Three major problem areas are identified as limiting the effectiveness of African health delivery systems: (1) inadequate health planning and management capabilities; (2) health personnel at the local level lacking necessary skills; and (3) weak disease surveillance and control data systems. A large multi-donor regional health project is envisioned to tackle these health system weaknesses and a coordinating mechanism for a project is agreed upon in the form of two committees:

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- (1) Program Coordination Committee, responsible for technical and administrative coordination of program, composed of one representative each from WHO, AID, and FAC; and two representatives each from the francophone and anglophone groups of countries.
- (2) Program Review Committee, charged with confirming the PCC recommendations, composed of one representative from each of the 20 nations, from WHO, AID and FAC.

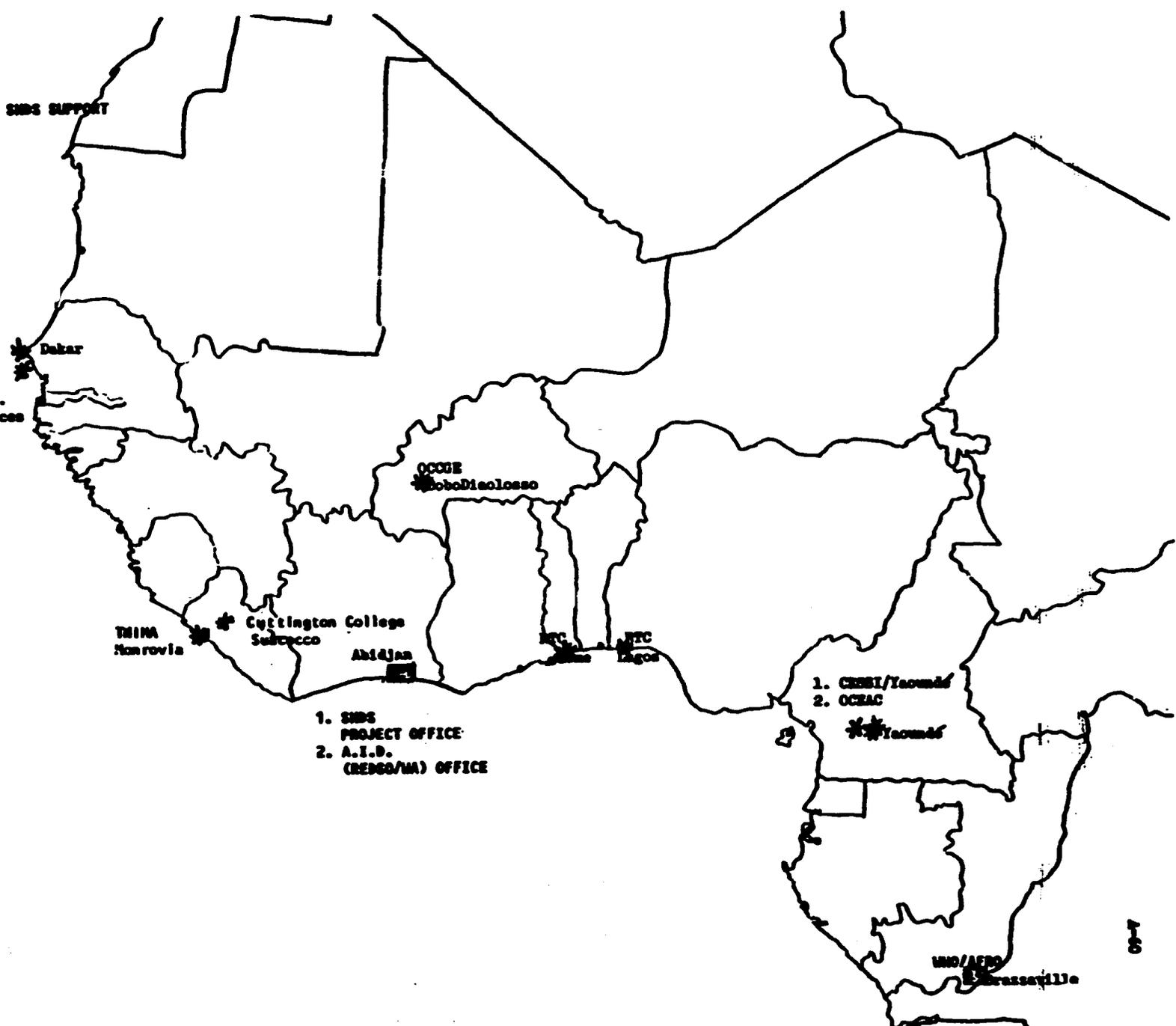
- November 1975:** A contract is signed between AID and APHA to execute Phase I of the SHDS project.
- November 1975:** The APHA sub-contracts the technical implementation of Phase I of the SHDS project to Boston University (BU). BU carries out a number of activities during Phase I of the SHDS project, paramount among which is the preparation of a proposal for a Phase II of the SHDS project which would: (1) improve national and regional health planning and management; (2) increase the skills and improve the utilization of health personnel operating at the local level; (3) improve the effectiveness of regional and national disease surveillance and health/demographic data systems; and (4) develop two rural training, service and research areas for low-cost health delivery.
- In addition to planning the proposal for a Phase II, Phase I of the SHDS project provided: (1) fellowship for African health professionals to regional health institutions and North American universities; (2) measles vaccines to 15 nations; (3) three seminars (two on primary health care; one on communicable disease surveillance/immunization programs); (4) a three-month consultancy to an immunization program of the Cameroon; (5) consultancies for curriculum revision at the WHO Regional Training Center (RTC) in Lome; and (6) review of some national health delivery systems.
- July 1977:** Project Review Committee (PRC) meets in Brazzaville. BU Phase II proposal is reviewed, modified and approved by PRC.
- March 1978:** Phase I ends. Total Expenditures: \$ 1,455,000.
- April 1978:** Phase II begins. Project Paper signed. BU contracted as executing agency for Phase II. Total budgeted amount for five year project is \$20,000,000. But, by the end of the 5th year of Phase II of the Project, approximately \$16.5-\$17 million will have been expended.

APPENDIX IX

✱ 9 INSTITUTIONS RECEIVING SIDS SUPPORT

SIDS PROJECT OFFICE
AID (REDDO/MA) OFFICE
WHO/AFRO HEADQUARTERS

- 1. CESSI/Dakar
- 2. WHO Center for Planning & Mgmt. of Health Services (Disbanded 1981)



TRINA
Nanrovia

Cyttington College
Subrecco

Abidjan

OCCE
BoboDioulasso

ITC
Lagos

ITC
Lagos

- 1. CESSI/Yaounde
- 2. OCEAC

✱ Yaounde

- 1. SIDS PROJECT OFFICE
- 2. A.I.D. (REDDO/MA) OFFICE

WHO/AFRO
Kinshasa

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APPENDIX X

SAMPLE PROJECT BUDGET*

GRAND TOTAL SHDS PROJECT BUDGET 1981

Boston University	\$2,135,692	(49%)
WHO/AFRO	942,329	(22%)
CDC	<u>1,269,063</u>	<u>(29%)</u>
Total	\$4,347,084	(100%)

* 1981 is chosen as a sample Project Budget because it is the last year of the four year period under consideration of the Evaluation Team.

BOSTON UNIVERSITY BUDGET*

	<u>OBJ. I</u>	<u>OBJECTIVE II</u>			<u>OBJ. III</u>	<u>OBJ. IV</u>	<u>Abidjan</u>	<u>Boston</u>	<u>TOTAL</u>
		<u>Lome/ Lagos</u>	<u>CESSI</u>	<u>Liberian Nursing</u>					
Salaries	-	27,820	43,644	45,746	-	-	256,374	102,301	475,885
Consultants	13,440	-	-	-	-	10,368	-	-	23,808
Fringe benefits	940	5,842	9,056	9,490	-	726	42,841	19,611	88,506
Overhead	14,875	31,800	63,496	60,329	-	55,370	244,666	83,674	554,210
Travel	8,800	2,800	6,350	13,633	-	11,550	67,050	5,370	115,553
Allowances	9,000	12,240	34,688	41,485	-	11,854	206,010	8,471	323,748
Other Direct Costs	10,072	29,250	8,917	21,498	-	124,351	129,330	20,323	343,747
Equipment, etc.	1,500	16,550	6,000	30,685	-	4,000	29,300	1,800	89,385
Participant Training	-	-	78,100	42,300	-	-	-	-	120,400
Total	\$ 58,627	\$126,302	\$250,251	\$265,166	-	\$218,225	\$975,571	\$241,550	\$2,135,692

* Revised June 1981

BOSTON UNIVERSITY, 1981

	<u>Subtotal</u>	<u>Total</u>	<u>Grand Total</u>
<u>OBJECTIVE I</u>			<u>\$58,627</u>
<u>Salaries</u>		<u>\$13,440</u>	
5 Consultants (\$192/day)	\$13,440		
<u>Benefits</u>		<u>940</u>	
7% of Consultant fees	940		
<u>Overhead</u>		<u>14,875</u>	
34% of all costs	14,875		
<u>Travel and Transportation</u>		<u>8,800</u>	
4 trips for workshops	8,800		
<u>Allowances</u>		<u>9,000</u>	
Per diem (\$100 average/day)	9,000		
<u>Other Direct Costs</u>		<u>10,072</u>	
Training materials, transportation, communication, honorariums, secretarial support for workshops	8,900		
Insurance	1,172		
<u>Equipment, Vehicles, Materials, Supplies</u>		<u>1,500</u>	
Books and materials for course	1,500		

BOSTON UNIVERSITY, 1981

	<u>Subtotal</u>	<u>Total</u>	<u>Grand Total</u>
<u>OBJECTIVE II (CESSI Yaounde and Dakar)</u>			<u>\$250,251</u>
<u>Salaries</u>		<u>\$43,644</u>	
Nursing Coordinator (3 mos.)	\$9,863		
Field Consultant (12 mos.)	31,050		
Secretary (3 mos.)	2,731		
<u>Benefits</u>		<u>9,056</u>	
17%-21% of salaries	9,056		
<u>Overhead</u>		<u>63,496</u>	
34% of all costs	63,496		
<u>Travel and Transportation</u>		<u>6,350</u>	
1 trip for Nursing Coordinator (U.S. to Canada)	150		
Field Consultant/Yaounde: 3 trips (intra Africa)	1,800		
Mileage and maintenance for vehicle	2,400		
R&R travel	2,000		
<u>Allowances</u>		<u>34,688</u>	
Field Consultant/Yaounde:			
Post differential	4,658		
Quarters	10,000		
Guard service	3,000		
Housing maintenance	4,800		
Post allowance	3,710		
Per diem to workshops (\$100/day)	2,000		
Per diem to assist CESSI/Dakar	3,500		
Nursing Coordinator: Per diem (\$60-\$100/day)	3,020		
<u>Other Direct Costs</u>		<u>8,917</u>	
Production of materials	5,000		
Communications	1,200		
Insurance	2,717		

	<u>Subtotal</u>	<u>Total</u>
<u>Equipment, Vehicles, Materials, Supplies</u>		\$ <u>6,000</u>
Books and teaching materials	\$ 3,000	
Materials and supplies	3,000	
<u>Participant Training</u>		<u>78,100</u>
5 students at University of Montreal	62,000	
1 student at Boston University	16,100	

BOSTON UNIVERSITY, 1981

		<u>Grand Total</u>
<u>OBJECTIVE II (Nursing Education for Liberia, Sierra Leone, the Gambia)</u>		<u>\$265,166</u>
<u>Salaries</u>		<u>\$45,746</u>
Nursing Coordinator (3 mos.)	\$ 9,863	
Secretary (3 mos.)	2,763	
Field Consultant	33,120	
<u>Benefits</u>		<u>9,490</u>
17 $\frac{1}{2}$ -21% of salaries	9,490	
<u>Over-head</u>		<u>60,329</u>
34% of all costs	60,329	
<u>Travel and Transportation</u>		<u>13,633</u>
2 trips for Nursing Coordinator (1 U.S., 1 U.S. to Africa)	2,433	
Field Consultant:		
6 trips (intra Africa)	2,200	
R&R travel	1,800	
Storage of Field Consultants' household goods in U.S.	1,200	
3 trips for 3 participants to U.S.	6,000	
<u>Allowances</u>		<u>41,485</u>
Field Consultant:		
Post differential	8,280	
Quarters	15,000	
Guard service	3,000	
Housing maintenance	4,800	
Post allowance	2,750	
Per diem (\$81-\$109/day)	4,055	
Nursing Coordinator per diem (\$75-\$90/day)	3,600	
<u>Other Direct Costs</u>		<u>21,498</u>
Production of materials for workshops	2,000	
Secretarial/administrative support for field consultant	7,800	

	<u>Subtotal</u>	<u>Total</u>
Production of instructional materials	\$4,000	
Postage and communications	1,200	
Driver for field consultant	3,600	
Insurance	2,898	
<u>Equipment, Vehicles, Materials, Supplies</u>		<u>\$30,685</u>
Equipment	8,185	
Automobile	8,800	
Gasoline and maintenance	2,500	
Books and periodicals	3,000	
Films	3,000	
Materials and supplies	1,500	
Freight	3,700	
<u>Participant Training</u>		<u>42,300</u>
5 Fellowships	42,300	

BOSTON UNIVERSITY, 1981

	<u>Subtotal</u>	<u>Total</u>	<u>Grand Total</u>
<u>OBJECTIVE II (RTCs at Lagos and Lome)</u>			<u>\$126,302</u>
<u>Salaries</u>		<u>\$27,820</u>	
Educational Coordinator	\$27,820		
<u>Benefits</u>		<u>5,842</u>	
21% of salary	5,842		
<u>Overhead</u>		<u>31,800</u>	
34% of all costs	31,800		
<u>Travel and Transportation</u>		<u>2,800</u>	
Educational Coordinator: 1 trip (U.S. to Africa)	2,800		
<u>Allowances</u>		<u>12,240</u>	
Educational Coordinator per diem (\$120/day)	12,240		
<u>Other Direct Costs</u>		<u>29,250</u>	
In-country adaptation of VHW training materials	8,250		
Finalization of VHW training materials	13,000		
Production and field testing of VHW supervisory training materials	8,000		
<u>Equipment, Vehicles, Materials, Supplies</u>		<u>16,550</u>	
Lome: equipment, books, office supplies, freight	14,600		
Lagos supplies and freight	1,950		

BOSTON UNIVERSITY, 1981

	<u>Subtotal</u>	<u>Total</u>	<u>Grand Total</u>
<u>OBJECTIVE IV</u>			<u>\$218,225</u>
<u>Consultants</u>		<u>\$10,368</u>	
1 Consultant to course (\$192/day)	\$ 6,528		
1 Consultant for proposal development assistance and monitoring of proposals (\$192/day)	3,840		
<u>Benefits</u>		<u>726</u>	
7% of consultants' fees	726		
<u>Overhead</u>		<u>55,370</u>	
34% of all costs	55,370		
<u>Travel and Transportation</u>		<u>11,550</u>	
1 trip for 1 consultant to course (U.S. to Africa)	2,200		
3 trips for 3 SHDS/BU staff members to course/workshop (U.S. to Africa)	6,600		
1 trip for 1 consultant for proposal development assistance and monitoring of proposals (U.S. to Africa)	2,750		
<u>Allowances</u>		<u>11,854</u>	
1 Consultant to course per diem (\$77/day)	2,310		
3 SHDS/BU staff members to course/workshop (\$77-\$119/day)	7,486		
1 Consultant for proposal development assistance and monitoring of proposals	2,058		
<u>Other Direct Costs</u>		<u>124,357</u>	
Funds for research projects	100,000		
Production, translation, reproduction of materials for courses/workshops	6,000		
Secretarial assistance for courses/workshops	1,950		
Postage for courses/workshops	500		
Dissemination of research materials	15,000		
Insurance	907		

	<u>Subtotal</u>	<u>Total</u>
<u>Equipment, Vehicles, Materials, Supplies</u>		\$ <u>4,000</u>
Supplies for courses/workshops	\$ 1,000	
Books, periodicals, and equipment for courses/workshops	3,000	

BOSTON UNIVERSITY, 1981BOSTON OFFICE

	<u>Subtotal</u>	<u>Total</u>	<u>Grand Total</u>
<u>Grand Total</u>			<u>\$241,550</u>
<u>Salaries</u>		<u>\$102,301</u>	
Professional:			
Campus Coordinator	\$33,120		
Planning and Evaluation Coordinator	27,820		
Administrative:			
Office Manager	14,231		
Secretary	11,302		
Secretary (1/2 time)	5,600		
Bookkeeper (1/2 time)	8,948		
Temporary Help/Overtime	1,280		
<u>Benefits</u>		<u>19,611</u>	
Professionals (21% of salaries)	12,797		
Administrative (17% of salaries)	6,814		
<u>Overhead</u>		<u>83,674</u>	
53% of all costs	83,674		
<u>Travel and Transportation</u>		<u>5,370</u>	
U.S. Travel	1,970		
International Travel	2,200		
Other Travel Costs (taxi in Boston)	1,200		
<u>Allowances</u>		<u>8,471</u>	
Per diem:			
U.S. travel	974		
International travel	7,497		
<u>Other Direct Costs</u>		<u>20,323</u>	
Communications (Telex, Telephone, Postage, Express Delivery)	15,852		
Copying	3,960		
Meetings, other miscellaneous	175		
Equipment Maintenance	336		
<u>Equipment, Vehicles, Materials, Supplies</u>		<u>1,800</u>	
Office Supplies	1,800		

BOSTON UNIVERSITY, 1981ABIDJAN OFFICE

	<u>Subtotal</u>	<u>Total</u>	<u>Grand Total</u>
<u>Grand Total</u>			<u>\$975,571</u>
<u>Salaries</u>		<u>\$256,374</u>	
Professional:			
Project Director	\$70,912		
Assistant Project Director	27,235		
Assistant Project Director	26,750		
Administrative:			
Accountant/Bookkeeper	30,700		
2 Secretaries	47,256		
Secretary	21,100		
Driver	7,371		
Driver	6,741		
Messenger/Cleaner	5,493		
Temporary Assistant/Bookkeeper	7,816		
Overtime	5,000		
<u>Benefits</u>		<u>42,841</u>	
14%-21% of salaries	42,841		
<u>Overhead</u>		<u>244,666</u>	
34% of all costs	244,666		
<u>Travel and Transportation</u>		<u>67,050</u>	
Travel within U.S.	4,400		
International travel (Including R*R)	29,500		
SHDS Region travel	22,400		
Taxi trips	1,000		
Visa fees and photos	350		
Transportation of household effects and vehicles	9,400		

	<u>Subtotal</u>	<u>Total</u>
<u>Allowances</u>		<u>\$206,010</u>
Post differential:		
Project Director	\$10,640	
Assistant Project Director	5,625	
Assistant Project Director	4,085	
Quarters (Rent and Utilities):		
Project Director	42,000	
Assistant Project Director	25,000	
Assistant Project Director	32,200	
Refurnishing of Project Director's house	2,500	
Replacement of home equipment, Project Director's house	2,500	
Guard Service:		
3 quarters and office	10,000	
Education allowance:		
4 children	30,225	
Post allowance:		
Project Director	5,490	
Assistant Project Director	2,910	
Assistant Project Director	3,375	
Per diem:		
U.S. travel	6,300	
SHDS Region travel	19,800	
Abidjan transportation allowance for 9 employees	3,360	
<u>Other Direct Costs</u>		<u>129,330</u>
Office rent and utilities	44,582	
Repairs and maintenance	4,800	
Copier maintenance	3,000	
Vehicle maintenance	10,000	
Communications (telex, cables, telephone, postage, air, express delivery)	38,620	
Translation, duplication, production of Project materials	7,400	
Moving costs to new office	5,000	
Insurance	10,928	
Vehicle registration and insurance	5,000	

	<u>Subtotal</u>	<u>Total</u>
<u>Equipment, Vehicles, and Supplies</u>		<u>\$29,300</u>
Photocopier	\$11,300	
Gasoline	12,000	
Office supplies	6,000	

WHO/AFRO BUDGET - 1981

	<u>OBJ. I</u>	<u>OBJECTIVE II</u>			<u>OBJ. III</u>	<u>OBJ. IV</u>	<u>Abidjan</u>	<u>Boston</u>	<u>TOTAL</u>
		<u>Lome/ Lagos</u>	<u>CESSI</u>	<u>Liberian Nursing</u>					
Salaries	-	-	-	-	-	-	-	-	-
Consultants	-	62,800	21,000	36,300	-	-	-	-	120,100
Fringe benefits	-	-	-	-	-	-	-	-	-
Overhead	-	-	-	-	-	-	-	-	-
Travel	44,200	3,600	17,100	8,800	19,800	23,700	-	-	117,200
Allowances	119,190	51,000	29,770	49,592	64,285	75,600	-	-	389,437
Other Direct Costs	9,000	19,400	20,660	-	-	5,000	-	-	54,060
Equipment, etc.	-	-	3,000	4,500	1,500	2,000	-	-	16,000
Participant Training	-	<u>205,532</u>	-	<u>45,000</u>	-	-	-	-	<u>257,275</u>
Total	\$172,390	\$347,332	\$ 91,530	\$144,192	\$ 85,585	\$106,300	-	-	942,329

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WHO/AFRO, 1981

	<u>Subtotal</u>	<u>Total</u>	<u>Grand Total</u>
<u>OBJECTIVE I</u>			<u>\$172,390</u>
<u>Travel and Transportation</u>		<u>\$44,200</u>	
4 Temporary Advisors	\$ 4,200		
Administrator	200		
2 Secretaries	400		
51 Participants	39,400		
<u>Allowances</u>		<u>119,190</u>	
4 Temporary Advisors(150 days total)	18,750		
2 Administrators (40 days total)	3,000		
4 Secretaries (80 days total)	6,000		
4 Drivers (80 days total)	3,800		
75 Participants (3,180 days total)	87,640		
<u>Direct Costs</u>		<u>9,000</u>	
Direct Costs including translation	9,000		

<u>WHO/AFRO, 1981</u>		<u>Total</u>	<u>Grand Total</u>
<u>OBJECTIVE II (CESSI Yaounde and Dakar)</u>			<u>\$91,530</u>
<u>Consultant</u>		<u>\$21,000</u>	
Consultant (6 mos.)	\$21,000		
<u>Travel</u>		<u>17,100</u>	
7 Students field practice	2,100		
2 CESSI staff to supervise field practice	600		
2 Advisors for workshop	2,400		
20 Participants workshops	12,000		
<u>Allowances</u>		<u>29,770</u>	
7 Students for field practice (\$45/day)	4,410		
2 CESSI staff to supervise field practice (\$70/day)	1,960		
2 Advisors for workshop(\$95/day)	3,800		
20 Participants for workshop (\$70/day)	19,600		
<u>Other Direct Costs</u>		<u>20,660</u>	
Topping off salary for local CESSI faculty	18,000		
Teaching Assistant, CESSI/Yaounde	2,660		
<u>Equipment, Vehicies, Materials, Supplies</u>		<u>3,000</u>	
Materials, facilities, secretarial services, petrol, driver, etc. for workshop	3,000		

WHO/AFRO, 1981

	<u>Subtotal</u>	<u>Total</u>	<u>Grand Total</u>
<u>OBJECTIVE 11 (Nursing Education for Liberia, Sierra Leone, the Gambia)</u>			<u>\$144,192</u>
<u>Consultants</u>		<u>\$36,300</u>	
2 Faculties Cuttington College (11 mos. each)	\$36,300		
<u>Travel and Transportation</u>		<u>8,800</u>	
1 trip for consultant to workshop	600		
8 trips total for 2 advisors to workshop	2,400		
22 trips total for 22 participants to workshop	5,800		
<u>Allowances</u>		<u>49,592</u>	
Per Diem			
2 Faculty consultants at Cuttington College (11 mos) \$41/day	27,100		
2 Advisors to workshops (\$95/day)	5,700		
27 Participants (\$60-70/day)	16,792		
<u>Equipment, Vehicles, Materials, Supplies</u>		<u>4,500</u>	
Facilities, supplies, secretarial services for two workshops	4,500		
<u>Participant Training</u>		<u>45,000</u>	
10 Fellowships at Cuttington College	45,000		

WHO/AFRO, 1981

	<u>Subtotal</u>	<u>Total</u>	<u>Grand Total</u>
<u>OBJECTIVE II (RTCs: Lome and Lagos)</u>			<u>\$342,332</u>
<u>Consultants</u>		<u>\$62,800</u>	
2 Consultants, Lome	\$38,500		
2 Consultants, Lagos	24,300		
<u>Travel and Transportation</u>		<u>3,600</u>	
In-country adaptation of VHW training materials	2,400		
2 Consultants (Lome) trips	1,200		
<u>Allowances</u>		<u>51,000</u>	
2 Consultants Lome (\$50/day)	27,000		
1 Consultant Lagos (\$105/day)	12,600		
In-country adaptation of VHW training materials (\$95/day)	11,400		
<u>Other Direct Costs</u>		<u>19,400</u>	
Local subject matter committee	(6,000)		
Lome	3,000		
Lagos	3,000		
Operational costs for VHW Training of Trainers course	(13,400)		
Lome	2,400		
Lagos	2,400		
Translation costs for VHW and Supervisors training material	8,600		
<u>Participant Training</u>		<u>205,532</u>	
Lome	123,877		
Lagos	81,655		

WHO/APRO, 1981

	<u>Subtotal</u>	<u>Total</u>	<u>Grand Total</u>
<u>OBJECTIVE III</u>			<u>\$85,535</u>
<u>Travel and Transportation</u>		<u>\$19,800</u>	
18 (national and international) trips for 15 (national and sub-regional) counterparts to SHDS/CDC epidemiologists and operations officers	\$11,800		
12 trips for 12 participant to courses	4,400		
6 trips for 2 facilitators to courses	3,600		
<u>Allowances</u>		<u>64,285</u>	
8 Counterparts during training (\$55/day-\$73/day)	30,705		
Counterparts to OCCGE and OCEAC sub-regional epidemiologists:			
2 Per diem in Africa and Atlanta	4,500		
1 Salary subsidy	5,000		
12 Participants to courses (\$60-\$88/day)	14,000		
2 Facilitators to 3 courses (\$80/day)	10,080		
<u>Equipment, Vehicles, Materials, Supplies</u>		<u>1,500</u>	
Supplies, etc. for EPI course	1,500		

WHO/AFRO, 1981

	<u>Subtotal</u>	<u>Total</u>	<u>Grand Total</u>
<u>OBJECTIVE IV</u>			<u>\$106,300</u>
<u>Travel and Transportation</u>		<u>\$23,700</u>	
9 trips for 6 advisors to workshops	5,400		
2 trips for 2 advisors for development assistance and monitoring proposals	3,000		
28 trips for 23 participants to workshops	15,300		
<u>Allowances</u>		<u>75,600</u>	
6 Advisors to workshops (\$100/day)	24,000		
31 Participants to workshops (\$40-\$50/day)	45,600		
2 Advisors for development assistance and monitoring proposals (\$100/day)	6,000		
<u>Other Direct Costs</u>		<u>5,000</u>	
Facilities for course	2,000		
Development of documents, secretarial assistance, etc. for workshops	3,000		
<u>Equipment, Vehicles, Materials, Supplies</u>		<u>2,000</u>	
Gas, secretarial supplies for workshops	2,000		

TOTAL CDC BUDGET 1981

OBJECTIVE III

Salaries	\$ 384,969
Benefits	38,497
Overhead	153,714
Travel	163,200
Allowances	93,883
Other Direct Costs	431,800
Equipment	<u>3,000</u>
Total	\$1,269,063

CDC ATLANTA HEADQUARTERS

	<u>Subtotal</u>	<u>Total</u>	<u>Grand Total</u>
<u>OBJECTIVE III</u>			<u>\$235,358</u>
<u>Salaries</u>		<u>\$137,211</u>	
<u>Professional:</u>			
Director (4 mos.)	\$16,704		
Medical Officer (2 mos.)	10,019		
Medical Officer (2 mos.)	8,051		
Public Health Advisor (3 1/2 mos.)	11,782		
Public Health Advisor (11 mos.)	32,314		
Nurse Educator (1 mo.)	1,936		
Clerk-Typist	13,902		
Administrative Officer (4 1/2 mos.)	8,432		
Fiscal Accounting Asst. (6 mos.)	9,873		
Staff Assistant (4 mos.)	5,042		
Travel Assistant (6 mos.)	7,769		
Secretary (3 mos.)	4,431		
1981 5% pay raise	6,596		
<u>Benefits</u>		<u>13,721</u>	
10% of salaries	13,721		
<u>Overhead</u>		<u>39,226</u>	
20% of all costs	39,226		
<u>Travel</u>		<u>30,200</u>	
<u>Other Direct Costs</u>		<u>12,000</u>	
Rent, communications, utilities	4,000		
Movement effects	1,000		
Printing, reproduction, supplies, materials	5,000		
Security clearances and training	2,000		
<u>Equipment</u>		<u>3,000</u>	

CDC AFRICA FIELD, 1981

	<u>Subtotal</u>	<u>Total</u>	<u>Grand Total</u>
<u>OBJECTIVE III</u>			<u>\$1,033,705</u>
<u>Salaries</u>		<u>\$247,758</u>	
Medical officer	\$50,012		
Medical officer	47,260		
Medical officer	43,102		
Operations officer	39,444		
Operations officer	32,920		
Operations officer	31,961		
1981 5% pay raise	3,059		
<u>Benefits</u>		<u>24,776</u>	
10% of salaries	24,776		
<u>Overhead</u>		<u>114,488</u>	
5%-20% of all costs	114,488		
<u>Travel</u>		<u>133,000</u>	
<u>Allowances</u>		<u>93,883</u>	
Post Differential	28,863		
Other allowances	65,020		
<u>Other Direct Costs</u>		<u>419,800</u>	
Rent, communications, utilities	109,200		
Printing and reproduction	9,100		
Transportation of supplies and equipment to post	68,100		
Subcontracting	233,400		

APPENDIX XIWHO/SHDS: PROGRAM OF APPLIED RESEARCH
IN HEALTH SERVICES AND PRIMARY HEALTH CARE**A. Procedure for Submission of Research Proposals for Funding**

1. Read carefully "WHO-SHDS Directives on Applied Research in Health Services and Primary Health Care" and the "Criteria for Selection of Projects for Funding."

These documents are available from the following address:

The Director
SHDS Project
04 B.P. 799
Abidjan 04
Ivory Coast

2. If your research topic falls in the domain of the above mentioned Directives, develop a research plan of a maximum of 12 months duration.

3. Prepare a written project proposal comprised of the following elements:

3.1. A properly filled out copy of the WHO/SHDS Project document for requesting financial support for Health Services Research.

This document must be signed by the appropriate governmental authorities.

3.2. A written proposal of 4 to 10 pages developing the 9 points on the first page of the above mentioned document.

4. Submit the document and the written proposal to the following address:

The Director
SHDS Project
04 B.P. 799
Abidjan 04
Ivory Coast

~~5. The SHDS Project will examine the proposal and, if necessary,~~
request further information from the principal researcher.

6. The eventually revised proposal will be submitted concurrently to the regional Office of WHO and to the U.S. Agency for International Development. They will examine it and decide whether or not to grant the request for funding.

7. The SHDS Project will inform the principal researcher through his government if the proposal has been accepted by the WHO/SHDS Program. If rejected, suggestions for other possible sources of funding may be made.

8. If funding is approved, the SHDS Project will take the necessary steps to provide the funds and initiate the research.

8. Criteria for selection of projects for funding

Purpose of the research program

To encourage the development, application, and testing of strategies and techniques which will improve the capacity to plan, implement, and manage appropriate health delivery systems in West and Central Africa.

The program's research priorities

Priority will be given to research proposals that:

- focus on development of solutions to health problems that have relatively high priority in the countries in which the research will be undertaken;
- focus on solving problems that are critical to the successful implementation of primary health care programs;
- focus on development, application, and evaluation of techniques and strategies that will significantly improve the health of local populations; and
- address health issues and problems of importance to the effective delivery of health services throughout all or a substantial portion of the region.

Research proposals should focus on one or more of the following areas which have been identified by the International Conference on Primary Health Care at Alma-Ata in 1978** as essential to primary health care:

* The criteria listed here are a summary of the guidelines described in greater detail in the document, WHO/SHDS Guidelines for Applied Research on Health Delivery and Primary Health Care, The Project for Strengthening Health Delivery Systems in Central and West Africa and WHO/AFRO, 1980.

** Page 4, Item 3, of the "Declaration of Alma-Ata" in Alma-Ata 1978 Primary Health Care, WHO Geneva, 1978.

- ~~education concerning prevailing health problems and the methods of preventing and controlling them;~~
- promotion of food supply and proper nutrition;
- an adequate supply of safe water, and basic sanitation;
- maternal and child health care, including family planning;
- immunizations against the major infectious diseases;
- prevention and control of locally endemic diseases;
- appropriate treatment of common diseases and injuries; and
- provision of essential drugs.

Additional areas for emphasis include aspects of health manpower training, health planning and management, the cost of health care, and appropriate health technology that relate to the development of effective programs of primary health care in the region.

When appropriate the proposal should reflect an integrated approach to the problems of health and health care, considering health situations in the context of wider issues of socio-economic development.

Collaboration with experts from disciplines, research organizations, and/or government ministries that should articulate with the health sector is encouraged.

Acceptable research standards and methodology

The project should use research design(s) and methodologies of acceptable scientific quality and show evidence of general knowledge of former studies on the subject.

Not all research projects, however, would necessarily utilize the experimental scientific approach (isolating a problem, testing a hypothesis with rigorous controls, and obtaining clear cut results). Health services research should be practical and applied and may use other methods such as observations made in health institutions and the field, critical analyses

of existing health practices, studies of interesting cases (e.g., special health care experiments or projects), etc. The results will not always be expected to yield definite answers but should make available important data that will facilitate decision-making by health authorities.

The proposal should comply with acceptable ethical standards for research on such important issues as (1) the rights of human subjects; (2) the rights of persons studied to privacy, confidentiality, respect for cultural and religious beliefs, etc.; (3) consideration of social and environmental costs of the research; and (4) the right of the population studied to feedback concerning the results.

Organization, administration, and staffing of the research project

Approval for the proposed project should be obtained from whatever national, university, or other research review body is appropriate within the country(ies) in which the research will be undertaken.

The principle investigator(s) on the project should be from the country or region in which the proposed research will take place. The project should utilize local or regional personnel in other project positions whenever possible.

The group applying for the grant should be affiliated with a local or regional institution or organization. There are no specific restrictions on the types of institutions that may be involved. The institution, for example, may be an educational organization, a governmental, private, or community agency or group whose work relates to the planning or delivery of health care or applied health-related research, etc.

The types of personnel used within the project are not restricted to health researchers, but can include research, service, and planning workers from a variety of disciplines and levels, as well as students enrolled in

~~academic or training institutions.~~ Health service personnel of various levels working within the health program studied and/or community members from the local area should be involved, as appropriate, by those responsible for the planning and implementation of the research project.

In cases in which certain necessary technical expertise is not available within the country or the region, the project designers may utilize expertise from outside the region in the form of use of individual consultants or arrangements for institutional collaboration. If practical, mechanisms for training local personnel in the skills initially provided by outside consultants should be included in the project design.

Whenever possible, proposals should include arrangements which serve to strengthen institutions and their research capabilities within the country(ies) and/or region in which the project will be located.

Length, scope, and budget of the project

Projects proposed should be as short and practical as possible, considering research requirements, and not longer than one year at most. If the research is successfully completed and there are strong indications that further study will yield additional positive results, an application may be made for funding of further "phases" of the project.

The project budget should be reasonable considering: (1) the realistic funding needs for the research study proposed; (2) the capacity of the research group to use the funds effectively; and (3) the benefits the project is likely to bring in terms of improved health and/or health care, in comparison with the project's cost.

Monitoring and evaluation of the project

The proposal should indicate what techniques will be utilized for monitoring and evaluating the project for quality of work, maintenance of the work schedule, adequacy of administrative and fiscal procedures, etc.

Plans for dissemination and utilization of research results

Tentative plans for dissemination of research results should be outlined within the proposal. The proposal should include a statement concerning practical application of the results anticipated. It should describe any arrangements which have been or will be made within the country and/or region which will assure or make more likely the utilization of the research results for improvement of health or health care.

Suggested format for the research proposal

The proposal should include such sections as: (1) introduction/summary; (2) statement of problem or assessment of need; (3) goal and objectives; (4) research design and methodology; (5) project staffing, administration, and evaluation; (6) significance of the research; (7) budget and other support; and (8) appendices.