

685-0210

SENEGAL

Rural Health Services Development

PROJECT

PAPER

FY 77

AGENCY FOR INTERNATIONAL DEVELOPMENT  <b>PROJECT PAPER FACESHEET</b>		1. TRANSACTION CODE <input type="checkbox"/> A ADD <input checked="" type="checkbox"/> C CHANGE <input type="checkbox"/> D DELETE		PP
3. COUNTRY/ENTITY <b>SENEGAL</b>		2. DOCUMENT CODE <b>3</b>		
5. PROJECT NUMBER (7 digits) <input type="text" value="685-0210"/>		5. BUREAU/OFFICE A. SYMBOL <b>AFR</b> B. CODE <input type="text" value="06"/>	7. PROJECT TITLE (Maximum 40 characters) <input type="text" value="Rural Health Services Development"/>	
8. ESTIMATED FY OF PROJECT COMPLETION FY <input type="text" value="8"/> <input type="text" value="1"/>		9. ESTIMATED DATE OF OBLIGATION A. INITIAL FY <input type="text" value="77"/> B. QUARTER <input type="text" value="3"/> C. FINAL FY <input type="text" value="80"/> (Enter 1, 2, 3, or 4)		

10. ESTIMATED COSTS (\$000 OR EQUIVALENT \$1 - )						
A. FUNDING SOURCE	FIRST FY			LIFE OF PROJECT		
	B. FX	C. L/C	D. TOTAL	E. FX	F. L/C	G. TOTAL
AID APPROPRIATED TOTAL						
IGRANT	( 226 )	( 268 )	( 494 )	( 1248 )	( 2073 )	( 3319 )
ILOAN						
OTHER U.S.						
1. PEACE CORPS	8		8	55		55
2.						
MOST COUNTRY		60			1647	1647
OTHER DONOR(S)						
TOTALS	234	328	562	1301	3720	5021

11. PROPOSED BUDGET APPROPRIATED FUNCS (\$000)									
A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. 1ST FY <u>77</u>		H. 2ND FY <u>78</u>		K. 3RD FY <u>79</u>	
		C. GRANT	D. LOAN	F. GRANT	G. LOAN	I. GRANT	J. LOAN	L. GRANT	M. LOAN
(1)	590	510		494		999		949	
(2)									
(3)									
(4)									
TOTALS				494		999		949	

A. APPROPRIATION	N. 4TH FY <u>80</u>		O. 5TH FY _____		LIFE OF PROJECT		12. IN-DEPTH EVALUATION SCHEDULE
	Q. GRANT	P. LOAN	R. GRANT	S. LOAN	T. GRANT	U. LOAN	
(1)	876				3319		MM YY <input type="text" value="0"/> <input type="text" value="7"/> <input type="text" value="8"/> <input type="text" value="0"/>
(2)							
(3)							
(4)							
TOTALS	876				3319		

13. DATA CHANGE INDICATOR. WERE CHANGES MADE IN THE PID FACESHEET DATA, BLOCKS 12, 13, 14, OR 15 OR IN PRP FACESHEET DATA, BLOCK 12? IF YES, ATTACH CHANGED PID FACESHEET.

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14. ORIGINATING OFFICE CLEARANCE				15. DATE DOCUMENT RECEIVED IN AID, W. OR FOR AID, W. DOCUMENTS, DATE OF DISTRIBUTION			
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TITLE <b>Regional Development Officer</b>				<input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="3"/> <input type="text" value="1"/> <input type="text" value="4"/> <input type="text" value="7"/> <input type="text" value="7"/>			
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# SINE SALOUM RURAL HEALTH PROJECT

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## THE SINE-SALOUM RURAL HEALTH PROJECT

### Part I. - Project Summary and Recommendations

#### A. Recommendations

Grant: \$3,373,682

Waivers: Code 935 Procurement of project vehicles.

#### B. Project Description

The Sine-Saloum Rural Health Project will provide a system of delivery of basic health services to the rural population of the region, with full community participation in the selection of village health workers, in their support and in the provision of village health facilities.

The Sine-Saloum Region is one of eight regions of Senegal. The Region contains one-fifth of the total population of Senegal (1); eighty-five percent of the Region's inhabitants are rural. Sine-Saloum's rural population inhabits 2,884 villages comprising 76 Rural Communities in 6 Departments. In most of the villages there is a lack of health services and facilities.

The project will provide for: the construction of 600 village health huts; the training of 1800 village health workers (VHW's); the system for providing medicines to village huts; the renovation of 58 existing secondary health posts; construction of 15 new secondary health posts; the upgrading of 237 medical and paramedical personnel through in-service trainings and strengthening of the training infrastructure of the Khombole Sanitation School.

A base line health survey will be done at the beginning of the project which will provide the basis for subsequent evaluations. The project will extend over the period FY'1977/FY'1980. All activities of the communities and of the four agencies involved (Ministry of Health, Promotion Humaine, Génie Rural and USAID) will be coordinated through the offices of the Regional Governor at Kaolack by an executive committee with powers of delegation to the local levels.

(1) The population of Senegal is 5,085,388, of which the region of Sine-Saloum, the most populous, contained 1,007,000 inhabitants. Bureau de Recensement et de la Statistique, Aug. 24, 1976.

The State Secretariat of Promotion Humaine (PH) will, through each of its six Departmental-level teams in Sine-Saloum, conduct a series of assemblies with the Rural Community councils to assure each Community's active involvement in the Project through their selection of village health workers, the construction of health facilities (huts) and the management of a medicine restocking system. Promotion Humaine instructors will also undertake literacy training of Rural Community councillors who are to be involved in the administration of the Project on a local level.

The Project provides for adequate physical infrastructure at the level of secondary health posts, as well as a full complement of health post personnel in each post i.e. 1 Registered Nurse, 1 sanitarian and 1 orderly. In addition, one matron with basic midwifery training, and compensated by the Community for services rendered, is present in the health posts. One of the health post personnel will be designated as an Itinerant Worker (usually the sanitarian) who will provide technical backstopping by visiting every month each of the village health huts in his area.

The Ministry of Health (MOH) will staff 21 new health posts, making a total of 79 health posts which are to be operative at the end of the project. The MOH health post staff will train the village health workers through a series of sessions at the health posts. After training of the village health workers is completed, the itinerant workers will undertake ongoing advisory support. The MOH will, in addition, upgrade the teaching program at the Khombole Sanitation School to a two-year curriculum and provide 40 graduates for the project's requirements over a period of four years. The MOH will also ensure through normal channels availability of medicines for village health facilities via Rural Community councils, which are councils composed of representatives from several villages comprising a "Rural Community". The staff for these Health Posts will be trained and ready to begin work when the Construction is finished.

The MOH will designate one of its cadre as Project Director to be based in Kalcack and work with other participating agencies. A regional training team, personnel provided by MOH, will work under the direction of the project management. In addition, each Department will have a MOH Departmental Supervision team which will monitor the training of village health workers and the activities of the itinerant agents.

The Rural Engineering Service (Génie Rural) will participate in the Project through the construction of 21 new health posts in Rural Communities where there are presently no health posts. Its assistance will also be required for the renovation of the Khombole School of Sanitation and the renovation of 58 existing health posts.

The USAID will finance three long-term advisors (See Job Descriptions, Annex K) and associated Senegalese support staff; costs for renovation at the Khombole School; construction of 15 of 21 new health posts and renovation of 58 existing health posts; equipment of the health posts; materials for construction of village health facilities (huts); equipment for village health huts and initial stock of basic medicines; 17 low cost vehicles; and 79 horses and buggies for health post itinerant workers' transportation.

The Rural Communities' participation will consist of: the selection of village health workers; the construction of village health huts; the management of the sale of basic medicines at cost and the subsequent re-stocking of same. Each village health hut will be staffed by:

- a first-aid man, who will dress wounds and administer medicines for the most common ailments (malaria, diarrhea, eye infections, anemia, etc.);
- a midwife, who will assist village women during pregnancy, at delivery and with child-care; and
- a young man, who will organize sanitation activities (latrines, refuse pits, drainage ditches, etc).

The village health workers will be remunerated by the villagers. Six Peace Corps Volunteers will participate in the project at village and higher levels to facilitate training and achievement of project goals.

Throughout Project life the major emphasis will be placed upon the training of the village health workers, as well as on the in-service training of Health Post staff. Additional training is to be provided via the Khombole School and others to increase and improve the complement of skill areas available in the health sector in Sine Saloum. This training will also include family planning and health care modules.

There are specific conditions to be met by the GOS to enable health services in the Sine Saloum project to be carried out at the village level. These are: the presence of trained personnel on-site, a health facility (hut), and a consistent and regular supply of basic medicines. In addition, there exist requirements for on-going support, technical back-stopping of VHW's and referral services facilities for their patients. These can be answered by improvements and addition of equipment to existing and new health posts and upgrading of health post staff. The project provides for the construction of health huts, training of VHW's and Health Post personnel, basic equipment and medical stocks. In addition, the Project has provision for the necessary linkage of health posts and health huts through deployment of the itinerant workers. Usually one health post would service 9-14 health huts within a radius of 3-9 miles. The itinerant workers would visit by horse and buggy, thus providing year-round service.

The villages will provide support for their VHW's, construct their health huts and in return will have access to health services, medicines and referral services. The medicines, although purchased by the villages' patients, would be in continuous supply as the receipts would be used to re-stock depleted supplies. Thus a continuous cycle of services, medicines and extension of medical services and knowledge will be established in this model rural health delivery project.

The GOS will assume additional costs for required personnel, project construction and recurrent budgetary expenditures; these costs will represent a minor proportion of the current MOH budget.

The field action elements of the project have been phased, each of three phases addressing two departments in the region. This will allow adequate opportunity for modification in project implementation without substantial loss of time or resources and will permit the respective ministries involved in the project a more rational use of their scarce manpower.

The first phase of field action, beginning in the Fall of 1977, will involve the Departments of Kaolack and Fatick. These departments have been chosen because they presently have the most complete infrastructure and personnel of the entire region. Field action elements affecting the phase one departments (including sensitization of villagers by Promotion Humaine, selection and training of supervisory teams and health post personnel by the MOH, construction of health posts by the GOS and village health huts by villagers, and training of village workers) will extend through Nov., 1978 when the village health workers will be fielded. Retraining and supervision of village health workers continues on a periodic basis; literacy training extends for an additional year.

An assessment of the progress made under Phase I can be made one year after commencement to determine the adequacy of the participation of the GOS technical ministries and the receptivity of the villagers to project concepts. Modifications and changes in the program and in the work plan can be made in sufficient time to allow them to be incorporated into phases 2 and 3.

Assuming no major changes are required, the second phase departments (Foundiougne and Gossas) would be introduced to the project late in 1978. Village health workers would be fielded in mid 1979.

The same assessment cycle would obtain for the third phase departments, with Niora and Kaffrine, beginning in the Fall of 1980 and village health workers finally being fielded in early 1981.

(The phasing of the field actions is more completely illustrated in Annexes B and F.)

C. Summary Findings

Detailed analyses of the project are contained in Part 3 and the Annexes. These analyses conclude that the relatively simple technology introduced in the project is within the sphere of knowledge of the general population and can easily be handled by them. More than introducing a new technology the project strengthens a communal system for delivering better health services. The costs apportioned to the national government and to the villagers themselves for support of the project (both initial costs and recurrent expenditures) should be within their means and will not constitute an undue burden on either the MOH budget or on village households accounts.

Sociological analysis indicates the relatively homogeneous character of a population keenly interested in health improvement and prepared to actively participate in the project.

As discussed in the engineering analysis, it would be feasible to perform the required renovation of buildings and new construction using the Fixed Cost Reimbursement method. Considerable estimated cost data has been provided by the Public Works Office at Kaolack which permits the inclusion in this paper of a reasonable cost estimate for the required work. Of course, prior to release of funds and the start of new construction (scheduled to begin in Phase II) more adequate plans and specifications will be presented to enable a 611(a) certification to be made.

D. Project Issues

1. Procurement Issues

a. Code 935 Procurement of Vehicles for the Project:

Vehicles of U.S. manufacture are extremely rare in Senegal. Repair facilities, even in Dakar, for U.S. vehicles are few and the spare part system is virtually non-existent. In the project area, there are no facilities capable of effecting necessary maintenance and care. The project has minimized the requirement for vehicles by providing for horse and buggy transport of itinerant workers but a certain number of vehicles are required for field transport of departmental and regional supervisors and for project management. A Code 935 waiver is requested for the purchase of 17 small vehicles (2CV or 4L) at an approximate cost of \$4,400 each.

b. **Medicine/Drugs**

The purchase of initial stocks of medicines under this project will be made through a bulk procurement action. The GOS, acting through SIPOA, a private firm operating under GOS sponsorship, will import, pelletize, package and label the medicine once it is received. A specific letter requesting permission to use the SIPOA facility will be sent by the MOH once the project is approved. It will be included as a covenant in the Project Agreement.

2. Issues Raised at PRF Review

The issues raised at the ECPR review as outlined in State 205024 are discussed in the Project Paper. A brief summary of the resolution of each point raised in the cable is discussed below.

a. Evidence GOS is supporting a rural emphasis in its health program: Part II.A.

b. Estimated cost for all proposed construction: Part 3. Engineering Analysis and Financial Analysis and Annexes B and D.

c. Water supply: The project does not propose construction of additional water supplies to either health posts or village health huts. It has been determined that adequate well water exists at each existing or proposed site.

d. Feasibility of fixed cost reimbursement. The FAR method of financing is proposed and to be negotiated in ProAg.

e. Role of Peace Corps Volunteers. Page 16 and Annex J.

f. Role of village level workers and assurance of their support by villages. While there can be no absolute assurance that villages will continue to support their health workers subsequent to project termination, it is reasonable to expect that if the various elements of the project as described in this PP are adequately implemented including the actions of Promotion Humaine, and the village health workers are able to effect a difference in the health aspects of village life then they will continue to have the support of the village community.

g. Role of Sanitary Engineering. Part II.B and Annex K.

Part II. - PROJECT BACKGROUND AND DETAILED DESCRIPTION

A. Background

A primary concern in any developing country is health improvement and the development of the delivery of health services to the population which is mostly rural. Senegal, like other former French colonies, inherited a ponderous administrative apparatus poorly geared to respond to development problems. There was a heavy, and initially concentrated investment in infrastructure, manufacturing, and social services. Major endemic health sector problems continued. Senegal's major health problems today are: malnutrition, malaria, tuberculosis, onchocerciasis, schistosomiasis, gastro-intestinal diseases in children, and measles.

Although post-colonial progress has been made in addressing the health problems of Senegal, especially endemic diseases, analysis of present sectoral constraints and causes indicates that the delivery of services, trained personnel, and funding priority are clearly the issues to be addressed.

In summary: There are inadequate numbers of trained personnel at all levels; there is lack of supervision all along the health delivery system chain; there are inadequate numbers of rural health posts; there is an inadequate supply of essential basic drugs; there is a weak logistical infrastructure, and there is an inadequate funding allocated to the health sector (see DAP Section 3 FY-75; Senegal).

The GOS in the Fourth Four-Year Plan for Economic and Social Development 1973-1977 states two primary objectives for the health sector;

- (1) maintenance of the present coverage of the population in the rural areas by making sure that every existing health post is operational; and
- (2) increasing coverage to 200,000 additional inhabitants per year. This expansion can take place only by yearly stages at the rural level, while it will take place at an accelerated pace at the intermediate Regional level.

In order to achieve these objectives, a series of projects is proposed, with highest priority given to:

- a. a reorganization of the structure of the Ministry of Health in order to improve implementation capability;
- b. plans to re-model old health posts and build new ones;
- c. logistical equipment supply to mobile units;

- d. development of basic health services;
- e. increase in the effectiveness of the cold-chain for vaccine storage;
- f. a new school of nursing;
- g. endemic disease surveillance;
- h. nutritional protection;
- i. fight against TB;
- j. regional pharmacies;
- k. semi-autonomous rural communities knowledgeable in proper ways of maintaining good health.

The commitment to improving and expanding rural health services made in the Fourth Four-Year Plan has been implemented slowly, both for lack of funds and an uncertain plan of action. Part of the difficulty may be attributed to an administrative structure weak in health planning capability.

An announced reorganization of the Ministry of Health which would strengthen the Ministry's planning capability accompanies the Government's Administrative Reform which gives rural communities control over their own revenues and places at their disposal cadres of technicians to assist them in organizing community development projects.

These administrative changes have important implications for the delivery of health services to the rural populace.

In light of the Plan's priority on rural health services with an emphasis on preventive care, it is notable that budget appropriations in favor of hospitals are on the increase, both in personnel and supply of drugs. It is obvious, then, that the increased emphasis on the rural areas will have to be addressed through low cost delivery systems as opposed to urban curative systems which are notoriously high-cost. The Plan admits that a gap between investments and returns seems to be worsening and, in the hopes of turning this situation around, recommends reform of the method of training future sanitary personnel and recycling of existing job holders.

A further level needs to be added to the health delivery system, however, if a truly effective method for reaching the rural masses is to be developed: the Village Health Worker. This worker, trained in the rudimentary principles of health care and observation would be the link between the "basic health service" (the Health Post) and the villagers.

.../...

In response to the sector constraints regarding funding, training, supervision, infrastructure at lower levels, logistics, and supply of drugs, the framework of the present project has been designed to create an extensive low-cost, community-supported rural health delivery system. The system involves five imperatives:

1. Completing the infrastructure for the delivery of health services; including child spacing information and methodology;
2. Training new health workers (village health workers) and recycling existing MOH personnel;
3. Establishing a comprehensive supervisory system:
  - a) among the existing personnel of the Region;
  - b) technical supervisory links between Health Post and villages;
  - c) through literacy and animation, a civic and financial supervision of the village health worker by the villagers and their representatives.
4. Providing health supplies, storage and establishing a resupply system supported by the villagers;
5. Providing means of transportation for the technical supervision system at all levels; and
6. Obtaining budget support and investment from external sources on a diminishing scale.

In theory, the health section of Senegal's Fourth Plan outlines just such an approach to developing a health-care delivery system.

The Sine-Saloum Rural Health Care Delivery project answers the above imperatives and provides a two-fold thrust in this important development sector. First, it will deliver health services to the rural population of Sine-Saloum; second, it will establish a replicable model which could be applied in the other regions of Senegal.

B. Detailed Description of the Project

1. Goal: The Sine-Saloum Rural Health Project addresses the health problems in one Region of Senegal. It is designed within a framework of replicability to be extended to other Regions of Senegal. The basis of the project is the Rural Community's linkage to higher levels both administratively and medically. The Project goal is to improve the level of health among the rural population and establish a model health care delivery system for preventive and curative medicine that can be maintained by community support.

.../...

2. Purpose: The purpose of this project is twofold; a) to establish a network of village health posts which are staffed and supported by community level personnel throughout the region of Sine Saloum and b) to improve and strengthen the support infrastructure of the Government of Senegal (GOS) for service to secondary health centers and village health posts.

To date, the GOS has concentrated the bulk of its services primarily on urban centers with only tertiary consideration given to the rural communities. The preoccupation of the GOS with urban areas has resulted in a corresponding budgetary and program neglect of rural health support systems. The village post especially has received scant attention in terms of resource allocation as it is the lowest point in the GOS logistics chain. In sum, little or no health care extends to the village level at this time.

In response to the foregoing situation the thrust of this project will be to provide resources in a way which will enable a village based rudimentary health system to become self-sustaining. To date, only isolated demonstration centers have been attempted which were never replicated due to the concentration of scarce manpower and financial resources they required. Once outside resources were withdrawn, the demonstration projects rapidly deteriorated. Mobile teams, intended to serve rural areas, strained GOS budget resources and could not be replicated in other areas. The project will attempt to overcome the cost replicability problem in rural health services by concentrating limited resources at the village level with the bulk of recurring costs also being absorbed at that level. A basic objective and guideline on the effort will be to ensure that preventive health services are provided at a price that can be afforded on a sustained basis. Indicators that this has been achieved will be the following:

- a) Five to ten villages in each rural community have health workers who work in and are maintained compensated by the village on a permanent basis. The health worker (VHW's) will provide low cost medicine and treatment for common illnesses as well as basic health education on a continuing basis. The VHW will also provide a referral system for those illnesses which are beyond local treatment capacity.
- b) Secondary health posts will be staffed by trained personnel who have adopted and practice new supervisory skills; i.e. receive referrals from village health workers and conduct advisory visits to the village health worker on a scheduled basis, etc.
- c) A sound system of drug supply to local village health huts will be established and adequately supported by the Ministry of Health. Also, a financial control and accounting system will be in place which will provide for accountability in the sale of medicines as well as resources for effective and continuing local drug resupply and procurement operations.

3. Project Outputs: At the end of the project in the Sine-Saloum Region the following conditions will indicate to a large extent, the progress made towards achieving the purpose of the Project:

The Rural Community Councils will have selected 1800 village health workers and installed a functioning mechanism for their remuneration by the villagers;

600 health huts will have been constructed by the rural communities;

Village Health Workers will have received preliminary training and refresher course;

A total of 21 new health posts (including 6 under construction by GOS) will have been constructed, staffed and equipped;

All Health Post Chiefs and itinerant workers will have received in-service training or recycling which will enable them to instruct and monitor VHW's;

Supplementary equipment will have been purchased and provided to health posts and health huts;

Horses and buggies will have been provided to health posts for transportation purposes and will be maintained by villagers;

Regular medicine and drug re-stocking, as well as the maintenance of horses and buggies will have been undertaken by the Rural Community Councils;

The Khombole Sanitation School will have been supplying at least 18 graduates per year;

Renovation of 58 Health Posts will have been completed.

4. Project Inputs: Project inputs are described in terms of the functions of the participating governmental Agencies and USAID.

In accordance with the GOS "Administrative Reform" policy, the project will be initiated and evaluated at national level but implemented and controlled at the regional level. The first step will be to organize a Regional Execution Committee at Koalack for implementation of the project. The administrative procedures will be established by the Governor of Sine-Saloum and national agency

representatives while the routine administration and implementation will be delegated to appropriate regional level governmental agencies, (see Part IV.A. and Annex G).

The Peace Corps will also participate in the Project through the phased deployment of six PCV's (one per Department) who will assist in Project execution.

Role of "Promotion Humaine" (PH) - Promotion Humaine is the Senegalese Ministry responsible for community development activities. (See Annex I for a description of Promotion Humaine.) Promotion Humaine will have the following roles within the Project:

- (i) animation of Rural Community Councils to assure their active participation in the Project;
- (ii) Literacy courses for Rural Community Counsellors;
- (iii) demonstration in nutrition concepts.

Promotion Humaine Animation - The animation of Community Councils will be performed through a series of assemblies spread over 2-3 months according to a program established by the project management. To this end, Promotion Humaine will field in each Department a full-time itinerant team consisting of two adjoints d'animation, who will visit each Rural Community Council at least twice a month, and will visit village assemblies as required, under supervision of the PH Regional Inspector. As a result of the PH animation each Rural Community will accomplish the following actions before the start of the Village Health Worker training program:

- (i) indicate to the project their health priorities and expectations of what the VHW are to do;
- (ii) select persons from among their villages for training in first aid, for training in mother-child care, and for training in environmental sanitation: generally 10 of each as there are usually about 10 larger villages in a Rural Community;
- (iii) agree on the mode of compensation of the village health workers (e.g. by the villagers cultivating a communal field for the benefit of the VHW's, contributing labor on the fields of the VHW's, or making a small payment at each visit);
- (iv) arrange village contribution of labor and materials for the construction of approximately 10 health huts and one literacy class hut per Rural Community, excluding the cement for floors and pillars, which will be financed by AID;

.../...

- (v) agree on village participation in maintenance of the horse serving to transport the Itinerant Worker.

To accomplish its tasks, each PH Department -level team will be provided through the Project with a light vehicle (4L or 2CV), i.e., a total of 6 vehicles. The regional-level PH office will receive an additional vehicle to assure effective supervision of the Department animation teams.

Although the PH teams will not teach health subjects, they will undergo, before starting their activities, a 2-week health/family care course in order to facilitate communications with Ministry of Health Personnel and Rural Community Councillors.

PH Literacy Action - To assure the continuation of rural health activities in Sine-Saloum after the withdrawal of US assistance, it is essential that the Rural Communities take responsibility for the most essential Project activity, the supply of medicines to the villagers through the health huts. To this end, the Rural Community Council must collect from the health huts the monies paid for medicines sold, verify the stock, place orders for additional medicines, pay for, receive and distribute them. The Rural Community Councils cannot be reasonably expected to fulfill these activities as long as over 90% of its members are illiterate, as is currently the case. Therefore the teaching of reading, writing and simple arithmetic to Rural Community Councillors (10-15 per Rural Community) is considered as essential part of the Project.

Literacy will be required as a qualification of the villagers to be trained as first-aid workers. Some might need a refresher course. Village matrons and environmental sanitation trainees who are illiterate will need literacy training. Consequently, a literacy campaign will be conducted in each Rural Community for counsellors and village health workers totalling about 30 persons per Rural Community. Since 10 Rural Communities already have literacy programs, the Project will involve the remaining 66 Rural Communities. The literacy courses will extend over a 2-year period (7 months per year). Courses will be conducted by Brevet-holding village residents, selected by the Rural Community Council. These will be trained by PH for 30 days to become literacy monitors. A monitor will be supervised by Promotion Humaine Department-level personnel. The community will participate through construction of class-rooms (in local materials) and through students fees for the purchase of notebooks, chalk, etc.

Role of the Ministry of Health - The Ministry of Health plans to complete the staffing of its existing 58 health posts in the Sine-Saloum by the middle of the project. This entails the posting of personnel so as to provide at each HP the services of: 1 HP chief or nurse, 1 matron (trained local midwife), 1 sanitarian and 1 orderly. In addition, the MOH will fund, construct and staff 6 new HP's which it has previously programmed for the Region. The Project framework envisions the construction of 15 additional HP with housing, (financed by AID), to be staffed by the MOH. The cost of renovating 58 existing health posts will also be financed by the project. The implementation of the renovation and construction activities are to be carried out by the Rural Engineering Service (Génie Rural) of the Sine-Saloum Region. AID will finance supplementary equipment for the existing 58 health posts and the 21 programmed health posts, as necessary, to bring all HPs into a full operational status. In addition, as the project gradually extends to cover all six departments, AID will finance the provision to each Health Post of a horse and buggy as its means of transport for liaison with the village health workers.

The MOH will facilitate and authorize the purchase of medicines by the Rural Community Councils for restocking of the health huts.

The MOH will provide a Project Director who will collaborate with the AID project manager, resident advisor and other appropriate regional authorities. The MOH will also provide and employ a Kaolack-based Regional Teaching and Supervising Team composed of:

- 1 graduate nurse
- 1 trained midwife
- 1 Khombole trained sanitarian

The Regional Supervisory Team will implement the in-service training of the HP personnel. Funding for this training will be provided by AID. Annex R has the Teaching/Training Plan for this Activity.

The MOH Health Post personnel will train the VHWs selected by the villagers. One staff member at each Health Post will be an Itinerant Worker (usually the Khombole graduate sanitarian) or in some cases a matron. The itinerant worker's job will be to travel at least twice a month to the 9-14 village health huts in a radius of 3-15 kms to supervise VHW activities.

In each of the six departments, MOH will provide a Departmental Supervisory Team, composed of:

- 1 male Registered Nurse
- 1 female Registered Nurse or Midwife.

These will be assigned from the existing staff of the MOH Department-Level Health Centers. The Departmental Supervisory Team will assure (i) correct training of VHWs by the Health Post staff (participating in the instruction themselves as necessary) and (ii) adequate monitoring of the VHWs by the Health Post itinerant workers.

The Regional Supervisory Team will be provided by the USAID with 2 light vehicles, and the Departmental Supervisory Team with 1 vehicle each, as well as a fuel and maintenance budget the mobility necessary for effective supervision.

Renovation of the Khombole Sanitation School (Ecole des Agents d'Assainissement)

The Khombole Sanitation School, located about 25 kilometers East of Thies, provides one year training in Sanitary Engineering. The school was originally financed by WHO and started operations in 1960-1964. The renovation and expansion of the Khombole School is an inseparable part of the project and will train a sufficient number of itinerant workers to staff the Health Posts in the project area and so assure effective training and supervision of the village health workers. Furthermore, without an increase in the number of itinerant workers, there will be little possibility of expanding the rural health system initiated by the Project to other regions of Senegal, one of the Project goals.

The Khombole School was designed for 76 students, but never equipped for that number. With relatively minor renovation (two classrooms from existing warehouse) and furnishings, it will be able to house 40 students.

The buildings at Khombole consist of one two-story dormitory, classroom and faculty offices building, one dormitory and personnel quarters building, one kitchen and one dining hall complex, one workshop building and one warehouse. The buildings have had no maintenance during the past 15 years except for the white-washing of the exterior walls on two occasions. However, the basic structure of the buildings is still sound. The items in need of maintenance are: plumbing, electrical fixtures and wiring, windows, ceiling in the dormitory buildings, and inside and outside painting. The furnishings should be replaced. The cost for renovation, repairs, furnishing, and equipment at Khombole, shown in detail in Annex P, amounts to US dol. 193,000. This will be financed by AID.

The expansion of the student body from 10 to 40 will involve an increase of US \$67,080 in annual operating expenses (Table 5, Pg. 38) Of this sum, the cost directly chargeable to the students (alimentation, school supplies, washing) amounts to US \$46,960 per year (US \$1,174 per student per year).

This cost could be met by the Project by means of AID financed study stipends to about 40 students for two years each, on condition that 40 stipend receivers will, upon graduation, be assigned to work in the Project area, thus assuring the staffing of Project installations. In this case, the additional overhead expenses to GOS resulting from the expansion of Khombole will be US \$20,120 per year.

The expansion of Khombole will alleviate pressure on St. Louis enabling it to produce annually about 10 additional auxiliary nurses, which are equally necessary to assure staffing of the new health posts to be constructed by the project.

At present, the school houses 10 students. These students first study at the St. Louis Nursing School for one year. Then, they spend one year at Khombole in order to graduate as Agents d'Assainissements (Sanitarians). The St. Louis school is at capacity and cannot accept the additional students for one-year training before sending them to Khombole. Consequently, the expansion of Khombole implies changing Khombole's status to a two-year school, which can enroll students at the Brevet level (the same as entering students at St. Louis). The two-year curriculum will be designed to produce individuals optimally trained to fulfill the role of Itinerant Workers in the Project. The student body of 40 will consist of a first year intake of about 22 students and a second year intake of about 18 students.

Role of the Rural Community Councils - The project depends upon active participation, involvement and interest of the villagers in improving their own health care. No inputs will be invested in any community unwilling to shoulder the responsibilities of arranging remuneration of the VHWs, construction of a health hut, and a village medical sales operation. Each village to be provided with a Health Hut will select:

- (i) a first-aid man who will dress wounds and administer medicines for the more common ailments (malaria, diarrhea, eye infections, anemia);
- (ii) a woman who will assist village women during pregnancy, at delivery and with family and child care;
- (iii) a young man who will organize sanitation activities (latrines, refuse pits, drainage ditches, etc.).

The project will cover the costs of training the village health workers (VHWs). This will include the preparation and production of 1800 VHW training manuals in 3 languages (French, Serer and Wolof) and meal expenses for the VHWs during training.

The villagers will remunerate the VHWs in a locally determined manner (e.g., through contribution of work on their fields or through a small payment at each visit) to assure their continuous service.

The initial stock of medicines provided by the project to the Health Huts will be sold to villagers at cost (say 25 FCFA per visit). The Rural Community Council will collect the monies thus obtained and once or twice a year shall place (through the Sub-Prefect and Prefect, with approval of the Regional Medical Officer) a restocking order with PHARMAPPRO, the national medicine distribution agency. PHARMAPPRO has a plan for installing regional outlets, including one in Kaolack to facilitate the distribution of medicines. In case the required medicines are not available at PHARMAPPRO, the Rural Community Council will be free to purchase from private pharmacists. The Council may vote monies obtained from rural taxes to augment receipts from Health Huts. The Rural Community Councils will assure the follow-through of their constituencies of the activities they are expected to undertake, such as the remuneration of the VHWs, the maintenance of the Itinerant Agent's horse, and maintenance of the Health Hut. The pelletizing, packaging and labelling of the bulk shipment drugs to be acquired under this project will be handled by SIPOA, however. (See I.D.1b, p.6)

Role of the Peace Corps - The Peace Corps will provide 6 volunteers (one per Department). Each PCV will collaborate with the PH animation team and the MOH Supervisory Team of the Department to assure the effective animation of the Rural Community Councils, training of the VHWs and organization of the Health Hut restocking supply channels (Annex J).

#### Coordination with Other Donors

This project will be coordinated with other rural health projects in Sine-Saloum:

1. UNICEF - completing projects in cooperation with WHO that strengthen basic health services at the health province level.
2. Ecumenical Project (Nganda)-Catholic-financed project, localized in scope, which aims at general health and sanitary improvement as well as a variety of homemakers skills.
3. CIDA (Gossas)- Provides technical advisors and doctors to two health centers in the Gossas Department.

All these projects have some rural health components which parallel some of the activities of this project. However, the success of this project is not dependent upon the performance of these other projects nor are they attempting to deliver health services in the same way as this project. Interest has already been expressed by CIDA in collaborating in the training portion of this project once implementation is underway.

## TRAINING

Training is an important element of the project. It surfaces at several levels and involves the two Senegalese government agencies most heavily engaged in the project - the Ministry of Health and the Services of Promotion Humaine.

The chain of health training to be provided under the project can be illustrated as follows:

Regional Training/Supervisory Team	}	Departmental Supervisory Team
Health Post Personnel		
Village Health Workers		

### Region Teaching and Supervisory Team

The Regional Teaching and Supervisory Team will prepare the curricula for the courses to be given to the Village Health Workers (VHW's) and will prepare the training plan and materials for use by the Health Post personnel who will train the VHW's. The Regional Team, composed of a mid-wife, a registered nurse, a sanitarian graduate of the Khombole School and an American Nurse/midwife or health educator, will also have the responsibility of observing and monitoring the training of VHW's.

### Health Post Training

The training of the Health Post professional personnel (a nurse, a locally trained mid-wife or matron, and a sanitarian) will emphasize principles of pedagogy as well as basic health principles which the VHW's are likely to meet and with which they can treat. The Health Post personnel to be so trained will number 237 over the life of the project. Training will be phased, beginning with the Department of Kaolack, with a total of 4 weeks training being given in a four month period. Training will be at either the Khombole School or in the Department.

### Department Supervisory Team

The Departmental Supervisory Team are professionally trained personnel (a male registered nurse and a female registered nurse or midwife) whose duties include supervision of training of the VHW's by the Health Posts, providing training as necessary and monitoring the work of the agent itinerant. Training of the twelve Department Supervisory team personnel will be given in conjunction with that given to the Health Post personnel.

### Village Health Worker Training

Approximately 1,800 village health workers will be trained over the life of the project. Again, the training will be phased, beginning with the Departments of Kaolack and Fatick. The three village health workers (first-aid man, matron and sanitarian) chosen to staff each village hut will be trained in the basic principles of rural health care. For example, the village first-aid man will be able to diagnose and give treatment for the most common ailments, such as malaria, diarrhea, conjunctivitis, etc. and to refer the more serious cases to the Health Post. The village matron will refer women with potential birth delivery problems to the Health Post, will assist during deliveries and will give orientation in child care and family planning. The village sanitarian will organize the environmental sanitation in the village. All three will be able to maintain elementary statistics.

Training for the VHW's will last for three weeks and will be given at the Health Post and the village, depending on availability of facilities.

### Khombole School

The last aspect of health care training to be provided under the project is long-term professional training to be given to sanitation engineers at the Khombole School. Over the life of the project approximately 80 students will be trained and the facilities will provide for the continued training of 40 students per year at the School.

### Promotion Humaine

The Service of Promotion Humaine will concentrate on literacy training of the Rural Community Councils and of the Village Health Workers. The literacy training given to the rural Community Councils is a part of the general literacy training being conducted by the Promotion Humaine field agents throughout the country. The training of VHW's is directly in response to needs generated by the project and will be financed in part by the AID contribution to the project. Literacy training of VHW's will be given by a brevet-holding resident of the village (equivalent to a junior high-school graduate) chosen by the rural community council. The PH field agent will train this village in teaching techniques and will continue to monitor his actual teaching. The village resident/teacher will give resident training to village matrons and sanitation workers as required. This literacy training will extend over a two-year period, seven months per year. Training will be conducted in the villages.

### FAMILY PLANNING

The Government of Senegal (GOS) is in the process of formulating and defining a national policy on family planning. The expressed policy to date is clear - family planning is acceptable insofar as it is oriented towards information and education to help women to space births and improve mother/child care. This GOS position was again restated in a April 12, 1977 meeting between the RDO and the Minister of Health (See DAKAR 2566, dated April 13, 1977). President Senghor of Senegal in a speech delivered December 27, 1976 to the ruling Party Congress, discussed a future family planning program for Senegal. The Congress has adopted as one of its tasks the "conception and application of a family planning policy, which without being in opposition to our religious concepts, will be capable of limiting Senegalese population and its demographic growth rate, in order to ascertain a constant harmony between this population, the resources and the land capacity of our country..."

It is expected that a national family planning program will be promulgated over the next several years and that AID will play a significant role in the implementation of the program. The AID mission in Senegal has for some time worked with the MOH in response to the Ministry's request for assistance in establishing a Family Planning Service. In addition, the MOH has requested AID assistance in preparing the ministerial decrees which would officially establish family planning services.

Present MCH/FP services are limited throughout Senegal. There may be some services provided at the MOH centers but the primary resource for family planning services in Dakar is the private Croix Bleue Clinic. This clinic, which also provides training, is supported by AID through the Pathfinder Fund and by IPPF. In addition, a family planning association, supported by many prominent Senegalese women, has existed for a few years but its activities have been limited. It is also possible that family planning services are available through other private clinics and private physicians but the extent of these services has not been well documented. Family planning programs have not, until now, been actively promoted by the Government although they have been tolerated where they do exist. More recently, under a Pathfinder Fund grant, the GOS has undertaken to renovate the Medina MCH Center in Dakar. The Medina Center will become a core location for carrying out training and contraceptive supply distribution.

The Pathfinder Fund contribution constitutes a pre-project phase of the proposed AID-funded Family Planning Project now under discussion with the GOS. This project will provide technical assistance, training and commodities to assist the GOS to establish organized, government sponsored health programs in selected health care centers, a developed contraceptive supply distribution system, a basic family planning data system and trained health personnel.

Several aspects of the Rural Health Services Development Project are directly in support of a national FP program in Senegal and prepare the basis for implementation of a FP program in rural areas as that program begins to be implemented.

1. An important component of training in this project to be given to the Village Health Workers, especially the village matron, will deal with mother and child care and will include orientation to the advantages of rational child spacing. In addition, locally trained midwives working at the Health Posts will have as one of their duties the dissemination of information to village women on child diseases and nutrition and in child spacing. The Curriculum for this training element will have a family planning element as an integral part of it.
2. The Rural Health Services Development Project will develop, over the first several years of the project, the logistics system required to place basic drugs and medicines in the villages. The same delivery system would be used for making available, at village level, contraceptive devices as these are made available through the Pathfinder Fund and under the AID Family Planning Project.

SUMMARY AND AID INPUTS

AID project financing will provide the following:

Construction, Equipment and Supplies

1. Renovation of 58 existing Health Posts.
2. Construction of 15 new Health Posts, including housing for the chef de poste and the itinerant worker. (Phase II)
3. Renovation of the Khombole School.
4. Equipment for 79 existing and new Health Posts.
5. Equipment and initial stocks of medicines for 600 health huts.
6. Financing of the purchase of 17 light vehicles.
7. Financing of the purchase of 76 horses and 76 buggies.
8. Financing of the purchase of 6 audio-visual kits.
9. Financing of the purchase of cement and materials required for construction of 600 health huts.
10. Financing of the publication of 1800 VHW manuals.
11. Financing of literacy manuals and teaching materials.

Logistics

12. PH animation travel expenses.
13. PH literacy travel expenses.

Training

14. In-service training program executed by Supervisory Team based in Kaolack.
15. PH literacy training.
16. Short-term contract personnel (2-3) in: Training Design, Training Extension Work, and Curriculum Development. These inputs are for Khombole.
17. Training stipends for 20-30 students for Khombole.
18. Expenses for VHW's during training (meals).

Evaluation

19. Financing of sociological survey at project inception to gather baseline data.
20. Funding of independent Evaluation Team

Technical Assistance

21. Funding of public health advisor to be based in Kaolack 3,5 manyears (nurse/midwife and training specialist)
22. Public Health Advisor (Health Education) - Dakar based.
23. Public Health Advisor (Administration) - Dakar based.

**Part III. - Project Analyses**

**A. Technical Analysis**

There are no technological inputs introduced by the project which are not within the knowledge or capability of the Government of Senegal or which lie outside the range of experience of the participating villagers. The project is based on the strengthening of the system of delivery of known technology rather than on the introduction of new technology. It deliberately avoids the introduction of sophisticated medicines, elaborate training or a more mechanized delivery system. An example of the low key technology to be employed by the project is the provision of houses and buggies for use by the itinerant workers. Construction of new facilities and renovation of existing structures is within the capability of the GOS Department of Public Works and the Genie Rural to design and complete themselves. Moreover, local construction firms would be able to execute the required work.

The project proposes to place basic health services and facilities within reach of the rural population, the majority of the people in Senegal. This responds to the thesis that there is a causal connection between the level of health of the population and their access to a health post.

Policy Considerations: The general concept of the project has been considered a necessary development objective since the preparation of the fourth Year Plan for Social and Economic Development which set the goal of reaching 200,000 inhabitants per year through rural health dispensaries. Though this may

be an over-ambitious goal nevertheless it is obvious that to extend the services of the existing health network in a significant manner several constraints have to be overcome: the need to involve the community in providing health care and the problems of resources, financial and human.

Technical Weaknesses and The Project Response:

The technical weaknesses of the present health delivery system can be stated briefly as, (1) inadequate health education among villagers of the causes of low health levels; (2) lack of basic sanitation; (3) deficiencies in communication and transport of those who deliver health services; and (4) lack of access to required medicines at the rural level.

The alternative chosen in this project to overcome the technical problems and to extend the health services network to the greatest numbers of the rural population without significantly burdening the system with additional expenses is the building of the project around the concept of village health workers chosen and supported by the community.

The system begins with a process of sensitizing and education on the part of the Service of Promotion Humaine. This service has been engaged for years in basic community development and population education in the broadest sense of the word. Within the context of the present project this service will be the instrument for educating the villagers to the possibilities of their participation in the improvement of the health services available to them and in organizing the villagers in the selection of health workers, construction of health huts and the support of the village health workers.

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The rather limited pharmacopeia which will be made available to village health huts (aspirin, chloroquine, ophthalmic and dermal ointment, sulfonamide, iron pills) nevertheless responds directly to the basic infirmities which debilitate the villagers (malaria, diarrhea, infections from minor wounds, conjunctivitis, anemias). (See Annex S).

Education in the necessity for sanitation and instruction in the maintenance of rudimentary sanitation will noticeably reduce the incidence of disease, specifically diarrheas and anemias which are endemic to the project area. The project proposes the introduction of this basic technology (drainage ditches, refuse and trash pits, latrines, etc.) through the village health team and the itinerant worker.

The heavy reliance on village workers for the face-to face contact with the project clientele raises a new set of problems, relative to the qualifications of the health organizations and their logistic support.

Here again, the project is proposing a system of technology which is relatively simple to execute and one which does not introduce new methods or techniques or unfamiliar equipment.

Project financing will assist the Ministry of Health to renovate the existing health posts in the project area and will construct the required new posts. The MOH will staff all posts with a trained nurse, a sanitarian and an orderly. A matron trained in midwifery will be present at each post, supported by the community. The health posts will then be prepared to train the village health workers and through the mechanism of the itinerant worker (sanitarian), provide on the spot advice to the village health huts.

The project concentrates significant resources and efforts on supervision both during the period of training for Health Post staff and Village Health Workers and for periodic and continuous supervision. The prime responsibility for supervision will lie with the departmental supervisory teams; the responsibility for in-service training and selective supervision with the regional inspection team.

The problems of logistic supply are transport of the itinerant workers and the supply of medicaments.

The project proposes to finance a horse and buggy to each health post for use by the itinerant worker at a cost of approximately dol.150, and dol.50 per year for feeding and care, which will permit the itinerant worker to have relatively easy access to the villages within his responsibility which would be used to transport patients to health posts or hospitals and which can be used for the transport of needed medicines to the health huts.

To provide a ready supply of the basic medicines to be put in each village hut, the GOSS intends to establish regional branches of Pharmapro (central pharmaceutical supply) at which the villages could replenish their drug cabinets through the purchase of medicines.

Reasonable cost and appropriate design: Alternative methods of providing rural health care have been evaluated and rejected. The most reasonable alternative in terms of a system which reaches a significant number of recipients - establishing more health posts - would require 45% more investment and operating costs 2-4 times higher (Table 7, pg. 43). It is estimated that 173 health posts would be required (just less than half of the health posts in the entire country at the present time) to provide the same measure of services foreseen by the proposed project.

Assuming that the national health ministry could staff the facilities with trained personnel, the identity between the community and the health workers is lost, as is the ready availability of services offered by the village health worker

A third alternative - mobile teams that would dispense treatment - are suitable to situations where recurrent care is needed on an unpredictable basis.

The project will extend the rural health delivery system by phases. The time lag between the startup of Project activities in each of the different departments will enable each Department to profit from the experience of the previous ones. Synthesis of the experiences in various Departments will result in a flexible methodology, applicable to future rural health delivery projects in the other Regions of Senegal.

Engineering and Construction: The cost estimates for rehabilitation of 58 existing Health Posts, the construction of 15 additional Health Posts and the renovation and new construction connected with the Khombole School have been reviewed by a REDSO engineer who has also visited a sampling of the existing Health Posts and the Khombole School. The methodology used to estimate construction costs is explained in Annex B "Engineering and Construction Analysis". Annex "B" contains the data enabling the certification that 611(a) has been met.

Environmental Assessment

The impact of the Project upon the environment will be positive. As the Project proposes to build 600 health huts in 600 villages the extent of any noticeable impact is little. The construction phase will involve use of cement and local materials. The location of the sites would usually be a well-drained semi-central area within the village. The land area utilized in this manner will be small and the disturbance to natural and indigenous vegetation minimal. (See ANNEX P)

During the implementation of the Project, as HP sites are renovated and constructed and health huts constructed, there will be various sanitary engineering activities carried out in each location: water storage systems, drainage ditches, incinerators, rodent proofing, etc. In addition, the HP sanitation personnel and the VHW sanitarians will be improving the sanitary conditions in villages by elimination of stagnant water through drainage, elimination of refuse and trash through refuse pits, and elimination of indiscretionary excreta through construction of latrines. Other activities in hygiene and public health will also be carried out so as to reduce various disease vectors and sources. The environmental effects of all these measures will be positive.

B. Social Analysis

A fundamental socio-economic indicator for the Sine Saloum Region is the extreme importance not only economically, but socially, culturally, and psychologically, of the groundnut economy.

This economic preoccupation of the region, and experience with the associated financial structure, has engendered in the peasantry a set of negative attitudes toward government - toward government-created structures for groundnut marketing (ONCAD, the cooperatives, technical ministries, state-sponsored "intervention companies" such as SODEVA, etc.) and toward government functionaries in general. Since the colonial era, numerous schemes and projects purporting to benefit the farmers of Sine Saloum have been undertaken. Most have failed to attain their social

objectives and even their economic production goals. Virtually all these schemes neglected to consider genuine participation of the peasantry in the improvement of their lot. Subsequently, much suspicion of intent exists as a backdrop to any present and future efforts in that direction.

However, when genuine efforts to give the villagers not only tangible improvements but also a greater voice in the management of their own affairs have been attempted, they have been met with interest and respect. The GOS Administrative Reform, based on the creation of relatively self-governing and partially self-supporting "Rural Communities", is well underway in Sine Saloum. These units of local government, each grouping a number of villages in contiguous zone, are the focus of the grass-roots activities.

Data indicate that the populations of Sine Saloum, to varying extent, are not only open to change, but are desirous of change in the direction of their aspirations: better health, education, training, higher income, and improved housing.

In order to bring modern first aid, sanitation, pre and post natal care to the village level, newer, more effective self-organizational efforts, a new kind of overall community development, must be attained. A major facilitative factor in this process has begun within the framework of the administrative reform. (See Annex G, "Institutional Framework - Administrative Reform Model").

The intended beneficiaries of the Project are all the rural poor of Sine Saloum who reside at some distance from the health posts; that is, some 55% of the population in the western part of the Region, and some 85% of the population in the eastern part, or some 600,000 people in all. The ultimate target group is the rural poor of other regions of Senegal, equally deprived of access to medical care, estimated at 2.8 to 3.2 million people.

The Project is not selective, since in the case of success, all the population of Senegal will be ultimately reached. The Project focus is the Region of the Sine Saloum because, as has been stated elsewhere, this model health project structure could be implemented only in a Region that has gone through the process of administrative reform. Moreover, Sine Saloum contains an important Wolof population which constitutes a test population for extension of the program to other regions with predominantly Wolof populations.

Project benefits will be visible even after a short period of its implementation on each Department of the Region. Spread to the ultimate target group will occur if the GOS, convinced of the efficacy of the Project extends it to other regions during its 6th 4-year Plan.

There exists widespread evidence that the rural population is seriously concerned with health and wants to participate and fund efforts to improve its health. Villagers have already financed and built numerous rural maternities, contributed monies to purchase drugs, and established village pharmacies. They have the channels for expressing these desires and use them freely. The authorities have constant dialogue with the populations. The present Governor of the Sine Saloum is one under whose leadership the administrative reform is proving successful.

The Project has been designed in accordance with cultural patterns and with desires expressed by the population. An important feature of all people in the area is the importance of institutionalized work groups. This led to the proposal of three types of village health workers. These workers would be chosen by the respective work groups: women (the village matron), family chiefs (the first-aid person), and youth groups (the sanitarian).

In view of the voluntary participation character of the Project, it is not expected to create any resistance. The value of modern medicines is well accepted by the population. The Project aims at training people to serve themselves and anyone who desires the benefits of the Project will be welcome to participate.

The role of women in this Project and its implementation is obvious. Over one-third of the people to be trained and to do training will be women. There will exist many opportunities for skills improvement for women and increase in their local stature through the international, inter-regional and inter-departmental contact. Moreover, many women will receive additional training in para-medical and medical management practices.

The effect upon women in the region will be multi-faceted because of the services offered: maternal and child health care, mid-wifery, family planning, nutrition and hygiene. This is not to mention the increased amount of time available to women because of the nearer

location of the health facilities. Women spend a great deal of time now traveling for health care for themselves and for their children; a reduction of this time represents a potential for other activities and uses of productive energy. (See Annex C, "Demographic and Sociological Structure and Trends".)

C. Economic Analysis

PROJECT COSTS

Total Project costs over a four-year period will be dol. 5,011,541 (Table 1). The Project will establish 600 health huts, each attending 600 persons (100 families), i.e. a total population of 360,000 which is about 45% of the rural population of Sine-Saloum (1). Project Investment is thus dol. 13.92 per beneficiary or dol. 13.21 per beneficiary per year. Total U.S. contribution will be dol. 9.19 per beneficiary or dol. 12.03 per beneficiary per year.

The total recurrent costs of the Project in the Sine-Saloum Region (2) are shown in Table 3 to be dol. 1,103,330 per year (dol. 3.06 per beneficiary per year). Of this cost, 39% or dol. 1.19 per beneficiary will be contributed by MOH (dol. 1.07 per beneficiary per year in salaries of Health Post staff and their supervisors, dol. 0.12 per beneficiary per year in added operating costs). The balance of dol. 1.87 per beneficiary per year (dol. 11.22 per family of 6) will be contributed by the villagers through purchase of medicines and compensation of the VHW's.

A recent AID agricultural survey for the groundnut basin gives an annual production figure of 45,000 CFA (about dol. 200) per agricultural worker, i.e. dol. 600 per family including 3 economically active persons. Thus the cost of medical services to the family through the Project will be 1.9% of the family income.

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(1) Estimated at 637,536 in 1972, or 690,000 in 1976 (assuming a 2% annual increase).

(2) Excluding the recurrent costs of the Khombole School, which is a national-level undertaking.

This is within the economic possibilities of the villagers, as indicated by their willingness to purchase even more expensive medicines through private pharmacists wherever available and by their participation in the construction of various village pharmacies in the Region.

#### PROJECT BENEFITS

It is inherently difficult to assess the benefits of a rural health project in terms of increased production; however; some estimate is given in the following.

The AID agricultural survey has shown that the income of dol.200 per agricultural worker quoted above requires about 180 workdays, mainly on millet and groundnut. Of these 180 days, 120 days during the rainy season earn dol.150, or dol.1.25 per day while the other 60 days of the year will produce dol.50, i.e. 21 c. per day, or dol.50 for 60 full workdays, i.e. 83 c. per day of actual work.

In fact, the contrast between the value and the significance of workday (or the loss caused by an illness) in the rainy vs. the dry season is probably greater because of the consequences that an illness just after a rain can have on the whole harvest, while a disease during the dry season will mean merely postponement of a non-urgent task.

The study "The Impact of Malaria on Economic Development" (G.N. Conly, Sc. Publ. No. 297, PAHO/WHO, 1975) has demonstrated that absences from the fields can have disastrous consequences for those crops which demand a good deal of care at a precise time (3), (in this case millet and groundnut), and that, when disease strikes repeatedly, farmers shift to less exacting crops such as cassava, a change which does take place in some areas of Senegal.

Consequently, bringing into the villages those few drugs that can prevent or cure common and incapacitating illness such as malaria and diarrhea can have significant economic returns. In fact, Annex D shows that an adult may be provided with annual

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- (3) The study "Les Paysans du Sénégal" (Paul Pelissier, Ed. Fabregue, 1966) maintains the following: "The two main cultures, millet and groundnut, have a cycle of 100 to 120 days. Seeding takes place from the end of June to mid-July. Groundnut can be seeded only in wet soil; each heavy rain is followed by 3 days of intense activity: this constitutes the perilous challenge of rain season agriculture". Such a situation requires physical fitness during the rainy season.

requirements of malaria and diarrhea pills for 57 cents, or the value of less than half a day's work during the rainy season. The total annual cost of Project medical services to the villagers in cash and in kind (dol.22 for a family of 6) may be compensated by avoiding 3 days of illness per adult during the rainy season - an effect which seems well within the Project possibilities. Statistics regarding frequencies of illness before and after the Project, to gathered during Project evaluation, will help quantify the economic effects of the Project.

Furthermore, estimating that the 1800 village health workers will spend 25% of their time in health activities, and will be compensated in kind by the villagers, the Project will in effect create the equivalent of 450 village-level jobs.

#### PROJECT COST-EFFECTIVENESS: COMPARISON WITH POSSIBLE ALTERNATIVE

The most likely alternative to the Project for increasing the rural health services would be to extend the existing system of health posts by constructing several Health Posts per Rural Community.

Even if it is assumed that the new Health Posts would be limited to the bare minimum (one Registered Nurse and one orderly per post; no means of transport; no supervision), Table 7, Pg. 43 shows that the investment in construction equipment and training will total dol.23,020 per Health Post. Assuming that three such health posts will give a satisfactory coverage of each of the 79 Rural Communities,  $79 \times 2 + 15 = 173$  new health posts will be necessary at a total Project cost of dol.7,411,850 (Table 7). This is 45% higher than the cost of the present Project. More importantly, the alternative project will not provide the villagers with equivalent health care, since it will lack the fundamental feature of assuring the supply of medicines. Under the present MOH policy, the budget for purchase of medicines is woefully inadequate even for the present 58 posts, and it is most unlikely that MOH will be able to furnish an adequate supply of medicines to 173 new posts. Moreover, the alternative project would imply for MOH an increased operating cost of dol.298,620 annually for the salaries of 79 Registered Nurses and 79 ordelies (not counting maintenance of the Health Posts and equipment). This amount is 31% of the total present budget of the Sine Saloum Medical Region (excluding the Kaolack hospital), or 2.4 times larger than the recurrent costs of the proposed model Project, which will be dol.124,250 per year (4).

Thus the recurrent costs of the alternative project are likely to exceed the MOH financial capacity. For all for the above reasons, the alternative to the proposed model project cannot be considered satisfactory.

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- (4) dol.79,200 per year in salaries of new personnel (the Regional Supervision Team and 15 new health posts) and dol.45,050 per year in added operating costs (Table 3, Pg. 37).

**D. Financial Analysis**

**Project Budget:** The Project budget is outlined in Table 1. Supplementary and back up data are contained in Annex D. The method of estimating costs for renovation and construction of facilities is explained in Engineering and Construction Analysis (Annex B):

Obligations of USAID inputs to the project are evenly balanced over the four year life of project reflecting the "phased" implementation schedule. Obligation of funds subsequent to the initial obligations will be pursuant to an evaluation of prior year activities and approval of a work plan for the coming year. Project expenditures for each fiscal year will correspond closely to fiscal year obligations.

**RECURRENT BUDGET ANALYSIS OF IMPLEMENTING AGENCY**

**1. Recurrent costs during Project life**

Annex D shows that the additional recurrent costs engendered to MOH during Project life increase gradually to dol.99,320 per year. This sum is composed of:

- 1) salary of Regional Supervision Team (dol.12,600/year) and additional Khombole operating costs (dol.20,120/year); these will be inscribed in MOH budget.
- 2) salary of Health Posts chiefs (dol.39,600/year) and of itinerant workers (dol.27,000/year) for 15 new health posts; these will be inscribed in MOH budget at the time of Project midterm evaluation to take effect prior to the construction of the 15 new health posts. (Table 4).

The amounts currently budgeted by the MOH for the Sine Saloum Medical Region (excluding the Kaolack hospital) and for the Khombole School have been:

	<u>1974/75</u>	<u>1975/76</u>	<u>Increase</u>
Sine Saloum, personnel	dol.683,180	845,510	162,330
Sine Saloum, supplies	26,960	26,960	
Khombole: personnel, supplies honorariums	71,180	87,090	15,910
	<u>dol.781,320</u>	<u>959,560</u>	<u>178,240</u>

The above figures show that the budget increase required during Project life (dol.99,320) is 10% of the current budget for the Sine Saloum Medical Region and the Khombole School, or 56% of the budget increase between 1974/75 and 1975/76. Thus the required budget increase seems well within the MOH financial capacity.

Furthermore, if personnel are not appointed to the 15 new Health Posts, construction of these posts would be cancelled and would have no effect on the rest of the Project, since the 600 planned Health Huts may be installed around the 6 already programmed Health Posts. In this case, the additional recurrent costs to MOH will be only dol.32,720 per year, or 3.4% of the current budget for Sine Saloum and Khombole.

2. Recurrent costs to MOH after Project termination

Table 5 shows that upon Project termination, the MOH will incur the following additional annual expenses:

i) Sine Saloum Medical Region (equipment maintenance, per diem)	\$45,050
ii) Khombole School (maintenance of 40 students)	\$87,080
	<hr/>
Total	\$112,130

This added outlay is less than 12% of the current budget for Sine Saloum and Khombole or 63% of last year's budget increase. It is only 0.5% of the total MOH budget in 1975/76, which was \$22,031,240. Thus it seems well within the MOH budgetary capacity. Moreover, the added expense would mean new MOH funds channeled to operating expenses, whereas in the past few years most budget increases in Sine Saloum and Khombole were directed to personnel.

3. Replicability of the proposed rural health delivery system

The increased recurrent costs to the Sine Saloum Medical Region generated by the project and the installation of 600 health huts is manifested in the Regional Supervision Team (\$12,600) and added operating expenses (\$45,050). Assuming that the project were replicated to the six remaining Regions in Senegal, the total per annum recurrent costs to the Ministry of Health would be total \$403,550 or 1.8% of the current budget of the Ministry of Health. Thus the replicability of the system to all rural areas of Senegal is clearly within the financial capability of the Ministry of Health.

TABLE 1: SUMMARY COST ESTIMATE AND FINANCIAL PLAN (\$U.S.)

Cost to USAID (Annex (N))	FY - 77	FY - 78	FY - 79	FY - 80	TOTAL
A. Training	4,540	55,670	35,790	58,450	204,450
B. Training materials	16,920	22,020	21,210	2,600	62,750
C. Equipment	127,370	140,470	89,340	6,000	363,180
D. Medicine	175,000	280,000	145,000	-	600,000
E. Vehicle o + m	5,670	12,600	17,640	21,420	57,330
F. Per Diem	5,720	15,200	22,880	27,360	71,160
G. Construction	82,790	150,750	205,420	447,590	886,550
H. Expatriates	21,000	120,000	160,000	125,000	426,000
I. Evaluation	<u>10,000</u>	<u>-</u>	<u>10,000</u>	<u>10,000</u>	<u>30,000</u>
Cost to USAID	449,010	796,710	757,280	698,420	2,701,420
10% contingencies	<u>44,901</u>	<u>79,671</u>	<u>75,728</u>	<u>69,842</u>	<u>270,142</u>
Cost with contingencies	493,911	876,381	833,008	768,262	2,971,562
Inflation 14% annually	-	122,693	118,621	107,556	346,870
<u>Total cost to USAID</u>	<u>493,911</u>	<u>999,074</u>	<u>949,629</u>	<u>875,818</u>	<u>3,373,682</u>
Cost to PC (Annex D)	8,500	12,750	17,000	17,000	55,250
<u>Total Cost to U.S.</u>	<u>502,411</u>	<u>1,011,824</u>	<u>966,629</u>	<u>892,818</u>	<u>3,373,682</u>
<u>National Counterpart costs</u>					
A. Ministry of Health	47,770	186,280	301,080	404,600	939,730
B. <u>Promotion Humaine</u>	6,480	14,400	23,040	30,240	74,160
C. Community participation	<u>-</u>	<u>48,200</u>	<u>84,860</u>	<u>106,300</u>	<u>239,360</u>
Cost of GOS and communities	54,250	248,880	408,980	541,140	1,253,250
Inflation allowance, 10% annually	<u>5,420</u>	<u>49,780</u>	<u>122,690</u>	<u>216,460</u>	<u>394,350</u>
<u>Total national counterpart cost</u>	<u>59,670</u>	<u>298,660</u>	<u>531,670</u>	<u>757,600</u>	<u>1,647,600</u>
<u>Total Project Cost =</u>	<u>562,081</u>	<u>1,310,484</u>	<u>1,498,299</u>	<u>1,650,418</u>	<u>5,021,282</u>

National participation = 33% of total Project cost.

**TABLE 2 : DISTRIBUTION OF USAID FUNDS BY EXECUTING AGENCY**  
 (including contingencies and inflation allowance - ( \$ U.S.)

	<u>FY - 77</u>	<u>FY - 78</u>	<u>FY - 79</u>	<u>FY - 80</u>	<u>TOTAL</u>
Ministry of Health	176,211	575,787	<del>425,419</del>	227,404	1,402,821
<u>Promotion Humaine</u> <u>animation</u>	4,180	12,340	21,800	28,530	66,850
<u>Promotion Humaine</u> <u>literacy action</u>	23,170	35,530	49,590	26,340	134,630
<u>Genie Rural</u>	84,350	3,020	166,140	484,180	737,690
Rural Community Councils	--	12,180	10,860	7,660	30,700
Imports or contracts directly by USAID	206,000	360,000	275,000	95,000	936,000
Total cost to USAID (including contingencies and inflation allowance)	<u>493,911</u>	<u>998,857</u>	<u>946,809</u>	<u>869,114</u>	<u>3,308,691</u>

Note: This table needs to be adjusted to reflect a drop from 20% to 14% inflation and an increase of \$120,000 of technical assistance costs.

TABLE 3: Total Project Recurrent Costs to Senegal (\$U.S.)

	<u>Total, \$/year</u>	<u>Per beneficiary, \$/year</u>
<u>Annual Costs to MOH</u>		
1. Salaries of existing personnel engaged in project (64 health post chiefs, 64 itinerant agents, 6 regional teams)	305,280	.85
2. Salaries of additional MOH personnel (Regional Supervision Team, staff of 15 new health posts)	79,200	.22
Additional MOH operating costs	45,050	.12
Subtotal, annual costs to MOH	429,530	1.19
<u>Annual Costs to Villagers</u>		
Community compensation of 1800 VHW's, estimated value of \$4/mo each (25% of VHW's annual income)	86,400	.24
Rural Community Council renovation of 600 health huts: structures (\$% each) and equipment (100 Dol. each) every 10 years	11,400	.03
Payment of medicines by population: 600 health huts x 600 beneficiaries each x \$1.60/year medicine consumption each	576,000	1.60
Subtotal, annual costs to villagers	673,800	1.87
Total annual recurrent project costs:	<u>1,103,330</u>	<u>3.06</u>

TABLE 4 : NATIONAL COUNTERPART COSTS (\$U.S.)

A. <u>Costs to MOH</u>	<u>FY 77</u>	<u>FY 78</u>	<u>FY 79</u>	<u>FY 80</u>	<u>Total</u>
<u>Costs already inscribed in MOH budget</u>					
1. Salary of 6 departmental supervision teams of 2 persons each at \$220/mo each (drawn from existing Health Center personnel)	1,760	7,040	12,320	21,120	42,240
2. Salary of chiefs of the 58 existing and 6 programmed health posts at \$220/mo each	22,880	83,600	132,000	168,960	407,440
3. Salary of itinerant agents of the 58 existing and 6 programmed health posts, at \$150/mo each	<u>15,600</u>	<u>57,000</u>	<u>90,000</u>	<u>115,200</u>	<u>277,800</u>
Subtotal, costs already inscribed in MOH budget	40,240	147,640	234,320	305,280	727,480
<u>New Costs to MOH</u>					
1. Salary of regional supervision team, 3 persons at \$350/mo each	7,530	12,600	12,600	12,600	45,330
2. Salary of chiefs of the 15 new health posts, at \$220/mo each	-	3,520	20,240	39,600	63,360
3. Salary of itinerant agents of the 15 new health posts at \$150/mo ea.	-	2,400	13,800	27,000	43,200
4. Additional operating costs at Khombole School (Annex R)	-	<u>20,120</u>	<u>20,120</u>	<u>20,120</u>	<u>60,360</u>
Subtotal, new costs to MOH	7,530	38,640	66,760	99,320	212,250
Total, costs to MOH	47,770	186,280	301,080	404,600	939,730

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TABLE 4 : National Counterpart Costs (contd)

<u>B. Costs to "Promotion Humaine"</u>	<u>FY 77</u>	<u>FY 78</u>	<u>FY 79</u>	<u>FY 80</u>	<u>Total</u>
1. Salary of 6 department teams of animation agents and 1 regional team, 2 persons each (existing personnel), at \$180/mo each	6,480	14,400	23,040	30,240	74,160
<u>C. Community Participation</u>					
1. Value of part-time work of 3 x 600 village health workers, remunerated at \$4/mo (25% of village worker's annual income) each	-	15,600	50,040	75,480	141,120
2. Construction of 600 health huts and 66 literacy huts, labor and local materials valued at \$90 each	-	25,380	20,880	13,680	59,940
3. Student fees in literacy classes, 66 x 30 students at \$1/month each for 14 months	-	4,620	9,240	9,240	23,100
4. Upkeep of Itinerant Agent's horse, valued at \$100/year each	-	2,600	4,700	7,900	15,200
Total community participation	-	48,200	84,860	106,300	239,360
National counterpart costs (without inflation allowance)	<u>54,250</u>	<u>248,880</u>	<u>408,980</u>	<u>541,140</u>	<u>1,253,250</u>
Inflation 10% annually	5,425	49,780	122,690	216,460	394,350
Total national counterpart costs	<u>59,670</u>	<u>298,660</u>	<u>531,670</u>	<u>757,600</u>	<u>1,647,600</u>

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TABLE 5: Additional Recurrent Costs to MOH  
after Project Termination

(in \$/year)

1. Amortization of 1 vehicle of regional supervision team and 6 vehicles of departmental supervision teams, at \$4,400 each, over 5 years. . . . .	6,160
2. Gasoline for 7 above vehicles, 2,00l/mo each at 40 ¢/l. . . . .	6,720
3. Maintenance of 7 above vehicles, at \$25/mo. each. . . . .	2,100
4. Per diem for regional supervision team - 3 persons each, 15 days/month at \$6/day. . .	3,240
5. Per diem for 6 departmental supervision teams - 2 persons each, 15 days/month at \$4/day. . . . .	8,640
6. Maintenance of 15 new health posts, 2% of the construction cost (\$26,100 each) annually	7,830
7. Amortization of equipment of 15 new health posts, \$900 each, over 10 years. . . . .	1,350
8. Amortization of 79 water systems, \$100 each, over 10 years. . . . .	790
9. Replacement of 79 horses (\$400) and buggies (\$120) over 5 years. . . . .	8,220
Subtotal, additional recurrent costs to the Sine Saloum medical region	45,050
Additional Khombole operating costs	67,080
Total annual recurrent costs to MOH engendered by Project. . . . .	<u>112,130</u>

**TABLE 5: KHOMBOLE SCHOOL - ANNUAL OPERATING EXPENSES**

**A. Future expenses - School renovated for 40 students**

**1. Expenses which can be defrayed by study stipends:**

- Alimentation,		
40 students x 10 months x 25,000 <sup>FCFA</sup> /mo	=	10,000,000 FCFA
- School supplies	=	500,000 FCFA
- Washing	=	300,000 FCFA
		<hr/>
Total = \$46,960 (\$1,174 per student)	=	10,800,000 FCFA

**2. Overhead expenses**

- Services		1,000,000
- Correspondence		100,000
- Printing		200,000
- Maintenance of furniture & building		500,000
- Uniforms for personnel		200,000
- Teaching materials		500,000
- Field work		500,000
- Water analysis laboratory		500,000
- Uniforms for students		1,500,000
- Vehicle operation and maintenance		2,000,000
		<hr/>
Total overhead expenses = \$30,435	=	7,000,000 FCFA
		<hr/>
Total operating expenses = \$77,390	=	17,800,000 FCFA
Personnel expenses = \$76,780	=	17,660,000 FCFA
		<hr/>
Total annual costs: <u>\$154,170</u>	=	35,460,000 FCFA

TABLE 5: Khombole School. cont.

B. Present Annual Expenses

- Personnel salaries	16,078,000 FCFA
- Honorariums for outside lecturers	500,000 FCFA
- Operating expenses	<u>3,453,000 FCFA</u>

Total present annual expenses: \$87,090 = 20,031,000 FCFA

Additional expenses required by expansion:

\$67,080 = 15,429,000 FCFA

Additional expenses, net of study stipends:

\$20,120 = 4,629,000 FCFA

TABLE 7 : COST OF AN ALTERNATIVE PROJECT - CONSTRUCTION OF 173 HEALTH POSTS (\$U.S.)

	<u>FY - 77</u>	<u>FY - 78</u>	<u>FY - 79</u>	<u>FY - 80</u>	<u>TOTAL</u>
Construction of (15+2+79) = 173 new health posts, 70 m2 with housing for health post chief 60 m2, at dol.130/m2 = dol.16,900 each (43 or 44 per year)	726,700	726,700	726,700	743,600	2,923,700
Equipment and water systems for health posts, dol. 1000 each	43,000	43,000	43,000	44,000	173,000
Expanding Khombele School	157,000	---	---	---	157,000
Project co-director	45,000	60,000	60,000	60,000	225,000
Training 173 registered nurses, at current St. Louis training costs of dol.5,120 each (budget of dol.230.310/year for 45 graduates)	220,160	220,160	220,160	225,280	885,760
Salary of new personnel (1 registered nurse at dol.220/mo and 1 orderly at dol.95/mo per post)	---	162,540	325,080	487,620	975,240
	<u>1,191,860</u>	<u>1,212,400</u>	<u>1,374,940</u>	<u>1,560,500</u>	<u>5,339,700</u>
Contigencies, 10%	119,190	121,240	137,490	156,050	533,970
Inflation, 10% annually	131,100	266,730	453,730	686,620	1,538,180
<b>Total cost of alternative project</b>	<b>1,442,150</b>	<b>1,600,370</b>	<b>1,966,160</b>	<b>2,403,170</b>	<b>7,411,850</b>

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**Part IV. - Implementation Planning**

**A. Administrative arrangements**

Execution of the Project will directly involve at least four types of national authorities:

- i) The Ministry of Health (MOH)
- ii) The State Secretariat of Promotion Humaine (PH)
- iii) The Genie Rural (GR) service of the Ministry of Rural Development
- iv) All the Rural Community Councils of the Sine Saloum Region.

It is considered that the constant coordination among these entities which is indispensable for Project execution cannot be established on a ministry-to-ministry level in Dakar owing to the cumbersomeness of this procedure, especially in view of the fact that MOH and PH have not yet had the experience of working relations at this level. Consequently, the Project can best be executed by placing the responsibility for its execution in the Regional authorities. The Administrative Reform provides the legal basis for such a delegation of execution responsibilities; in fact, the Project -covering as it does one Region - is a prime example of the type of activity which the Administrative Reform intends to entrust to Regional authorities. The UNICEF Project and the Bopp Ecumenic Center project, both of which are located in the Sine Saloum Region and include rural health delivery activities, form precedents for such delegation of responsibility for execution by the Ministry in charge to the Regional authority (Gouvernance). Such an arrangement would have the following advantages:

- i) effective working coordination at the regional level among the representatives of the ministries involved;
- ii) effective control of Project construction activities by the Governor's office.
- iii) full engagement of the population, represented by its local authorities (Rural Community Councils, Sub-Prefects and Prefects) in the Project.

According to this procedure, Project execution would proceed as follows:

- i) The Governor of Sine Saloum would be responsible for the Project (1).

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(1) Excluding the renovation of the Khombole School, which should best be performed by the Genie Rural service of the Thies Region in which Khombole is located.

- ii) The Governor would issue a decree appointing a Project Execution Committee (2);
- iii) A Project account would be opened in a Kaolack bank using a letter of commitment/Letter of Credit payment procedure and drawing upon it at the joint direction of the Project Director(GOS) and USAID.
- iv) Disbursements from this account would be authorized by the Governor's office, which would keep the accounting and issue periodic reports to the MOH and USAID;
- v) The Governor's office would be able to handle directly with USAID all matters regarding the execution of the agreement as signed by GOS and USAID.
- vi) With respect to the Fixed Amount Reimbursement (FAR) system recommended for renovation and construction. It is essential that a sufficiently large advance be made so that the GOS will have the liquidity for adequate contract arrangements.

#### B. Project Evaluation

The importance of evaluation of the Sine Saloum model Rural Health Delivery Project cannot be overstressed. In general the data and information available in terms of meaningful indices in the health sector is incomplete. Project funds are programmed to prepare baseline data - sociological as well as medical - to be collected as part of the Project at its inception. In addition, a Project evaluation framework will be structured so as to evaluate the Project at mid-point, completion and ex post facto. This evaluation process, although routine AID procedure, will include special evaluation in order to assess the changes, if any required to improve and expand the program Department by Department in the Region as well as to other Regions. The specific indicators of measurement in this Project are included in the Logical Framework(Annex E, p.2).

In order to assure an impartial evaluation, outside contractual services will be sought to execute the overall evaluation framework, any required evaluation training and liaison with the GOS -AID teams. Contractual services will be arranged for the initial sociological surveys and collection of baseline medical data.

The above approach to Project evaluation is supported by the MOH.

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- 2) Such a committee might be composed as follows;
    - the Regional Governor (Chairman)
    - the Chief Medical Officer of the Region (Secretary)
    - the Regional Inspector of Promotion Humaine
    - the Regional Officer of Genre Rural
    - the Governor's Deputy for Development
    - the Regional Coordinator of the Centres d'Expansion Rurale
    - One of the long-term project advisors.

C. IMPLEMENTATION PLAN

Actions and Agreements at time of Grant Negotiation

- A. Agreement reached with MOH, MOF, MOI, MPH and the Governor's Office at Kaolack for the decentralized mode of execution of the Project, and a decree produced establishing a Regional Committee of Execution.
- B. Khombole certified by MOH as a two-year school.
- C. Agreement reached with MOH to assign Khombole stipend recipients to the Project area.
- D. MOH plans and implements the required Khombole operating budget increases.

Actions During First Quarter of Implementation

1. GOS appoints Project Director.
2. USAID-financed advisor contracted.
3. PIO/C written by USAID for project commodities.
4. 9 AID-purchased vehicles ordered for commencement of project.
5. The Regional Project Execution Committee nominated by all parties.

Project Operations: 4th - 13 month

1. Arrival of 9 vehicles -
2. The assignment of the Kaolack-based Regional Supervision Team by 4th month.
3. Equipment ordered for 26 HP and 260 HH, medicines ordered for 260 HH. These are for the first two Departments of Kaolack and Fatick.
4. The training manuals are prepared and training equipment is purchased by 5th month.

6. The designation of Supervision Teams in Departments 1 and 2 by MOH by the end of 4th month.
7. The Health post staffing should be 90% complete by the fourth month in Department 1 & 2. This is an MOH activity.
8. The Evaluation framework should be determined; gathering of baseline data should start. A contract (local) can be arranged for the sociological data. This action is expected to last six months. A contract will be required for the consultants who execute the entire evaluation. This will take place from 4th - 10th month.
9. The Training of HP Staff and Department I Supervision Team begins in 5th month and lasts until 10th month (Kaolack). This is executed by MOH/AID Regional Team in Kaolack.
10. The GOS begins renovation of 22 HP and construction of 4 previously programmed HP in Department 1 & 2. This is expected to last six months commencing from the fourth month. This will be implemented by GR.
11. The renovation of Khombole school should begin in the fifth month. This will require USAID funding, GR implementation. The length of the contract work is expected to be five months. Some on-site inspection will be required to monitor the GR/AID contract.
12. Promotion Humaine should begin its animation campaign in Department 1 & 2 by the 5th month with a view towards achieving its goals within 8 months. This should involve some MOH/USAID collaboration and monitoring.
13. The 2 PCVs should enter their service between the 7th and 10th month. Their roles are in Department 1 & 2 (Based in Kaolack and Fatick).

15. By the eighth month the training of the 2 PCVs, the HP Staff, and the Dept. Supervisional Team (Fatick) should have commenced. This will last over a period of 4 months. The Regional Team MOH/USAID implements, monitors and executes this activity.
16. In the ninth month the training of PH literacy monitors in Departments 1 & 2 for 1 month period should take place. AID provides the logistics and funding.
17. MOH opens a PHARMAPPRO branch at Kaolack by the tenth month.
18. In the eleventh month the Khombole School will enroll 10 St. Louis Transfers as usual in a 1 yr. course and 22 B.E.P.C. holders in the new two year program. It is expected that some short-term AID contract assistance might be required to help in organization and management and curriculum.
19. Four more vehicles should be ordered by the end of the first project year (two - PH Teams, two - Dep. Sup. Teams in Dept. 3 and 4) (USAID).
20. Twenty-six horses and buggies are to be purchased in the twelfth month They are to be delivered to the HPs in Dept 1 & 2 MOH task.
21. The equipment and medicines for HPs and HHs in Dept. 1 & 2 arrive and are stored in a rented warehouse at Kaolack, (12/77) MOH/USAID and PCVs management role, but MOH implements.
22. The PH literacy courses begin in Depts. 1 & 2 and lasts seven months beginning from the end of the first year.

Project Operations - 13th - 25th month.

1. The training of VHWS in Dept. 1 & 2 begins. (13th month) (duration four months) a joint MOH/USAID operation.

2. Rural Communities in the 13th month should begin construction of 260 HH and 22 literary huts in Dept. 1 & 2. (duration four months) PH and GR/USAID provide monitoring of this event.
3. The four vehicles for Dept. 3 & 4 should arrive (via USAID) 14th month.
4. By 15th month MOH HPs staffing in Dept. 3 & 4 should be 90% complete.
5. By 15th month the Departmental Supervision Teams should be designated for Dept. 3 & 4 MOH.
6. 16th month - two PCVs should begin in-country training.
7. 16th month - training should begin of the HP staff and Dept. Supervision Team of Dept. 3. (duration four months) Regional Team and USAID implementation.
8. In 17th month PH should commence the animation campaign in Depts. 3 & 4 (duration 8 months).
9. In 17th month the VHWS of Depts. 1 & 2 are to be fielded and on-going supervision should commence. This is to be managed by MOH with assistance from USAID project team.
10. 18th month - The equipment for 21 HP and 210 HH; medicines for 210 HH should be ordered for Dept. 3 & 4. This should be assured jointly by MOH and the Regional Team.
11. 19th month - 2 PCVs enter service.
12. By 20th month of 1978 several of the 10 Kombole graduates should be assigned to the Sine-Saloum by MOH.
13. 20th month - The training of the HP staff, the Departmental Supervision Team and the two PCVs begins for Dept. 4 (program duration four months).
14. In 21st month, the MOH should undertake to inscribe the increased post-project operation costs in its FY 81 budget program.

15. 21st month - The literary monitors for Dept. 3 & 4 are to be trained by PH for one month.
16. 22nd month - The staffing should be complete in all existing HP and contracted by GOS for 4 project HP in Dept. 3 & 4.
17. 23rd month - The Khombole School enrolls 22 students in a two year course.
18. 23rd month - The project commences construction of 4 HP. The GOS begins renovation of 16 HP and constructs 1 programmed HP in Dept. 3 & 4 (6 months duration).
19. 24th month - four cars to be ordered for Dept. 5 & 6 (to be used by PH and Dept. Supervisors).
20. 24th month - 21 horses and buggies purchased.
21. 24th month - 1st year literary courses start in Dept. 3 & 4. 2nd year literary courses in Dept. 1 & 2 (7 month duration).

Project Operations 25th - 36th month

1. Training of VHWs begins for Dept. 3 & 4. Refresher courses for VHWs Dept. 1 & 2 (four month duration).
2. Rural Communities start constructing 210 HH and 22 LH in Dept. 3 & 4 (four months duration) this commences in 25th month.
3. 26th month - four cars are received for Dept. 5 & 6.
4. MOH assigns supervisory team for Dept. 5 & 6 in 27th month.
5. 28th month - two PCVs start in-country training.
6. 28th month - The training begins for HP Staff, (PCV's) and supervisory team of Dept. 5 (four months duration).
7. 28th month - Equipment and medicines for Dept. 3 & 4 arrive.
8. 29th month - PH starts animation campaign in Dept. 5 & 6 (8 months duration).
9. 29th month - The VHWs in Dept. 3 & 4 are fielded and on-going supervision begins.

10. 30th month - Equipment for 32 HP and 130 HH, medicines for 130 HH is ordered for Departments 5 & 6.
11. 31st month - Two PCVs enter service.
12. 32nd month - Khombole graduates 18; some are assigned to Sine-Saloum HP.
13. Training begins for HP staff, supervisory staff, PCVs, for Dept. 6 (four months duration) (32nd month).
14. 33rd month - The literary monitors for Dept. 5 & 6 are trained by PH for one month.
15. 34th month - MOH contracts staff for 11 new HP built by project in Dept. 5 & 6.
16. 35th month - Khombole enrolls 22 students in two year course.
17. 35th month - Project starts construction of 11 new HP, GOS/GR renovates 20 HP and constructs 1 already programmed HP in Dept. 5 & 6. (six month duration).
18. 32 horses and buggies purchased for Dept. 5 & 6. End of third year.
19. 12/79 - 1st year literary courses start for Dept. 5 & 6 and 2nd year courses start for Dept. 3 & 4 (7 months duration).

Project Operations - 36th - 58th month

1. 37th - The training of VHWs starts for Dept. 5 & 6, refresher courses are started for VHWs Dept. 1 & 2 & 3 & 4. (duration four months).
2. 37th - The Rural Communities start constructing 130 HH + 22 LH in Dept. 5 & 6 (duration four months).
3. 40th - Equipment and medicines for Dept. 5 & 6 arrives.
4. 41st - VHWs for Dept. 5 & 6 are fielded, on-going supervision starts.

5. 44th - Khombole graduates 18, some of which are assigned to Sine-Saloum by MOH.
6. 46th - Output - 1800 VHW trained.
7. 46th - Output - 600 HH constructed of which over 300 are functioning normally.
8. 46th - Output - 15 HP constructed and staffed.
9. 46th - Output - Rural Health delivery system planned for other regions.
10. 46th - Final Project evaluation and documents.
11. 58th - Post Project evaluation and report.

Summary of Contracts

Host Country

1. Contracts for HP renovation by MOH/GR.
2. Contracting for new HP personnel (MOH).
3. Contracting for Khombole renovation by GR in cooperation with AID.
4. Contracts for construction of 6 already programmed HPs by GR/MOH.
5. Contracts for construction of 15 new HPs, GR/USAID.
6. Contracts for transport of commodities.

AID Contracts

1. 3 Public Health Advisors (Training, Education, Administration)
2. Contract for Evaluation Team and Sociological Survey.
3. Contract for production of VHW manuals.
4. Contracts for equipment for HPs and HHs.
5. Contracts for vehicles.
6. Contract for horses.
7. Contract for buggies.
8. Contract for water supply equipment.
9. Contract for medicines.
10. Contract for audio-visual equipment.

685-0210

SENEGAL

Rural Health Services Development

PP Annexes

(Incomplete)

FY 77

B. Total Rehabilitation costs by Phases.

Phase I: Kaolack District	11 sites		
Fatick District	<u>11 sites</u>		
Total	22 sites	x 1,407,500 =	30,965,000 cfa
Phase II: Foudiougne District	6 sites	(4 are new sites)	
Gossas	<u>6 sites</u>		
Total	12 sites	x 1,632,700 =	19,592,400 cfa
Phase III: Kaffrine District	13 sites	(11 are new sites)	
Nioro du Rip District	<u>9 sites</u>		
Total	22 sites	x 1,857,900 =	40,873,800 cfa
TOTAL of the three phases .....			= 91,431,200 cfa
			= \$ 373,190

Rehabilitation of the Khombole School

Included under Phase I of this project is the rehabilitation of the existing buildings at the Ecole des Agents d'Assainissement (School of Sanitary Health Agents) located at Khombole.

The buildings consist of a large two story combination classroom dormitory, a kitchen and dining hall complex, a workshop building and a warehouse. The basic structure of the buildings is still in very good condition and the maintenance area that has the most deterioration is the plumbing, electrical and ceiling in the dormitory building as well as painting which is needed overall inside and out.

The Director of the Institution submitted a cost estimate for rehabilitation, some new construction and furnishings which is shown in Annex

Cost of rehabilitation of existing buildings. 4,860,000 cfa.

The REDSO Engineer made an on site inspection of the facilities and ascertained the cost figures to be in order.

New Construction

Phase I.

Ecole des Agents d'Assainissement/Khombole is the only location to have new construction under Phase I. It consists of converting of one portion of the warehouse to a classroom and the installation of a perimeter fence around the entire complex at an estimated cost of 11,695,000 cfa (U.S. \$ 47,734 ). See attached for the partial breakout of estimate submitted by the Khombole Director.

Summary: Perimeter Fence	9,240,000 cfa
Warehouse	2,450,000
Total	<u>11,695,000</u>

Phase II

Construct 4 new health posts at an estimated cost of \$ 26,100 each.....\$ 104,400.

This figure is based upon an estimate by the Office of Public Works. In discussions with the Office of Génie Rural on the same type of building construction, they feel the figure is high. The above figures nets out to \$ 300 per square meter for construction of living quarters<sup>(1)</sup> but finishing was not included nor was water and electricity in that price. Also, taking into account the escalation factor for the possible delay in the start of the project, it will be wise to stay with the higher figure.

Phase III

Construct 11 new Health Posts at an estimated cost of \$ 26,100 each.....\$ 287,100. The same backup as stated in Phase II applies.

Maintenance

It is imperative that the Ministry of Health (GOS) provide sufficient funds in their annual budgets to properly maintain the dispensaries and the Khombole School. A maintenance and budget plan for these recurring expenses in the health project will be a condition precedent to disbursement.

The dispensaries require some painting and minor repairs annually such as possible window glass replacement, broken hinges, etc. A fair estimate would be approximately \$ 100. per unit which would amount to \$ 5,600 annually.

The Khombole School is an altogether different proposition. There should be a minimum full time maintenance staff consisting of

	<u>Estimated Salary/yr</u>
1 plumber	480,000 cfa
1 electrician	480,000
1 handyman	360,000
1 custodian	360,000

Note: The "handyman" should assist the custodian in the periodic major items such as washing windows, mowing lawn, etc.

.../...

(1) Génie Rural used a cost average of \$180 sq/m.

In addition to the above salaries there should be an annual allowance for:

Tool replacement and/or purchase	70,000 c/a
Maintenance/repair supplies/plumbing	100,000
" " /electrical	100,000
" " /miscellaneous	<u>50,000</u>

Total Annual budget for maintenance: 2,000,000 cfa.

An alternate method for handling the maintenance would be to contract it out to a private company. Generally under this method, the employees are not so apt to be diverted to perform duties other than their job descriptions. However, it might be questionable as to the availability of such a maintenance firm in Khombole and it is doubtful if the annual contract amount would be large enough to attract a Dakar firm.

Please note that the Khombole School Director has submitted an itemized list for new furnishings and tools for the school which estimate out to 4,000,000 cfa and 490,000 cfa respectively and which should be included under commodities for this project.

Environmental impact statement

The rehabilitation of the 56 existing dispensaries would have no environmental impact as it is strictly a maintenance operation. As the proposed new dispensary construction sites are to be located within existing designated areas, which for the most part already have perimeter fencing. They would therefore also have no environmental impact. This can be further justified when one realizes that these sites are located in remote villages where the terrain is flat desert in nature and space is not at a premium. Furthermore no EIS would be required for such construction in the U.S.A.

Fixed Amount Reimbursement

Engineering concurs in issuance of an engineering 611(a) certification and the feasibility of using the Fixed Amount Reimbursement (FAR) method for the construction. FAR will be used in such a way that full reimbursement will not be made until the staffs to operate the health units have been assigned to these units and are ready to begin working.

ANNEX C

DEMOGRAPHIC AND SOCIOLOGICAL STRUCTURE AND TRENDS

According to preliminary official reports of the 1976 Census the Sine Saloum has the following demographic profile:

<u>Population</u>	<u>Area</u>	<u>% of Pop. of Senegal</u>	<u>% of Area of Senegal</u>	<u>Population Density</u>
1,007,000	23,945 Km <sup>2</sup>	19.8%	12.17%	41

Within the region densities vary. Thus the Départements of Fatick and Gossas in the northern zones of the region have the highest densities, followed by the Départements of Kaolack, Foundiougne, Niore and Kaffrine respectively. The range in densities is from over 65 persons per km<sup>2</sup> to 10 or less.

Again, in certain of the arrondissements of the more northerly Départements, such as Niakhar, the density may run as high as 90 persons per km<sup>2</sup>.

The areas occupied by the Serer people (see below, ethnic groups) are the most densely populated rural zones in Senegal; the Serer are one of the principal groups in the Sine Saloum.

The Census has given the total population and breakdown by ages for the country but not by region. Computations based upon percentage of age groups in the total population and on the total for Senegal give the following tentative figures (1976) for the Sine Saloum Region.

<u>Ages</u>	<u>Male</u>	<u>Female</u>
0 to 11 mos.	7,000	8,000
1 to 4 years	57,000	60,000
5 to 14 years	128,000	125,000
15 to 54 years	248,000	273,000
55 years +	<u>56,000</u>	<u>38,000</u>
	496,000	504,000

The number of births can be estimated and projected for the Sine Saloum as follows:

<u>1976</u>	46,000
<u>1981</u>	50,000+

From the Enquete Demographic National 1970-71 cited in other sources the percentage of annual increase during the period 1960-1970 for the region was 0.6%. (The national annual increase percentage was 1.93%.)

Mortality figures expressed in percentages and by probable cause for the country as a whole are as follows:

<u>Cause</u>	<u>%</u>
Infectious and Parasitic Diseases	25
Perinatal Mortality	22
Digestive Diseases	7.4
Respiratory Diseases	7.3

For the Sine Saloum region, the principal causes of morbidity and mortality are malaria, cerebro-spinal meningitis, measles, tuberculosis, etc. In the Département de Foundiougne the highest incidence of contagious forms of leprosy is found, after the Bassari zones of Senegal-Oriental.

ETHNIC GROUPS: Identity, Characteristics and Distribution

The principal ethnic groups of the Sine Saloum are the following:

Serer  
Wolof  
Niominka

with a scattering of Toucouleur and Manding found in the southern and southwestern part of the region in general.

Serer

It is difficult to evaluate the numbers of Serer in the Sine Saloum region. An estimation of their numbers in the country as a whole gives a figure in the neighborhood of 722,000. A portion of this ethnic group is found in the Thies Region, and it is likely that more than 500,000 Serer are located in Sine Saloum.

The Serer are generally considered to be divided into two groups, the Serer-Sine and the Serer-non. The Serer-Sine are principal branch of this ethnic group found in the Sine Saloum. The Serer have a historically northerly origin, having come into their present area probably from the Senegal River Valley centuries ago. There seems to be a linguistic and to a

certain extent even a cultural affinity between Serer and Toucouleur, although the long, deep attachment of the latter to Islam has undoubtedly made for major cultural differences between the two groups. Historically, groups of Manding, particularly in the form of a warrior aristocracy, the Guellewar, politically organized and in a sense "defended" the Serer vis-a-vis encroaching Wolof. These Manding were eventually assimilated to the Serer although family traditions and names may keep alive distinctions.

The Serer have been and remain essentially intensive cereal cultivators. Their rainfall-based agricultural techniques are highly developed and complex. The principal cereal grains cultivated are several types of millet, sorghum, cowpeas. Livestock raising (cattle) in close association with cultivation and the use of animal manure for fertilizer characterizes Serer agriculture. In the modern era they have taken to groundnut cultivation for cash income to a large extent, but have by no means abandoned cereal cultivation (as has been virtually the case of certain Wolof groups).

Despite having been organized into a number of states under Guellewar leadership in the past, the Serer are basically egalitarian, the state structures having long since disappeared. They have remained faithful to their agrarian traditions and the large majority of Serer, despite some limited inroads of Christianity on the one hand (some 15% are estimated to be Christians) and Islam on the other (Islamized Serer seem to rapidly become assimilated to Wolof), remain deeply attached to their ancestral, locally-based religion. (See below for Serer social structure.)

### Wolof

The Wolof in the Sine Saloum have been intrusive from the North, particularly since the end of the 19th century on. The numerical strength of Wolof in Senegal as a whole is probably close to 1.5 million but through their spreading language - spoken by many non-Wolof Senegalese and Gambians - and dynamism in both the economic and religious spheres, their influence goes beyond their numerical strength. In the Sine Saloum, although their numbers are somewhat difficult to evaluate, they are present in large numbers particularly in the Kaffrine area and eastwards into the "terres neuves" they are the dominant ethnic group. These southward- and eastward-moving people migrated out of more northerly areas where they had had highly-stratified and politically-structured kingdoms,

initially resistant to Islam but later rapidly embracing that religion. In contact with European influences rather early in the modern era, the Wolof began to cultivate groundnuts and entered into the cash crop and external market economy.

Never having developed particularly effective and complex agricultural techniques with regard to subsistence crops (cereal grains, etc.), the Wolof took to groundnut cultivation to the point where in many cases subsistence agriculture has been reduced to the strictest minimum. In the Sine Saloum, this extreme attachment to the groundnut cash crop economy is nowhere more apparent than in the Terres Nueves, settled from the early 1900s and by increasing numbers of Wolof since then, partly due to soil exhaustion of more northerly Wolof lands and partly due to the dynamism of the Mourid religious brotherhood which is ethnically overwhelmingly Wolof. (See below for Wolof social structure and dynamics.)

#### Niominka

Related linguistically to the Serer but showing more southerly cultural affinities (notably with Diola), the Niominka are essentially a people of fishermen in the islands and the estuary land of the Saloum.

#### Social Structures and Dynamics

Although the various peoples of the region have very much in common culturally, economically and increasingly linguistically (due to the spread of Wolof, to the point where it is the second language of many non-Wolof), there are nevertheless significant differences in social structures, much of which have been inherited from the past, patterns of living, and values. The settlement patterns - villages, quarters and compounds, the family kinship structure, the occupational-based grouping, and the social strata in general - vary distinguishably from one ethnic group to another in the Region. Perhaps the best way to present these data succinctly and to understand them is in the form of a comparative chart. Taking the two major groups, the Wolof and the Serer, that data are as follows:

Socio-Cultural Trait - Settlement Patterns

Wolof

Basic Scheme: dwelling aligned along the main trails radiating out. Generally a village public space with a palaver tree, a public prayer area and often the well. When village becomes larger, the public "place" becomes rectangular and the mosque is built around it, also seller's stalls and shops. Above a certain size (several hundred persons) village quarters appear, often separated from each other by several hundred meters. Characterized by cohesion, rigid structure, almost as if planned. An agglomeration of contiguous family compounds, the Keur, the fundamental unit of the village. The Keur ranges in size from about 10 to 15 persons, sometimes even 20.

Serer

Two types of villages:

Type 1: Within this type of village (older villages), each family "carré" or compound is dispersed, is detached and clearly isolated from its neighbors. There is no overall plan. Distance separating a "carré" from another is variable: from several meters to several tens of meters. There are dispersed, autonomous quarters which are the true basic units of rural life. There may be from three to five such dispersed quarters to a village. Within each quarter, each family has its individual compound, quite distinct from the others, and including all that is necessary for residence. Fields of millet and other crops come up to the compound and the countryside thus is interspersed between compounds. There is little transition from the village to the surrounding bush, as natural tree growth is characteristic.

Type 2: Characterized by even more extreme isolation of family compounds on their lands from separate farms. Thus the network of settlements involves a series of very extended villages running in population from several hundred to more than 1500 persons. Beyond three to four hundred inhabitants the villages give rise to autonomous quarters inhabited by 200 to 300 persons each. The most recent settlements are even more dispersed, but still maintain ties with the "home" village.

## Socio-Cultural Trait - Family Structure

### Wolof

The basic family unit is the nuclear family, either monogamous or frequently polygamous. But often within the unit are found other close kin: sisters, sister's children, other children. Although both patrilineages and matrilineages are recognized by Wolof, a greater emphasis is placed on the patrilineage and kinship through the father, a tendency reinforced by Islam. Land rights are held in the patri-lineage but help, especially when in trouble, is often sought from maternal kin, particularly from the mother's brother. But due to high rate of divorce and remarriage, children of same father may be members of different matrilineages; similarly, children of same mother may be members of different patrilineages. As for marriage, relatives are preferred: a preferred wife is either a mother's brother's daughter or a father's sister's daughter.

Marriage is prohibited between parallel cousins.

### Serer

The basic family unit, the M'bind, ranges in size from that of a nuclear or conjugal family unit, about 10 persons, to upwards of 40. In general larger and more cohesive than the Wolof Keur, the M'bind typically includes a man, his wives, their children, his younger brothers, their wives and children, and is an economic as well as social unit. But size, composition and cohesion vary seasonally: during the dry season each household unit lives on its own resources, the millet from its individual fields; during the rainy season there is greater cohesion of the M'bind and its members draw food from the main granary controlled by the head of the M'bind.

Kinship is reckoned in two lines and an individual belongs to both a patri and matrilineage. From the patrilineage a person derives his name and his caste and residence is generally patrilocal; most religions and magical prerogatives are passed from father to son. Each Serer is also an integral part of his matrilineage and he is very close to his maternal uncle, the head of the matrilineage who manages the family capital and who holds in trust his nephew's earnings and goods accumulated before marriage. Girls give the goods acquired through marriage (the bridewealth) to their maternal uncles who manage them.

Cross cousin marriage is preferred and particularly that between a nephew and his maternal uncle's daughter.

Socio-Cultural Trait - Caste and Status Groups

Wolof

Traditionally (and this is still consciously adhered to and behavior flows from the distinction and attitude, particularly in the rural areas), the Wolof stratification system (having large numbers of non-peasants) was as follows:

Upper stratum

Royal lineages  
Nobles  
Warriors - Serigne (marabout)  
Cultivators

Courtesans

Metalworkers  
Leatherworkers  
Weavers  
Woodworkers  
Griots (praise singers, musicians, genealogists, etc.)

Slaves

Serer

A basically egalitarian structure, historically hierarchized by immigrant Manding nobles (particularly in the Sine area), the vast majority of Serer have been and remain free peasants. Nevertheless a stratification system can be delineated less rigidly than for the Wolof:

Upper Stratum

King ) (of Manding origin)  
Nobles )  
Warriors  
Free cultivators (majority of population)

Artisans

Metalworkers )  
Leatherworkers) of Manding and  
Weavers ) Wolof origin  
Woodworkers (itinerant, often of peul origin)  
Griots

Slaves

Socio-Cultural Trait - Age Grades/Work Groups

Wolof

Among Wolof, rather than age grades as such, are institutionalized work groups (particularly among younger people) organized along lines of sex and age. Thus one female group may consist of young unmarried women and young married women without children; another group may have young married women who have children. Men's groups may include boys past puberty and married men in late twenties and thirties. Work groups take several forms:

dimboeli - spontaneous help/work groups

nadante - permanent work group who help in one another's fields

santaane - most common form, constituted on request. For cultivation of millet and groundnuts and rewarded by feast. Particularly strong among Mourides in Terres Neuves zone.

Serer

Among Serer traditional age grades much more elaborately organized. Each individual belongs to an age grade and in each village. These are associations each of which groups either boys or girls, single young men or young women, married men or women, old people (traditionally were theoretically seven age grades). These are linked to traditional rites de passage (e.g. ndout, period of ordeals and learning for boys following circumcision). Still practice among rural Serer, although affected by school and other influences.

ANNEX D: Costs to U.S. (U.S.\$)

A. Training Costs

	FY 77		FY 78		FY 79		FY 80		Total	
	\$ US	LC	\$ US	LC	\$ US	LC	\$ US	LC	\$ US	LC
1. Training of village first-aid men (260+210+130 = 600 persons for 24 days plus 6 days/year refreshers at 350 FCFA/day)	-	-	-	9,500	-	10,040	-	9,040	-	28,580
2. Training of village matrons and sanitarians (1200 persons for 12 days plus 3 days/year refreshers at 350 FCFA/day)	-	-	-	9,500	-	10,040	-	9,040	-	28,580
3. In-service training of departmental supervisors and Health Post personnel (56+46+68 = 170 persons for 24 days plus 6 days/year refreshers at 500 F. CFA/day)	-	2,920	-	3,130	-	4,880	-	2,220	-	13,150
4. In-service training of PH agents, 14 persons for 14 days at 500 FCFA/day	-	190	-	120	-	120	-	-	-	430
5. Training of literacy monitors (22+22+22 = 66 persons for 30 days at 500 FCFA/day)	-	1,430	-	1,430	-	1,430	-	-	-	4,290
6. Auxiliary project support 66 literacy monitors for 2 years (14 months) at \$40/month	-	-	-	6,160	-	12,320	-	12,320	-	30,800
7. Stipends to Khombole student (22+40+22 = 84 student/years at US \$ 1,174 each)	-	-	-	25,830	-	46,960	-	25,830	-	98,620
<b>Total training costs</b>		<b>4,540</b>		<b>55,670</b>		<b>85,790</b>		<b>58,450</b>		<b>204,450</b>

**B. Training Materials Costs**

	FY 77		FY 78		FY 79		FY 80		Total	
	\$ US	LC	\$US	LC	\$US	LC	\$US	LC	\$US	LC
1. Manuals for VHW training - 2000 copies at \$4 each	-	-	-	4,000	-	3,000	-	1,000	-	8,000
2. Demonstration materials for VHW training (slides, flip-charts) - \$50 per Health Post	-	-	-	1,300	-	1,050	-	1,600	-	3,950
3. Manuals and materials for training of HP personnel + supervisory teams, 170 persons at \$20 each	-	1,120	-	920	-	1,360	-	-	-	3,400
4. Equipment (projectors, flip-charts etc.) for <u>Promotion Humaine</u> departmental teams, 6 sets at \$200 each	-	400	-	400	-	400	-	-	-	1,200
5. Literacy training equipment (benches, blackboard, writing tablets), for 66 Rural Community Councils at \$220 each	-	4,840	-	4,840	-	4,840	-	-	-	14,520
6. Literacy manuals, 3 x 30 x 66 at \$4 each	-	7,920	-	7,920	-	7,920	-	-	-	23,760
7. Literacy practice books, 2 x 30 x 66 at \$2 each	-	2,640	-	2,640	-	2,640	-	-	-	7,920
Total, training materials costs		16,920		22,020		21,210		2,600		62,750

## C. Equipment Costs.

	FY 77		FY 78		FY 79		FY 80		TOTAL	
	\$US	LC	\$US	LC	\$US	LC	\$US	LC	\$US	LC
1. Equipment for 600 health huts, at \$100 each (Annex T)	13,000	13,000	10,500	10,500	6,500	6,500	-	-	30,000	30,000
2. Renewal of equipment in 58 health posts at \$900 each (Annex 5)	8,800	11,000	6,400	8,000	8,000	10,000	-	-	23,200	29,000
3. Water Systems for 79 health posts (50 I tanks and sinks) at \$100 each	-	2,600	-	2,100	-	3,200	-	-	-	7,900
4. Equipment for 15 new health posts, at \$900 each (Annex 5)	-	-	1,600	2,000	4,400	5,500	-	-	6,000	7,500
5. Furnishings for Khombole School	-	25,850	-	64,850	-	5,000	-	-	-	95,700
6. Horses (at \$400 each) and buggies (at \$120 each) for 79 health posts	-	13,520	-	10,920	-	16,640	-	-	-	41,080
7. Vehicles (2CV or 4L) - 4 for Management and supervision team, 6 for MOH departmental teams, 7 for PH departmental team and Inspection, at \$4400 each	-	39,600	-	17,600	-	17,600	-	-	-	74,800
8. Rental of warehouse space in Kaolack and transport of equipment and medicines from Dakar harbor/month-	-	-	-	6,000	-	6,000	-	6,000	-	18,000
<b>TOTAL, equipment costs</b>	<b>127, 370</b>		<b>140,470</b>		<b>89,340</b>		<b>6,000</b>		<b>363,180</b>	

D. Medicine costs

	<u>FY 77</u>		<u>FY 78</u>		<u>FY 79</u>		<u>FY 80</u>		<u>TOTAL</u>	
	<u>FX</u>	<u>LC</u>	<u>FX</u>	<u>LC</u>	<u>FX</u>	<u>LC</u>	<u>FX</u>	<u>LC</u>	<u>FX</u>	<u>LC</u>
f. Initial stock of medicines for 600 health at \$1000 each		175,000		280,000		145,000				600,000
<b>Total, medicine costs</b>		<u>175,000</u>		<u>280,000</u>		<u>145,000</u>				<u>600,000</u>

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## E. Vehicle operation + maintenance costs

	<u>\$US</u>	<u>FY 77</u> <u>LC</u>	<u>\$US</u>	<u>FY 78</u> <u>LC</u>	<u>\$US</u>	<u>FY 79</u> <u>LC</u>	<u>\$US</u>	<u>FY 80</u> <u>LC</u>	<u>TOTAL LC</u>
1. Gasoline, 4 supervision and 6 MOH department team vehicles= (36+78+102) = 336 vehicle/month @ 200 l/month each (40¢/l)		2,880		6,240		8,160		9,600	26,880
2. Maintenance of above vehicles, at \$25/month ea.		900		1,950		2,550		3,000	8,400
3. Gasoline for 7 PH vehicles, for animation: (18+42+66+84)= 210 vehicle/month at 100 l/month each		720		1,680		2,640		3,360	8,400
4. Gasoline for 7 PH vehicles, for literacy inspection, 210 vehicle/month at 100 l/month each		720		1,680		2,640		3,360	8,400
5. Maintenance of 7 PH vehicles, at \$25/month each		450		1,050		1,650		2,100	5,250
		-----		-----		-----		-----	-----
<b>Total, vehicle operation &amp; Maintenance costs</b>		<b>5,670</b>		<b>12,600</b>		<b>17,640</b>		<b>21,420</b>	<b>57,330</b>

## F. Per diem costs.

	FY 77		FY 78		FY 79		FY 80		TOTAL	
	\$US	LC	\$US	LC	\$US	LC	\$US	LC	\$US	LC
1. Regional supervision team - 3 persons, 20 days/ month at \$6 day		2,500		4,320		4,320		4,320		15,480
2. 6 Departmental MOH supervision teams - 2 persons each, 20 days/mo.		1,600		5,440		9,280		11,520		27,480
3. 6 Departmental PE animation teams - 2 persons each, 20 days/mo. at \$ 4/day		1,600		5,440		9,280		11,520		27,480
Total, per diem costs		5,720		15,200		22,880		27,360		71,160

G. Construction costs

	FY 77		FY 78		FY 79		FY 80		TOTAL	
	\$US	LC	\$US	LC	\$US	LC	\$US	LC	\$US	LC
1. Cement for floors of 600 health and 66 literacy huts, at \$30 each			8,460		6,960		4,560		19,980	
2. Construction of 4+11= 15 new health posts at \$26,100 each (11.P. of 70m2 with housing for 11.P. Chief and Itinerant Agent at 60m2 each)					104,400		287,100		391,500	
3. Construction of shelters for horses at 79 health posts, \$100 each		2,600	2,100		2,100		1,100		7,900	
4. Renovation of Khombole School: construction		18,210	78,310		-		-		96,520	
5. Rehabilitation of 56 health posts		61,980	61,880		91,960		154,830		370,650	
Total, construction costs		82,790	150,750		205,420		447,590		886,550	

H. Expatriates costs

	FY 77		FY 78		FY 79		FY 80		TOTAL	
	\$US	LC	\$US	LC	\$US	LC	\$US	LC	\$US	LC
1. Public Health Advisor (Ed.)	7,000	4,000	40,000	20,000	40,000	20,000	40,000	20,000	127,000	64,000
2. Public health adviser (Trg)	10,000		20,000		20,000		20,000		70,000	
3. Public Health Advisor (Admin)			40,000		40,000		40,000		120,000	
4. Consultant/Experts					32,000	8,000	4,000	1,000		
Total, expatriate costs	17,000	4,000	100,000	20,000	132,000	28,000	104,000	21,000	317,000	64,0

I. Evaluation costs

1. Set up of evaluation framework by outside team	5,000	-	-	-	-	-	-	-	5,000	
2. Collection of baseline data- 4 months by Senegalese Sociologist + expenses	5,000	-	-	-	-	-	-	-	5,000	
3. Mid-project evaluation - 1 expert/month, travel and expenses	-	-	-	-	10,000	-	-	-	10,000	
4. Final evaluation - 1 expert/month, travel and expenses	-	-	-	-	-	-	10,000	-	10,000	
5. Post-project evaluation	-	-	-	-	-	-	-	-	-(for the record)	
Total evaluation costs	-	-	-	-	-	-	-	-		
	10,000				10,000		10,000		30,000	

PROJECT FINANCED HEALTH HUT EQUIPMENT

U.S. Purchased equipment

I metal trunk with lock, 90 cm long	\$34
2 scissors, at \$4 each	8
2 forceps, at \$4 each	<u>8</u>
Subtotal, imported equipment	\$50

Locally purchased equipment

I meter bucket	\$3
I plastic basin	2
I small wooden table	25
2 wooden stools, \$10 each	<u>20</u>
Subtotal, locally purchased equipment	\$50
TOTAL, health hut equipment	<u><u>\$100</u></u>

PROJECT FINANCED HEALTH POST EQUIPMENT

U.S. purchased equipment

1	reclining examination table	\$200
6	thermometers	2
1	blood pressure measuring instrument	25
1	stethoscope (obstetrical)	10
1	stethoscope (biauricular)	20
200	needles	10
10	glass syringes	30
1	metallic box with 1 knife, 1 kocher forceps, 1 dissection forceps	33
1	box for compresses	15
1	box with 1 dissection forceps, 1 Michel clip forceps, 100 Michel clips	30
1	baby weighing scale	25
Subtotal, imported equipment		\$400

Locally purchased equipment

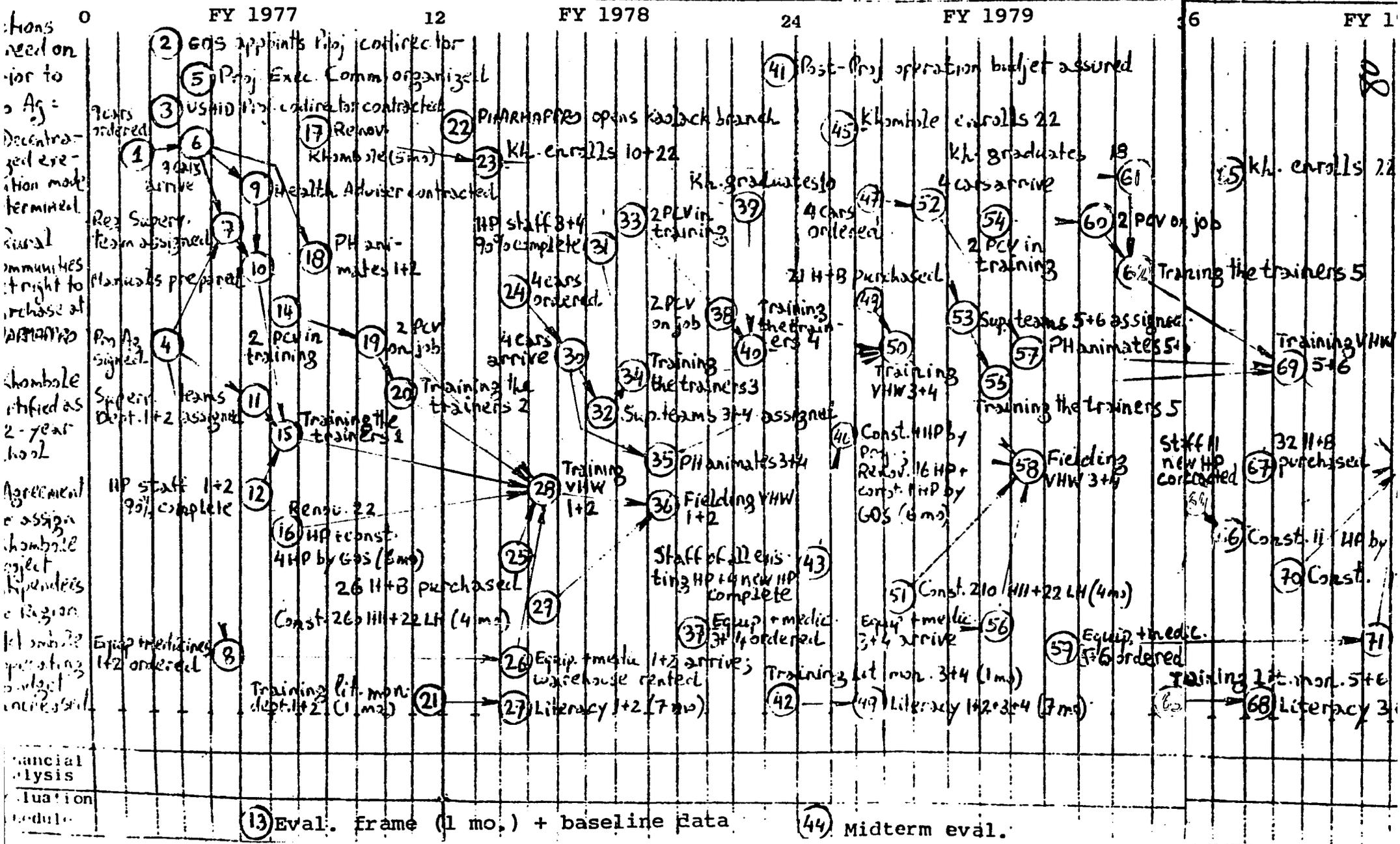
3	wood benches, \$20 each	\$ 60
3	tables 0.80 x 2m, \$45 each	135
3	chairs, \$14 each	42
6	stools, \$10 each	60
1	small table 40 x 60 cm	25
1	small enclosed wooden cupboard	70
1	set wooden shelves for 1 wall	95
1	plastic bucket	3
1	plastic basin	2
2	brooms	5
1	small brush	2
2	rags	1
Subtotal, locally purchase equipment		\$500

TOTAL, health post equipment	\$900
	====

KHOMBOLE SCHOOL - COST OF RENOVATION & NEW CONSTRUCTION- PROJECT FINANCED

	<u>F.CFA</u>
A. Repair of existing buildings	4,860,000
B. New Constructions:	11,690,000
- Converting one warehouse to classroom	2,450,000
- Installing perimeter fence	9,240,000
	<hr/>
Subtotal, constructions = \$58,960	16,550,000
	=====
C. Furnishings:	20,000,000
100 Class chairs	
10 Teacher's desks	
60 Chairs for conference room	
3 Large desks	
10 armchairs	
50 beds 90 cms	
50 mattresses 90 cms	
50 pillows	
50 bed tables	
50 chairs for dining room	
25 tables for dining room	
2 Large refrigerators	
Kitchen equipment	
2 Typewriters	
1 Radio	
1 Copying machine	
D. Training supplies for carpentry, Masonry, Plumbing and Insecticide shops	3,000,000
	<hr/>
Subtotal, furnishings & supplies = \$95,850 =	23,000,000
	=====
TOTAL cost, Khombole renovation = \$164,810 =	39,550,000
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country:	Project N°:	Project Title:	Date:	/ / Original PPT Appr. / Revision	country:	Project N°:	Project Title:	Date:	/ / Original PPT Appr. / Revision
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Final PPT Appr. on

country: Project N°: Project Title: Date: / / Original PPT Appr. No / Revision

May June July Aug Sept

Oct Nov Dec Jan Feb Mar Apr May June July Aug Sept

9

6 FY 1980 48

Get assured  
s 22  
duates 18  
rive  
in  
ning  
best 5+6 assigned  
57 PH animates 5+6  
ning the trainers 5  
58 Fielding VHW 3+4  
11+22 LH (4ms)  
Equip + medic.  
59 5+6 ordered  
4 (7ms)

kh. enrolls 22  
60 2 PCV on job  
62 Training the trainers 5  
Training VHW  
69 5+6  
Staff 4  
new HP constructed  
64  
66 Const. 11 HA by Proj., renov 2x HP + const. 1 HP by GOS (6ms)  
67 purchase  
72  
70 Const. 130 HH + 22 LH (4ms)  
71 Equip + medic 5+6 arrive  
68 Literacy 3+4+5+6 (7ms)

Khombole graduates 19  
73  
Principal outputs  
74 1800 VHW trained  
75 600 HH constructed, over 300 functioning normally  
76 15 new HP constructed + staffed  
77 System extended to other Regions  
79 Final eval.

Abbreviations  
H+B = horse + buggy  
HH = health hut  
HP = health post  
Kh. = Khombole  
LH = literacy hut  
Lit. mon. = literacy monitors  
PCV = Peace Corps volunteers  
PH = Promotion Humaine  
VHW = village health workers  
Dept. 1 = Kaolack  
Dept. 2 = Fatick  
Dept. 3 = Niouro du Rip  
Dept. 4 = Foundiougne  
Dept. 5 = Gossas  
Dept. 6 = Kaffrine

Post Actions

Oct. 1982

79 Post -Project eval. 79

PROJECT LOGICAL FRAMEWORK

Life of Project:  
 From FY 77 to FY 80  
 Total US Funding \$3,490  
 Date Prepared Nov. 15, 1976

Project Title and Number Sine Saloum Rural Health Project

Page 1

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Program or Sector Goal. The broader objective to which this paper contributes: (A-1)</p> <p>1. Improvement in the level of health amongst the rural population.</p> <p>2. Establishment of a model national health care delivery system for preventive and curative medicine that can be maintained through the support of the rural population.</p>	<p>Measures of Goal Achievement: (A-2)</p> <p>1. A measurable and marked level of improvement in the statistical indices of morbidity and mortality in the rural area.</p> <p>2. Improvement of medical indices.</p> <p>3. Demonstrated financial support by Rural Communities and Government authorities for the replication of the project.</p> <p>4. The continued existence of a rural health care system in the Sine Saloum Region.</p>	<p>(A-3) (Goal).</p> <p>1. Regional mortality and morbidity statistics: point-prevalent surveys (% of persons sick during working season).</p> <p>2. Point-prevalent surveys (children height + weight survey, hemoglobin), and more complex indices on sub-samples.</p> <p>3. Similar projects for other Departments and Regions in various stages of planning.</p> <p>4. Health huts organized in first two project years operate by end of project without project assistance or intervention.</p>	<p>Assumptions for Achieving Goal Targets: (A-4)</p> <p>1. GOS continues to support rural health.</p> <p>2. GOS continues to support the Administrative Reform, including the delegation of executor responsibilities to regional and local authorities.</p>

LB

PROJECT LOGICAL FRAMEWORK

Life of Project:  
 From FY \_\_\_\_\_ to FY \_\_\_\_\_  
 Total US Funding \_\_\_\_\_  
 Date Prepared \_\_\_\_\_

Project Title and Number \_\_\_\_\_

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Project Purpose (B-1):</p> <p>1. Create within the Region of Sine Saloum a network of staffed village health posts supported by local communities</p> <p>2. Strengthen a back-stopping system for secondary health posts supported by the national government.</p>	<p>End-of-Project-Status (B-2)</p> <p>1. Rural Communities: 5-10 villages have VHW's in villages but maintained by villagers. Health workers offer:</p> <ul style="list-style-type: none"> <li>a. prophylaxis and treatment for common ailments</li> <li>b. cooperate in educating villagers on health education</li> <li>c. Refer serious cases to Government Health Post.</li> </ul> <p>2. Health Post personnel adapted to new role</p> <ul style="list-style-type: none"> <li>a. head nurse receives referrals</li> <li>b. VHW visit itinerant worker monthly.</li> </ul> <p>3. MOH supports system through improved drug supply to rural communities</p> <p>4. Village: supports system of VHW by:</p> <ul style="list-style-type: none"> <li>a. providing sociological assistance to VHW</li> <li>b. Establishing accounting system for drugs.</li> </ul>	<p>5-10</p> <p>1. Inspection of Health huts by Regional Team</p> <p>2. Records of Health Post Chiefs and Itinerant workers' in service training.</p> <p>3. Inspection by regional team of Health Posts.</p> <p>4. Stock record verification.</p> <p>5. Inspection of Govt. budgetary records and stock control.</p> <p>6. Periodic visits by regional team to health posts and health huts.</p> <p>7. Rehabilitation contract executed to government satisfaction</p>	<p>Assumptions for achieving purpose (B-4).</p> <ul style="list-style-type: none"> <li>1. Ministry of Health delegates authority for project execution to the Regional Governor's office.</li> <li>2. Villagers continue to express desire for rural health services and support the health services delivery system.</li> </ul>

PROJECT LOGICAL FRAMEWORK

Life of Project:  
 From FY \_\_\_\_\_ to FY \_\_\_\_\_  
 Total US Funding \_\_\_\_\_  
 Date Prepared \_\_\_\_\_

Project Title and Number \_\_\_\_\_

Page 3

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS		IMPORTANT ASSUMPTIONS
<p>Project Outputs (C-1):</p> <ol style="list-style-type: none"> <li>1. Rural populace supportive of health care and health delivery system.</li> <li>2. Training manuals for VHW prepared in three languages.</li> <li>3. 600 village health units constructed and equipped.</li> <li>4. 1800 village health workers trained.</li> <li>5. Health post chiefs, itinerant workers and matrons recycled to be able to train and supervise VHWs.</li> <li>6. Itinerant workers provided with transport (horse buggy).</li> <li>7. Renovation, equipping and staffing of existing health posts.</li> <li>8. 15 new health posts constructed, equipped and staffed.</li> <li>9. Village health units regularly resupplied through Community Council.</li> </ol> <p>(Cont'd next page)</p>	<p>Magnitude of Outputs (C-2):</p> <ol style="list-style-type: none"> <li>1. At least 300 health huts function properly.</li> <li>2. At least 1800 manuals prepared by project third year.</li> <li>3. 600 health huts constructed and equipped.</li> <li>4. 1800 village health workers trained.</li> <li>5. All existing health post personnel undergo in-service training.</li> <li>6. All existing health posts properly equipped.</li> <li>7. 76 horses and buggies purchased.</li> <li>8. 58 existing health posts in Sine Saloum renovated and staffed.</li> <li>9. 15 new health posts constructed, equipped and staffed.</li> <li>10. Full medicine stock in health huts by end of project.</li> <li>11. All VHWs visited every months by itinerant worker.</li> </ol> <p>(Cont'd next page)</p>		<p>(C-3):</p> <ol style="list-style-type: none"> <li>1. Inspection by final evaluation team.</li> <li>2. Verification by project manager.</li> <li>3. Inspection by regional supervision team.</li> <li>4. Records of VHW training courses.</li> <li>5. Records of health personnel in-service training courses.</li> <li>6. Contract completed to govt's satisfaction by planned date; inspection by project manager.</li> <li>7. GCS budget execution; verification by project manager.</li> <li>8. Records of attendance in P.H. literacy courses.</li> </ol> <p>Assumptions for achieving outputs (C-4):                      Ministry of Health willing to assign to Sine Saloum the number of newly graduated RN and itinerant workers necessary to complete the staffing</p>

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PROJECT LOGICAL FRAMEWORK

Life of Project:  
 From FY \_\_\_\_\_ to FY \_\_\_\_\_  
 Total US Funding \_\_\_\_\_  
 Date Prepared \_\_\_\_\_

Project Title and Number \_\_\_\_\_

OBJECTIVELY VERIFIABLE

IMPORTANT

NARRATIVE SUMMARY

INDICATORS

MEANS OF VERIFICATION

ASSUMPTIONS

<p>Project Outputs (C-1):</p> <p>10. VHWs regularly supported and monitored by itinerant workers.</p> <p>11. Renovation and equipping of Khombole training school to accommodate 40 students graduating about 20 per year.</p> <p>12. 76 Community Councils receive literacy training.</p> <p>13. Regional supervising and teaching team in operation.</p> <p>14. Chain of supply for provision of medicines to health huts functioning.</p> <p>15. Process of project evaluation from baseline data established.</p>	<p>Magnitude of Outputs (C-2):</p> <p>12. Renovation of Khombole school completed as per contract and equipment provided by end of first project year.</p> <p>13. At least 760 rural counsellors pass literacy course.</p> <p>14. Evaluation team produces reports on schedule.</p>	<p>(C-3):</p>	<p>Assumptions for achieving outputs (C-4):</p>
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PROJECT LOGICAL FRAMEWORK

Life of Project:  
 From FY \_\_\_\_\_ to FY \_\_\_\_\_  
 Total US Funding \_\_\_\_\_  
 Date Prepared \_\_\_\_\_

Project Title and Number \_\_\_\_\_

Page 4

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Project Inputs (D-1):</p> <ol style="list-style-type: none"> <li>1. Construction, equipment and supplies for Khombole School, health posts and health huts.</li> <li>2. Training</li> <li>3. Staffing of two U.S. advisors.</li> <li>4. Operational support</li> </ol> <p>(See Summary of AID Inputs, p.18)</p>	<p>Implementation Target (Type and Quantity) (D-2):                      (See Part IV and Annex F)</p>	<p>(D-3):</p>	<p>Assumptions for Providing Inputs (D-4):</p> <ol style="list-style-type: none"> <li>1. Medicines available as required from <u>Pharmapro</u> or private pharmacists.</li> <li>2. MOH allocates budget to complete staffing of existing health posts, for staff of new posts, regional supervision team, expanded Khombole operating costs.</li> <li>3. Rural Communities willing to compensate VHWs through monetary or other means.</li> <li>4. Promotion Humaine effective in motivating rural community action and in training of rural community counsellors in basic literacy.</li> </ol> <p>(Cont'd next page)</p>

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PROJECT LOGICAL FRAMEWORK

Life of Project:  
 From FY \_\_\_\_\_ to FY \_\_\_\_\_  
 Total US Funding \_\_\_\_\_  
 Date Prepared \_\_\_\_\_

Project Title and Number \_\_\_\_\_

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Project Inputs (D-1):	Implementation Target (Type and Quantity) (D-2):	(D-3):	Assumptions for Providing Inputs (D-4): 5. Maintenance of itinerant worker transport (horse and buggy) assured through MOH operating budget or Rural Community participation. 6. PCVs available as requested. 7. AID funds available as required.

(To be revised based on timing of authorization)

Country:	Project No.:	Project Title:	date:	// original	apprvd:
				// revision #	
<b>CPI NARRATIVE</b>					
Prior actions agreed to in principle and date for their implementation set:			10x.	3/77	Training manuals prepared and training equipment purchased.
A. Decentralized mode of Project execution			11x.	3/77	Supervision Terms Dept. 1+2 assigned
B. Rural Communities allowed to purchase medicines directly from PHARMAPPRO.			12x.	3/77	HP staff Dept. 1 (Kaolack) and 2 (Fatick) 90% complete
C. Khombole certified as a two-year school			13x.	3/77	Evaluation Framework determined; gathering evaluation baseline data starts (6 mo.)
D. MOH agrees to assign Khombole graduates who receive Project stipends to Sine-Saloum.			14x.	4/77	2 FEV's start country training
E. MOH increases Khombole operating budget.			15x.	4/77	Start training HP staff and Dept. Supervision Team (Kaolack) (over 4 mo.)
1. 1/77 9 cars ordered (1 - Project Codirector, 3 - Reg. Sup. Team and Public Health Adviser, 1 - PH Reg. Inspection, 2 - PH teams Dept. 1+2)			16x.	4/77	GOS starts renovation of 22 HP and construction of 4 previously programmed HP in Dept 1+2 (6 mo.)
2. GOS appoints Project Codirector			17x.	5/77	Renovation of Khombole school starts (5 mo.)
3. USAID Project Codirector contracted			18x.	5/77	PH starts animating Dept. 1+2 (over 8 mo.)
4. ProAg signed, POIC written			19x.	7/77	2 PCV's enter service.
5. 1/77 Regional Project Execution Committee nominated			20x.	8/77	Start Training HP staff and Dept. Sup. team (Fatick) + 2 PCV's (over 4 mo.)
6. 3/77 9 cars arrive			21x.	9/77	Train literacy monitors Dept. 1+2 (1 mo.)
7. 3/77 Regional Supervision Team assigned			22x.	10/77	PHARMAPPRO opens branch at Kaolack
8. 3/77 Equipment for 26 HP + 260 HH, medicines for 260 HH ordered (Dept. 1+2)			23	11/77	Khombole enrolls 10 St. Louis transfers in usual 1-year course and 22 BEPC holders in new 2 year program.
9. 3/77 Public Health Adviser nominated			24x.	12/77	4 cars ordered (2-PH teams, 2- Dept. Sup. Teams in Dept. 3+4)
			25.	12/77	26 horses+buggies purchased
			26.	12/77	Equipment+medicines for Dept. 1+2 arrive; warehouse rented at Kaolack.
			27.	12/77	Literacy courses start, Dept. 1+2 (7 mo.)
			28.	1/78	Training VHW's Dept. 1+2 starts (4mo.)

Note : HH = Health Hut, HP = Health Post, LH = Literacy Hut, PC = Promotion, VHW = Village Health Worker, PCV's = Peace Corps Volunteers, Dept. 1 = Kaolack, Dept. 2 = Fatick & = Critical Factor (Time-wise).

Country:	Project No.:	Project Title:	date:	// original // revision #	apprvd:
<u>CPI NARRATIVE</u>					
29.*	1/78	Rural Communities start constructing 260 HH + 22 LH in Dept. 1+2 (4 months)	47.*	12/78	4 cars ordered (2 - PH teams, 2- Dept. Sup. Teams in Dept. 5+6)
30.*	2/78	4 cars for Dept. 3+4 arrive	48.	12/78	21 horses+buggies purchased
31.*	3/78	HP staff Dept. 3+4 90% complete	49.	12/78	1st year literacy Dept. 3+4, 2nd year literacy Dept. 1+2 starts (7 mo.)
32.*	3/78	Dept. 3+4 Supervision Teams assigned	50.*	1/79	Training VHW's Dept. 3+4, refresher courses VHW's Dept. 1+2 (over 4 mo.)
33.	4/78	2 PCV's start in-country training.	51.*	1/79	Rural Communities start constructing 210 HH + 22 LH in Dept. 3+4 (over 4 mo.)
34.*	4/78	Start training HP staff and Sup. Team of Dept. 3 (over 4 mo.)	52.*	2/79	4 cars for Dept. 5+6 arrive
35.	5/78	PH starts animating Dept. 3+4 (over 8 mo.)	53.*	3/79	Sup. teams Dept. 5+6 assigned
36.*	5/78	VHW's Dept. 1+2 fielded, ongoing supervision starts.	54.	4/79	2 PCV's Start in-country training
37.	6/78	Equipment for 21 HP+210 HH, medicines for 210 HH ordered (Dept. 3+4).	55.*	4/79	start training HP staff and Sup. Team of Dept. 5 (over 4 mo.)
38.	7/78	2 PCV's enter service	56.	4/79	Equipment+medicines for Dept. 3+4
39.	8/78	Khombole graduates 10, some assigned to Sine Saloum.	57.	5/79	PH starts animating Dept. 5+6 (over 8 mo.)
40.*	8/78	Start training HP staff, Sup. Team and PCV's for Dept. 4 (over 4 mo.)	58.*	5/79	VHW's Dept. 3+4 fielded, ongoing supervision start.
41.	9/78	MOH undertakes to inscribe increased post-Project operation costs in FY-81 budget.	59.	6/79	Equipment for 32 HP+130 HH, medicines for 130 HH ordered (Dept. 5+6)
42.	9/78	Train Literacy monitors Dept. 3+4 (1 mo.)	60.	7/79	2 PCV's enter service
43.	10/78	Staff complete in all existing HP and contracted for 4 Project HP in Dept. 3+4	61.	8/79	Khombole graduates 18, some assigned to Sine Saloum.
44.		Mid-term evaluation.	62.*	8/79	Start training HP staff and Sup. Team for Dept. 5 (over 4 mo.)
45.	11/78	Khombole enrolls 22 in 2 year course	63.	9/79	Train literacy monitors Dept. 5+6 (1 mo.)
46.	11/78	Project starts construction of 4 HP, GOS renovates 16 HP and constructs 1 already programmed HP in Dept. 3/4 (over 6 mo.).			

Note : Dept. 3= Nioro du Rip, Dept. 4 = Foundiougne , Dept. 5 = Gossas, Dept. 6 = Kaffrine.

Country:	Project No.:	Project Title:	date:	// original // revision #	apprvd:
<u>CPI NARRATIVE</u>					
64.	10/79	MOH contracts staff for 11 new Project HP in Dept. 5+6			
65.	11/79	Khombole enrolls 22 in 2-year course			
66.	11/79	Project starts construction of 11 HP, GOS renovates 20 HP and constructs 1 already programmed HP in Dept. 5+6 (over 6 mo.)			
67.	12/79	32 horses+buggies purchased			
68.	12/79	1st year literacy Dept. 5+6 starts (7 mo.) 2nd year literacy Dept. 3+4 starts			
69.	1/80	Training VHW's Dept. 5+6, refresher courses VHW's Dept. 1+2+3+4 (over 4 mo.)			
70.	1/80	Rural Communities start constructing 130 HH + 22 LH in Dept. 5+6 (over 4 mo.)			
71.	4/80	Equipment+medicines for Dept. 5+6 arrive			
72.	5/80	VHW's Dept. 5+6 fielded, ongoing supervision Starts			
73.	8/80	Khombole graduates 18			
74.	10/80	Output : 1800 VHW trained			
75.	10/80	Output : 600 HH constructed, of which over 300 functioning normally.			
76.	10/80	Output : 15 HP constructed and staffed			
77.	10/80	Output : rural health delivery systems planned for other Regions.			
78.	10/80	Final Project evaluation			
79.	10/82	Post-Project evaluation.			

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## ANNEX G

### INSTITUTIONAL FRAMEWORK - GOS - ADMINISTRATIVE

#### REFORM MODEL

##### A. Administrative structure and technical cadre

###### 1. National level

Planning in Senegal is depicted by chart No. 1. The High Planning Council defines planning policy, options and objectives of the Plan.

###### 2. Regional level

The creativity in the model is the existence of the function for development within the territorial administration. This authority has been modified and reinforced by the law of February 1, 1972 called the "Administrative Reform", enacted first in Cap Vert and Thies and since extended to the Sine-Saloum.

Senegal is divided into eight Regions: Cap Vert, Casamance, Diourbel, Fleuve, Louga, Senegal Oriental, Sine-Saloum and Thies. Each Region has a Governor who represents all ministries and acts as head of all Government officials employed in the Region. However, technical ministries have their own regional inspectors.

The Governor chairs Regional Commissions and the Regional Development Committee (CRD). The CRD brings together the Governor's Associate for Development, prefects, regional service chiefs, regional representatives of public organizations, such as: the Senegalese office for Handicrafts, the National Bank for Development of Senegal, the National Office for Cooperation to Assistance for Development, the National Society for Development and Agricultural Extension, the two deputies of the Region to the National Assembly, the president of the Regional Council. (The CRD assists the Governor in writing Regional Development Programs.

Each Region is divided into "Departments" each of which is administered by a "Prefect", placed under the authority of the Governor. "Prefects have a role of departmental coordination, technical transmission and assistance to rural and urban

Communities. They have supervisory powers over financial management by the Rural Communities. The Prefects presides over the Departmental Committee for Development which brings together employees of those technical and economic services who serve in the rural areas. Each Prefect has under his authority a Departmental Planning Agent who has authority over small local development projects.

Departments are divided into "arrondissements" (circles). The head of an arrondissement is a "subprefect". He is placed under authority of a Prefect. He has the responsibility of promoting development in his circle and to obtain participation of the population. He exercises a monitoring and control function over the Rural Councils which are the representative organs of the Rural Communities. The "Sub-Prefect" controls financial management of the Rural Communities but, as budget officer for the Rural Communities, he is under management of the Rural Councils.

The Administrative Reform has created the Rural Communities which bring together several villages and are the basic organizational level of populations of rural areas.

Villages, i.e., several families or "carrés" close to each other are the smallest administrative cell. The "village chief" is appointed by the "Subprefect", and is under the joint authority of the Subprefect and of the President of the Rural Council.

## B. Participatory Structures

### 1. National Level

- Political Echelon: the National Assembly and its Commissions.
- Socio economic echelon: the Economic and Social Council, composed of the representatives of the wage earners, of commerce, banks, industries, mines, artisans and rural development organisms, and also of individuals chosen for their economic, social, scientific or cultural competence.

## 2. Regional Level (Regional, Departmental, arrondissement)

At the Regional level, Consultative Regional Councils, with some elected members, also, some representative of local communities, and representatives of associations with economic and social importance.

There are Arrondissement, Department and Regional Councils. In the first two, the Government is represented by the Sub-prefects and the Prefects who must be consulted about all actions pertaining to the development of the arrondissement and of the Department. The Regional Council deals with planning of Regional Development and coordinates regional initiatives with national options. It is consulted on matters dealing with regional development programs and Rural Communities' budgets.

The Governor represents the Government in the Regional Council and presents to the Regional Council the National Plan of Development for the Region, programs set up by the Government and by Rural Communities.

Because of the creation of an institutional framework for this purpose, participation leads to better decisions as it guarantees agreement of the population and full efficacy of implementation, since consultation and agreement have been sought a priori.

### C. Content of the Administrative Reform

#### a) Deconcentration: administration structure

These measures increase the power of the heads of administrative units. i) at the level of the "arrondissement": the subprefect, with the Center for Rural Expansion (CER) over which he has authority, promotes rural development. ii) at the level of the Department: the Department is a transmission organ (between the Region and the Rural Communities) where the Prefect has a team of trainers, whose task is to sensitize, to assist and train rural councillors. Coordination at this level is facilitated by the Departmental Committee for development (CDD) who share all departmental technical chiefs, the subprefects and the heads of (CER). iii) at the Regional level, it is the Governor who carries the coordination effort described in i) and ii). The Regional Council and the Regional

Development Committee (the latter, a committee of technicians) assist the Governor in this task, the Governor makes a synthesis between the technical structure and the participation structure.

b) Decentralization: participatory structure.

The Rural Community has "moral personality" and financial autonomy. Each Rural Community elects the Rural Council, of which two-thirds of the members are elected by the people and one-third are representatives of the cooperatives. This Council manages Community affairs. Financial resources come from rural tax (paid by each person) and from other taxes. The income from rural tax is allocated to the financing of local development projects, which are approved and voted for by the Rural Councils.

c) Technical Structure: the (CER) - Center for Rural Expansion

Available to the administrative authorities (Governor, Prefect, Subprefect) are Regional and Departmental technical services, the Representatives meet one a month. The (CER) is at the level of the "arrondissement".

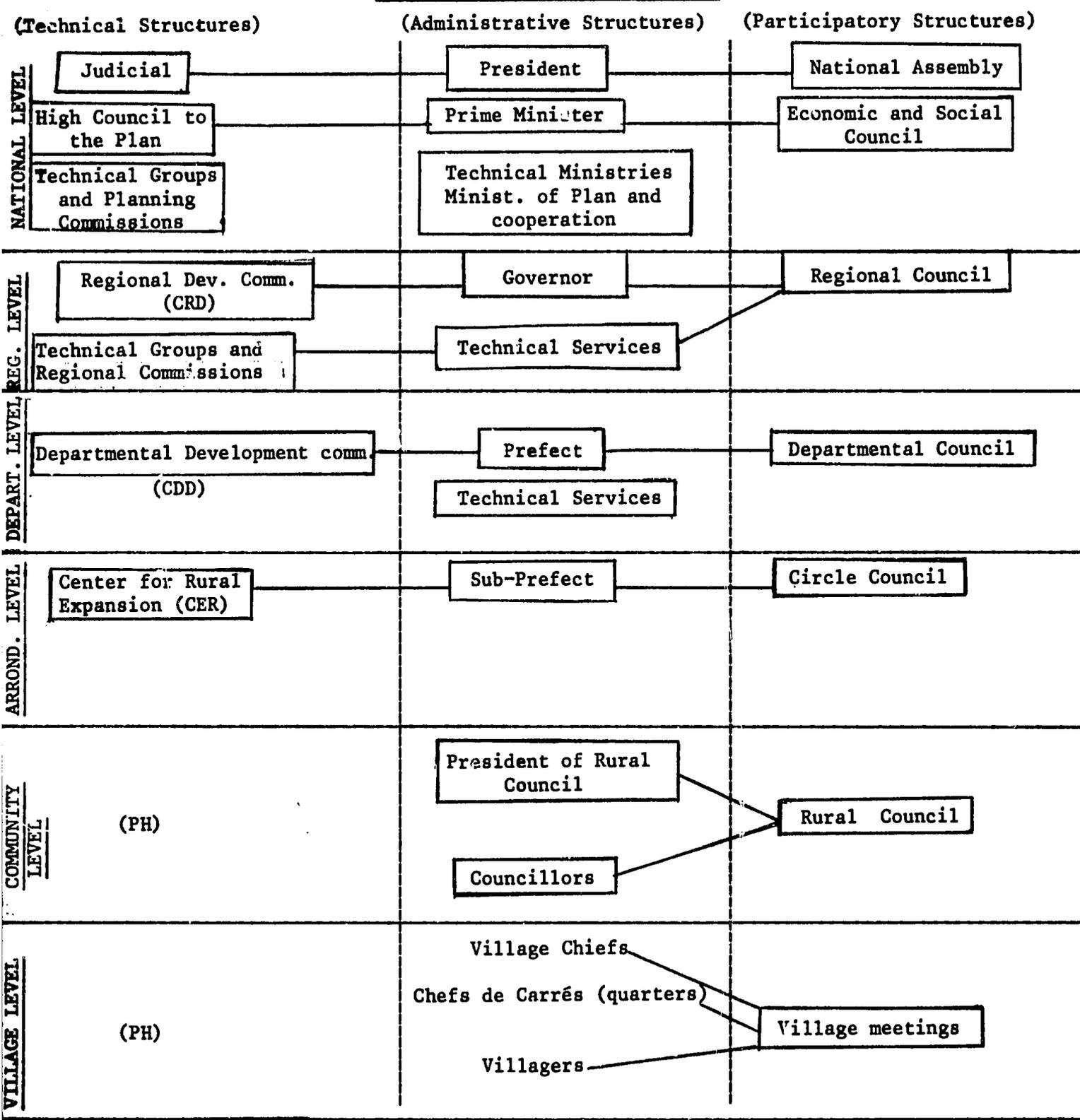
The Center for Rural Expansion is a service which contributes to the economic and social development of the Rural Communities; it is under the technical supervision of the Minister of Rural Development.

It provides technical assistance to the rural populations for the implementation of local development projects. The CER has a budget provided by the national treasury for the implementation of specific projects.

The ideal staff of technicians in the CER is as follows: agriculture, livestock, forests, water resources, cooperation, sanitation, youth and sports, fisheries, and technical education. There are also women who teach home economics. Once a month the head of the CER devises with the members of the team a plan of action.

Finally, the Services of the State Secretariat to "Promotion Humaine" are the vehicle that allows for interpreting the village health program, suggested by villagers.

G O S  
INFRASTRUCTURE



REGIONTechnical StructureRegional Committee  
Development

- Technical Study of Projects
- Assist in regional development Plan
- Assist in Implementation of Regional Development Plan

Territory Administrative  
StructureGovernor

Coordinates and controls Regional services re: economic and social development

Participation  
StructureRegional  
Council

Consultation for advice re: design & Regional Development Plan special requests

DEPARTMENTDepartment Committee  
Development

Technical study projects  
Assists design department in programs  
Exam programs of the C.E.R.'s

Prefect

Coordination and control of Services and Organisms in Department. eg. re: economic development.  
Coordination and control of Government employees in the Department

Department  
Council

Consulted in Practice eg. for setting up Department and Regional Development Program  
- special requests  
- sets level of rural taxes

CIRCLECenter for Rural  
expansion

- Technical study of projects
- Assistance
  1. Implementation of projects
  2. Design and implementation of local projects with rural councils

Sub-Prefect

Coordination; control of civil services in social and economic Development sectors.  
- Assists rural communities and controls Development activities in Regional and local planning

Arrondissement  
Council

Consulted for advice on all actions dealing with investments and development concerning the circle  
- Special request

RURAL COMMUNITY

Technical Structure

Territory Administrative  
Structure

Participation  
Structure

Promotion Humaine

President of Rural Council

Rural Council

1. Technical agr./Production
2. Literacy training
3. Youth training
4. Environmental improvement  
of villages

Implementation of decisions of  
Rural Council

Village Chief

Implements Administrative  
decisions of Rural Councils.  
Support of development action  
decided by Rural Council.  
Collects rural tax and animal  
tax

- Makes decisions  
re: management of  
rural communities  
- Voices opinion  
on all development  
projects concern  
the Rural Communi-  
ties

Rural Population

## ANNEX H

### Health Infrastructure - Ministry of Health Administrative Units

#### Regional Level

In each of the eight Regions, except the newly-created Louga Region, one finds a Regional Hospital which serves as a referral center for the Region and allows for treatment of the serious cases referred by the health facilities of the rural areas.

A study of the role played by Regional Hospitals in the Sine-Saloum (Kaolack) and in the Diourbel Region (Diourbel) shows, in obstetrics, a field that lends itself to quantitative analysis that these hospitals treat only one-fifth of the cases that they normally might treat: the other cases stay at home without receiving vitally needed care.

Taking as an example Kaolack, a 250 bed Regional Hospital, all work is handled by four French medical cooperants and by nurses.

There is (in principle) in each Region a "Communicable Disease Control Service" (Service des Grandes Endemies) which carries out immunization programs. This Service does not provide total coverage of the population. It also does not seem to possess a well defined communicable disease control policy. Vaccine stocks are often exhausted. The Regions of Thies and Sine-Saloum share one immunization team. Responsibilities of these teams in principle cover prevention and surveillance of yellow fever, smallpox, measles, cholera and malaria. A recent WHO study shows that in the countryside immunization reaches only a minority of the number of Sine-Saloum children.

Rural medicine is the responsibility of a Regional Chief Medical Officer, who supervises health Services in the Departments (called "Circonscriptions Medicales" in the Health Services.)

Sine-Saloum's Chief Medical Officer has, in fact, little time for supervision since he directs the "Circonscription Medicale" covering the neighborhood of the Region's main town, Kaolack, has clinical work in the Health Center (Centre de Santé) of Kaolack and is also director of the Kaolack Regional Hospital.

### Departmental Level

Each "Circonscription Medicale" (Department) is equipped with one Health Center (Centre de Sante): this is a small hospital with 20 to 30 beds of which ten are maternity beds. It is directed by a physician, assisted by one or two midwives, and nursing personnel.

The Health Centers are often deteriorated and insufficiently equipped. However, GOS has provided for their renovation and new equipment in its plan.

The Centers have fairly active outpatient clinics; they include some facilities for maternal and child health with clinics for children, nutritional demonstrations and pre-natal care. These maternal and child health activities are developed by a midwife and a physician who visits them occasionally.

### Rural Community Level

Health Posts are rural dispensaries located in the main villages of Rural Communities: in principle each Rural Community should have one Health Post. These are two or three-room buildings with a covered terrace in front; their total surface ranges about 60 to 70 m<sup>2</sup>. Some are new or in good state of repair, some are deteriorated. None have running water and electricity. Water for cleaning and other uses comes from hand-dug wells, ten to twenty meters deep. Some health posts have a well on the premises, others are close to a well, and to others water has to be fetched from a distance.

Ministry of Health plans require in each of these Health Posts:

1. One "Infirmier d'Etat", i.e. a professional male nurse;
2. One auxiliary nurse, called when working in the Health Post an itinerant worker (agent itinerant) because his task is, besides assisting the nurse, to visit the villages of the Community once a month, note all epidemiological problems and report them to the nurse, to teach health education in order to prepare the population for vaccination campaigns, and to advise the population on hygiene matters;

3. a laborer for cleaning and other heavy tasks.

In fact in most Health Posts there is only a nurse. Because of the inadequate medicine supply, the Health Post lacks essential drugs 8 to 9 months out of 12. Patients cease coming to the Health Posts as soon as they are aware of the lack of drugs.

Health Manpower Problems

Physicians: most recent statistics (Dec. 1974) show a total of 281 physicians in Senegal, 119 of whom (42%) are Senegalese. This means one physician for 15,000 inhabitants. National averages should be interpreted in view of the concentration of physicians in Dakar: Cap Vert Region has 3800 persons to a physician while Diourbel has 66,700 to a physician.

Sine-Saloum has 60,300 persons to a physician. 54 of the 281 physicians in Senegal, or 19%, are in private practice and almost all are located in the Dakar area. Of the total of 14 physicians stated to be in the Sine-Saloum area at the end of 1974, two are in private practice, six are being paid under technical assistance contracts, and six are paid by the Government. In the National Budget for 1975/76, the number of physicians listed for payment by the Ministry of Health in the Sine-Saloum area declined to three. All the physicians employed in the hospital at Kaolack are paid under technical assistance; no positions are budgeted by the Ministry of Health. With a decline in the number of physicians to eleven, this gives a ratio of one to every 77,000 persons, making Sine-Saloum the most underserved region. The Medical School at Dakar graduates about 30 students a year, of which ten are Senegalese. Efforts are being made to increase the number of Senegalese students. So far medical positions are limited in the Government budget and no solution is apparent that will soon bring a sufficient number of physicians to staff all the Health Centers in the interior.

Midwives: In 1974 there was a total of 330 midwives in Senegal. Almost two-thirds of these are located in the Cap Vert Region. Sine-Saloum, with 20 percent of Senegal's population, has only eight percent of the midwives. Of the midwives of Sine-Saloum, one source recorded nineteen working for the Ministry of Health, of which twelve worked in rural

areas and seven in the hospital at Kaolack. In addition, there are three midwives working in private practice. Six more are needed in the rural areas.

The state school for midwives, located in Dakar provides a three-year midwifery course. The graduating class consisted of twenty-five students in 1973 and twenty-seven in 1974, all of whom are Senegalese. If a fifth of the students were willing to work in the Sine-Saloum, it would be possible to annually increase the number of midwives employed there by five.

Nurses: Training of professional level nurses ("Infirmiers d'Etat") is given at the Nurses' School of Dakar and lasts for three years. This school has graduated 40 to 50 nurses a year (of both sexes) during the last year.

Training of auxiliary nurses is given in two schools:

(a) St. Louis: which gives a two year training, mainly clinical and gives a diploma of "Agent Sanitaire" which could be translated as "Health Auxiliary". This school occupies an overcrowded old building, and could not take more students. Sixty students (of both sexes) are recruited in the first year; at the end of this first year ten male students enter the school of Khombole. With normal attrition, St. Louis delivers forty to forty-five diplomas at the end of the second year.

(b) Khombole: receives each year from St. Louis ten students who have terminated their first year and provides a one-year course centered around hygiene, nutrition, sanitation, the practice of demographic surveys in villages, and prophylaxis of communicable diseases. At the end of the year the students receive a diploma of "Agent d'Assainissement" (i.e. Auxiliary Sanitarian).

These students appear particularly suitable to ensure the needed contact between villages and Health Posts, i.e. the functions of "itinerant workers". It is unfortunate that budgets have limited the number of students in Khombole to ten per year. The functional title of "Agent Itinerant" is given to graduates of Khombole or St. Louis when they assume their tasks of visiting villages around a rural Health Post. Most national statistics do not distinguish between the professional and the auxiliary. Distribution of nurses in

Senegal is less desperate than for physicians. There are nine nurses per physician or one nurse for 1,700 inhabitants, if one includes both professional and auxiliary nurses under the label "nurse".

Besides these national-level schools, there is in Dakar, a school which trains nurses and midwives for teaching, supervisory and management functions. This school opens its doors to students interested in modern public health perspectives, and has been set up through the communal effort of all francophone countries in West Africa with the WHO's cooperation. It is the "Centre d'Etudes Superieures en Soins Infirmiers" (CESSI). Studies last two years. Each year about thirty degrees are given, of which several are given to Senegalese nationals.

#### Health Services in the Sine-Saloum

The Sine-Saloum Region, with about 850,000 inhabitants, has one Regional Hospital (Kaolack) with 250 beds and six "Circonscriptions Medicales" or Departments; three of these Departments have two health centers:

Gossas: second center at Guinguineo

Foundiougne: second center at Sokone

Kaffrine: second center at Koungheul (80 km from Kaffrine).

The other Departments have one Health Center each. Three physicians are available to operate this network of nine Health Centers with 58 associated Health Posts. The Government plans to add six Health Posts in the near future. If one assumes that it would be desirable to have a physician to supervise the health delivery system in each Department, plus one for overall supervision of the Region, seven physicians would be required. Since each Department has a Health Center, and Departments range in population from about 78,000 in Foundiougne to 176,000 in Kaolack, such a requirement does not seem excessive. Without a physician in each Department, the local nurse or midwife is responsible for all referrals.

Supervision of personnel is minimal; the new Regional Medical Chief has just begun, with WHO cooperation, to provide on-the-job training in supervision to nurse supervisors in the

Departments of Fatick and Kaolack. The idea is to train one supervisor per Department. However, the nurses have limited education and should be under close supervision with constant on-the-job training provided by a Regional Nurse-Supervisor with advanced training, i.e. a CESSI graduate. The Ministry of Health has planned to continue and increase efforts in this direction.

There are 19 midwives listed as employed by the Ministry of Health in Sine-Saloum. There is a total of nine maternities in the six Departments: two in Foundiougne, Gossas and Kaffrine, and one in each of the other departments. It would be useful to have one midwife in an administrative capacity at the regional headquarters. It is desirable that this midwife be a graduate of the Centre d'Etudes Superieures en Soins Infirmiers (CESSI).

If one assumes that two midwives per maternity is a minimal number, one for supervision of all deliveries on a twenty-four hour basis, and another whose primary responsibility would be supervision of matrons, this implies a minimum number of eighteen required for the nine existing maternities. At present twelve midwives are employed with the rural population. Thus at least six more midwives are required.

#### Pharmacies, Drugs and Supplies

The Central Pharmacy Service (PHARMAPPRO), located in Dakar, is responsible for the purchase and distribution of drugs and supplies to the entire MOH system. It is also charged with the inspection of pharmacies attached to private and public establishments. In addition, it is expected to implement the international conventions on narcotic drugs. The funding, organization and manpower available to this unit presently do not permit it to fulfill any of these functions satisfactorily.

The provision of drugs and supplies to the Regions, especially to the rural health system, is particularly weak. The hospitals, who have physicians to speak on their behalf and strong contacts with the Ministry of Health, are able to obtain a larger allocation of the pharmaceutical budget. The Fourth Plan calls for the formation of new regional pharmacies located in Kaolack, Ziguinchor, Tambacounda and Diourbel.

This selective overview of the health infrastructure reveals several problems which are common to all developing countries (or the U.S. to a certain extent, for that matter). In both facilities and manpower there exists a severe maldistribution of resources which favors the capital city and other urban areas at the expense of the rural areas where the majority of the population lives. Severe shortages of manpower exist in almost all the health professions. Supervision is also inadequate.

These conditions will continue to hamper any major expansion of the health delivery system and even if the budget was available, it is not sure that improvements brought forth by remedial work would advance at a faster pace than the rise in demand and population. This is why a solution has to be found that would follow ways different from those of the past and which would use all existing sources and structures - some imperfect, admittedly, but nevertheless openly oriented towards regional development - which the GOS has put in place the past years.

STAFFING PATTERN - SINE SALOUM

OR PRESENTLY BUILT FACILITIES (1976)

	<u>MIDWIVES</u>		<u>R. NURSES</u>		<u>AUXIL. NURSES</u>	
	E.	N.	E.	N.	E.	N.
<u>FATICK</u> 1 Health Center 11 Health Posts	2	1	11	5	14	7
<u>KAOLACK</u> Rural only: 11 H.P.	-	-	10	1	10	1
<u>GOSSAS-GUINGUINEO</u> 2 Health Center 7 Health Posts	3	1	7	2	13	2
<u>FONDIUGNE</u> 2 Health Center 6 Health Posts	2	2	8	3	12	6
<u>NIORO</u> 1 Health Center 8 Health Posts	1	1	2	7	8	8
<u>KAFFRINE</u> 1 Health Center 13 Health Posts	2	2	6	12	8	10
<b>TOTAL</b>	10	7	44	30	65	36

Note: This does not count personnel in Kaolack neither at the Regional hospital nor at Kazenak Health Center.

## ANNEX I

### THE STATE SECRETARIAT OF "PROMOTION HUMAINE"

The Agency chosen to sensitize villages to the Project, and to integrate health into the general development efforts of the Rural Communities through non-formal education is the "Secrétariat à la Promotion Humaine" (Secretariat for Human Advancement, referred to hereafter as Promotion Humaine).

#### a. Background

There has arisen in Senegal over the past 15 years a series of programs designed to alleviate in various ways the shortcomings of Senegal's schools and agriculture extension systems. The time-consuming and expensive task of reforming the state school system to more adequately address the needs of the rural areas was initiated in 1971. Many years will pass before the schools in Senegal become a more effective means to raise the rural literacy rate, improve nutrition, improve health, and increase employment opportunities. Similarly, the extension services remain oriented in the formal tradition towards the delivery of special knowledge and techniques. Senegal's extension services are not yet staffed with personnel of solid technical backgrounds who are at the same time practiced in teaching organizational skills.

To compensate for these deficiencies, various programs have emerged in Senegal since 1960, each independent of the others in conception and in source of financial support.

- The oldest of these programs is Animation Rurale, an agency of GOS since independence in the community-development style of the anglophone areas. Animation Rurale was established to help local people to organize themselves and, with the help of GOS regular technical advisors, to make needed community changes.
- Sometime later, the Maison Familiale program, adapted from France, took root in Senegal, offering practical training to rural men and women in 15-25 year age group.
- More recently, a literacy program, still in fledgling form, has set up a national office in Dakar, and has begun to offer literacy training on a special request basis, mostly thus far in industry.

- Ten years ago, the I.L.O. assisted in the establishment of the Rural Professional Training program for the training of rural artisans, builders, "pilot" farmers, and fishermen. (I.L.O. support for this program terminated in 1975 under the I.L.O.'s ten-year rule for maximum duration of support).
- Most recently, the Practical Middle-level Training program (EMP) was founded, designed principally for the 80% of primary school graduates who do not gain entry to secondary school. This program recently received US\$ 3 million in support from the IBRD to build and equip the first 30 EMP centers under a careful program of phased expansion.

Given their common objectives and their independent origins, these programs overlapped each other to a certain extent. In an effort to coordinate rural training programs, the GOS in 1973 brought these five activities together within the same bureau, entitled Promotion Humaine. Early in 1975, Pro-motion Humaine became a State Secretariat, and formally attached to the Ministry of Education.

b. Prior A.I.D. involvement with Promotion Humaine.

A major objective of the Development Assistance Plan (DAP) team which visited Senegal in October-November 1974 was to recommend ways in which A.I.D. could assist with the development of human resources in the rural areas, in order to compensate for the deficiencies of the present education and extension systems. Following a survey of Promotion Humaine activities, the DAP team recommended in its report (March, 1975) that A.I.D. should consider long-term support to Promotion Humaine. The major premise upon which A.I.D. should be based, the report clarified, should be Promotion Humaine's capabilities to work closely with the agriculture, health, livestock and education services in preparing rural people to raise their standards of living.

To encourage Promotion Humaine and the technical services to work in a complementary fashion, the DAP report suggested that A.I.D. should begin its assistance to Promotion Humaine

in a modest way. The DAP specifically recommended that A.I.D. approve supplemental appropriations to ensure Promotion Humaine participation in the two medium-term food production projects authorized by A.I.D. in December 1974.

Promotion Humaine authorities welcomed this recommendation, believing that the two medium-term projects would present an opportunity to demonstrate the value of their activities.

Acting upon the DAP recommendation, AID has provided an American advisor to Promotion Humaine on a short-term assignment. His primary task has been to assist in the design of the Promotion Humaine components for the two projects. The continuation of his advisory services over the next two year period, in helping to ensure the proper implementation of these activities, is an important addition.

In 1975 and 1976 Promotion Humaine has been brought into the AID Cereals and Livestock projects with considerable degree of success.

## ANNEX J

### PEACE CORPS INFORMATION

#### Assumptions

2 PCV's will arrive in July of 1977 and will train until the end of Sept. 1977. Their probable backgrounds will be in business/management. It is assumed that at the latest they would be on the job by Oct. 1, 1977. There is no sex requirement; volunteers can be either male or female. Married couples would also be acceptable. Jobs for NMS available in same or associated skill area i.e. health management, business-accounting.

#### Ministerial responsibility

The whole Project, including the PCV's, will function under an accord with the Ministry of Health. The implementation of the Project will be accomplished through a regional committee responsible for the execution of the project.

#### Living + working conditions

One PCV will live in Kaolack (pop. 100,000) and one in Fatick (pop. 13,000), both within 2-2 1/2 hours drive of Dakar, 1-1 1/2 hours drive to beaches. Western-type housing with water and electricity can be obtained; shops and restaurants carrying Western-type foods are available. PCV's will spend at least 50% of time in villages, but will normally return home every night. PCV's will move with counterparts in cars provided by the Project. The job requires working with the several national agencies and USAID personal

#### PC Involvement

PC will field six volunteers - one per Department - for 2-year assignments, in measure that Project activity expands in the various Departments: 2 PCV's will commence their in-country training in July 1977, 2 in March 1978 and 2 in March 1979.

#### Supervision and counterparts

The PCV will report to the Project Manager. His counterparts would be the 2-member Ministry of Health department supervision team and the 2-member Promotion Humaine departmental animation team. Each of these teams will have a light vehicle supplied by the Project.

#### Duties of PCV

- i) collaborate with the PH departmental team to assure animation of the Rural Community Councils as programmed;
- ii) collaborate with the MOH departmental supervision team to assure the unfolding of the VHW training courses and the supervision of the itinerant agents as programmed.
- iii) collaborate with the Rural Community Councils to assure the restocking of health huts with medicines as required;

- iv) maintain the Governor's Deputy for Development informed of the progress of the Project in the various departments.  
The PCV will report to the Project Manager. The counterparts to each PCV will be the MOH and PH department-level teams in the Department the PCV will be assigned to.

Character traits required

Ability to get along with people; natural leadership (being able to move local persons to hold meetings, organize training sessions, procure supplies, build huts etc., without having a direct authority over them); organization abilities; responsibility; patience; persistence; willingness to work hard; tact; ability to bring people forward to assume responsibilities; penchant to get things done.

Experience and skills

Leadership and organization experience (in youth movements, church, clubs etc.); bookkeeping experience desirable.

Abilities not required

Medical knowledge.

Language capabilities

PCV's should be conversant in French (2 years of College French or 4 years of high school French or 2 years of living in France), and should be able to read documents and write simple letters and instructions in French. They should be willing to be trained on the Project in speaking one local language (Wolof or Serer).

Daily tasks of PCV

1. Plan work with his national counterparts (Promotion Humaine and Ministry of Health Department supervisors).
2. Drive with Promotion Humaine departmental team to village meeting to assure Community Council active involvement in the Project: selection of candidates for village health worker training, construction of health huts, etc;  
or
3. Drive with Ministry of Health departmental supervisory teams to training sessions of village health workers to assure their satisfactory development; or
4. Drive to Dakar, Kaolack and the villages to assure the arrival of Project equipment and medicines to the health huts; or
5. Assist Rural Community Councillors in keeping check on medicines dispensed

- and monies received at the health huts, and accompany them to reordering of medicines and restocking of health huts.
6. Maintain the Governor's Deputy for Development informed of the Project progress in the Department and of problems encountered.

## ANNEX E. JOB DESCRIPTIONS

### A. Village Health Workers

#### 1. Village First-Aid Man

##### Duties:

(i) management of Village Health Hut: diagnosis and treatment of the most common ailments (esp. malaria, diarrhea, conjunctivitis, headaches, cough, anemia, worms, scabies) with basic cures; treatment of simple wounds; administration of records and payments; re-ordering of stocks; cleaning of hut;

(ii) collaboration with Itinerant Worker on village surveys;

(iii) referral of more serious cases to the Health Post;

(iv) cooperation with Village Chief in civil registration (births, deaths);

(v) collaboration in vaccination campaigns;

(vi) explanation to the villagers of causes of and methods of avoiding the most common diseases;

(vii) collaboration with the Village Matron and the Village Sanitarian.

The Village First-Aid Man will be monitored by the Itinerant Agent. He should be literate. He will receive about 24 days (4 weeks) of training spread over 4 months.

#### 2. Village Matron

##### Duties (regarding village women):

(i) detection of pregnancies and referral of women with potential delivery problems to the Health Post Matron;

(ii) assistance during deliveries;

(iii) orientation in personal hygiene and methods of avoiding children's diseases;

(iv) nutritional education (including teaching the value of vegetable garden);

(v) orientation in family planning;

(vi) collaboration with the Village First-aid Man and the Village Sanitarian.

The Village Matron will be monitored by the Itinerant Agent, and periodically by the Health Post Matron. She will receive 12 days (2 weeks) of training spread over 2 months.

### 3. Village Sanitarian

#### Duties:

(i) organization of volunteer work gangs for environmental sanitation tasks (digging latrines, refuse pits, wastewater ditches, etc.);

(ii) education regarding individual hygiene;

(iii) collaboration with the Village First-aid Man and the Village Matron.

The Village Sanitarian (typically a young man of 18 to 28 years) will be monitored by the Itinerant Agent. He will receive about 12 days (2 weeks) of training spread over 2 months.

### B. Health Post Cadres

#### 1. Itinerant Agent

##### Duties:

(i) conduct training courses for VHW's, especially for Village Sanitarians;

(ii) monitor regularly the activities of the VHW's and the functioning of the Health Hut;

(iii) refer more serious cases to the Health Post and evacuate them to the HP if necessary;

(iv) participate in vaccination campaigns;

(v) supervise the registration of births, deaths and pertinent health statistics;

(vi) conduct in the villages talks regarding means of disease prevention, environmental and personal hygiene, nutritional education and family planning;

(viii) promote village environmental sanitation projects.

The Itinerant Agent will normally be a Khombole graduate who will receive a 4-week in-service training course spread over 4 months. He will be supervised by the Department Health supervision team.

## 2. Health Post Chief

### Duties:

(i) give persons who seek medical aid the treatment which he is authorized and equipped to administer;

(ii) refer more serious cases to the Health Center;

(iii) supervise the activities of the Itinerant Agent, Health Post Matron and Orderly;

(iv) be responsible for the satisfactory functioning of the Health Post.

The Health Post Chief will normally be a male Registered Nurse who will receive a 4-week in-service training course spread over 4 months. He will be supervised by the Department Health Supervision Team.

## 3. Health Post Matron

### Duties:

(i) assist women who live in the vicinity of the Health Post and those referred by the village matrons during deliveries;

(ii) refer more complicated cases to the Health Center;

(iii) periodically orient the village matrons in their activities, in collaboration with the Itinerant Agent;

(iv) participate in the Maternal and Child Health Clinics held at the health post with participation of the Health Center Midwife;

(v) orient village women in personal hygiene, methods of avoiding children's diseases, nutritional education and family planning.

The Health Post Matron is a local woman, usually fairly young and literate, who undergoes a 90-day training course in the Health Center. She is not a functionary, but is compensated by the community for her activities. Several matrons keep duty in rotation in the maternity associated with the Health Post.

#### 4. Orderly

##### Duties:

(i) be responsible for the cleanliness of the Health Post;

(ii) assist the Health Post Chief in certain routine tasks such as dressing;

(iii) be responsible, with cooperation of the villagers, for the upkeep of the horse provided to the Itinerant Agent.

The Orderly will be an unskilled worker who will be supervised by the Health Post Chief.

#### C. Supervisery Cadres

##### 1. National Project Director

The National Project Director will be the Chief Medical Officer of the Sine-Saloum Region.

Duties:

- (i) take all measures necessary for the execution of the project following the program approved by the Project Executive Committee;
- (ii) inspect and evaluate project progress;
- (iii) report to the Minister of Public Health.

The counterpart to the National Project Director would be the Project Co-Director (USAID contract).

2. Regional Supervisory Team

This team will consist of 1 CESSI-trained Registered Nurse specialized in treatment of diseases, 1 CESSI R.N. specialized in maternal and child health, and 1 Khombole-trained sanitary agent.

Duties:

- (i) compose manuals for VHW training and for training the trainers;
- (ii) conduct (in the Health Centers) courses to train the Health Post personnel and the departmental supervisory teams in the subject matters and the pedagogical methods required for training VHW's;
- (iii) supervise the departmental supervisory teams, and supervise together with them the health posts, to assure the training of VHW's and the functioning of health huts as programmed.

The Regional Supervision Team will constitute the counterpart of the expatriate Public Health Adviser. They will be supervised by the Chief Regional Medical Officer and by his expatriate counterpart, the Project Co-Director.

### 3. Departmental Supervisory Teams

Each of the 6 Departmental Supervisory Teams will be composed of 2 full-time supervisors, being 2 Registered Nurses (1 man, 1 woman), or 1 Registered Nurse and 1 Khombole Sanitary Agent.

#### Duties:

(i) assure that the training of VHW's by the Health Post personnel proceeds according to program and is satisfactory as to contents and presentation methods;

(ii) retrain the Health Post personnel on the job as necessary to accomplish satisfactorily the training of VHW's;

(iii) undertake the training of VHW's directly where this activity cannot be satisfactorily accomplished by the Health Post personnel;

(iv) be ultimately responsible for the initial stocking of health huts with medicines and supplies and their satisfactory functioning;

(v) report regularly to Regional Supervision Team and Project Directors regarding project progress.

The Departmental Supervisory Team will be drawn from the present staff of the Health Centers. They will be given a 4-week training course spread over a period of 4 months together with the Health Post workers, and additional training in management and supervision methods. They will be directed by the Regional Supervisory Team.

### 4. "Promotion Humaine" Animation Team

This team (one per Department) will be composed of 2 full-time Promotion Humaine Department-level instructrices or adjoints d'animation, supplemented by others as necessary.

Duties:

(i) organize an intensive initial series of meetings of the Rural Community Councils to let them express their priorities and desires regarding health services, select candidates for VHW training, determine the mode of VHW compensation by the villagers, and assure the construction of the health huts and literacy hut;

(ii) organize Rural Community Councils meetings on a continuing basis to elicit the voting of Rural Community Funds for project maintenance and expansion, assure necessary participation by the villagers, and obtain other actions by the villagers necessary for the continued satisfactory functioning of the health huts.

The Promotion Humaine Department-level animation teams will be supervised by the Promotion Humaine Regional Inspector or his deputy. They will undergo a 2-4 week health course, similar to that offered to the VHW's, to assure their understanding of the type of training given to VHW's and thus facilitate their communication with MOH personnel and Rural Community Councillors.

5. "Promotion Humaine" Literacy Instructors

These instructors (one per Rural Community) will be responsible for the literacy training of those Rural Community Councillors and VHW's who are not literate at present, to assure their useful functioning in the project.

Duties:

(i) conduct classes for Rural Community Councillors and VHW's (three times a week, seven months per year) in reading, writing and arithmetic.

The Literacy Instructors will be Brevet holders from the community, who will be trained for their task through a 30-day course. They will be supervised by the Promotion Humaine regional-level Literacy Supervisor.

D. Expatriate Cadres

1. Public Health Advisor (Administration)

Administration having expertise to assist GOS in:

- a. Planning
- b. Managing
- c. Implementation

Duties:

(i) assist in the execution of the project by the agencies involved (MOH, PH, regional and local authorities);

(ii) assist in coordinating activities with GOS, donor countries, PCV, etc.;

(iii) assist GOS project leader in data collection, reports and monitoring;

(iv) assist in logistical support ability to assure a steady supply of equipment and medicines to the project;

(v) deliver regular progress reports to USAID as required.

2. Public Health Advisor (Training)

Specialty

Health Training

Duties:

(i) assist in organizing in-service training courses and prepare curricula for the multi-level personnel to be trained;

(ii) advise the Khombole school on design of curricular to assure its graduates will be optimally trained as itinerant agents;

(iii) assist in preparing manuals;

(iv) assist in training trainers, coordinate training activities with PCV's;

(v) assist in implementing training and supervisory programs:

- a. Improve programs
- b. Upgrade programs and training

Note: This specialist should be on site early on training trainers and curricula preparation should run parallel to preparing teaching/training centers.

3. Public Health Advisor (Education)

Specialty

Health Educator with expertise in community development.

Duties:

(i) assist in effective supervision of the VHW training, the functioning of the health huts and the activities of the itinerant agents by the departmental supervision teams;

(ii) assist in the development and implementation of a health education program and services for the region;

(iii) assist in the development and implementation of village community health committees;

(iv) assist in the development of community self-help projects (i.e., sanitation, nutrition, water, sewage, vector control, etc.);

(v) assist in encouraging family planning activities.

- a. Teaching
- b. Referring
- c. Motivating

(vi) coordinate activities with PCV's

- a. Resource
- b. Backstop

#### 4. Peace Corps Volunteers

##### Duties:

To assist the Department level teams (Ministry of Health and Promotion Humaine) in their duties; to assess the effectiveness of these teams and the adequateness of their training; to assist in the redefining of roles and training programs as necessary.

The project aims to train village health workers in basic health and nutrition, first aid, and sanitation in some 600 villages in the Sine Saloum region. There would be three village health workers (VHW's) in each village; a first aid attendant, a village mid-wife/nutritionist, and a sanitarian.

The project would provide backstopping and supervision through the upgrading of services provided by the Health Post personnel at the "Rural Community" level (groupings of villages) and at the Department Level.

The Health Post personnel would have the most direct contact with the VHW's. They would be responsible for the training, supervision and support of the VHW's and provide referral services for the cases beyond the competence of the VHW. A Health Post team should ideally consist of a nurse, an auxiliary sanitarian, a matronne (local mid-wife) and an orderly. Each of these persons would, under the project, receive in-service training to enable them to undertake the new responsibilities.

There would be two "teams" at the Department Level. A Promotion Humaine team would establish the initial contact with the villages and organize community level meetings to assure community participation. A Health team would provide supervision and backstopping to the Health Post personnel. Both these teams would, under the project, receive in-service training in basic health, management and pedagogy.

A literacy team from Promotion Humaine would also prepare qualified villagers to monitor functional literacy training of VHW's and other key community members.

A Regional team would be primarily responsible for the training of the Health and Promotion Humaine personnel and the preparing of training materials.

A National Project Director and an USAID Project Co-Director would be responsible for the final execution and supervision of the project.

The project has a four year life-span and is divided into three phases. There are six departments in the Sine Saloum Region. Two of these departments will be developed per phase, with time allowed for a final evaluation.

The PVCs' will be assigned to the Ministry of Health and will work with the department level teams, in one or two departments. Project work should begin in the Kaolack department in mid 1977 and be ready to move to the second department when the PCVs' enter service. The PCVs' would accompany the Kaolack teams in their activities for a certain period of time, before beginning the development of the new departmental teams.

A description of tasks will be assigned to the teams but the PCV's duties will be to collaborate with the teams and the Project Directors in redefining these as necessary. If timely, the CV's should participate in the training of the Department level teams so they can offer suggestions as the adequateness of the training.

The PCV's will assist both teams in the performance of their duties. These would include, but not limited, to the following:

- According to the schedule of the Health Post Personnel, assist in visits to the village health units. During these visits, there would be a review of the techniques followed and records kept by the VHW, visits to villagers under medical surveillance (e.g., an undernourished child, a burn victim), observance of work done in a sanitation project, or assisting in a village health meeting. These would be frequent in the beginning, becoming less so as the need decreases.

- Assist in training courses given to VHW's by Health Post personnel. Assess appropriateness of training and materials as measured by effectiveness of VHW's in their activities.

- Assist Promotion Humaine team in community meetings to elicit community interest and support.

- Assist in modifying training materials as needed.

- Assist Health Post personnel in the initial stocking of village pharmacies and in setting-up of record keeping systems.

- Assist in the gathering of bench-line data and in on-going evaluations.

- Collaborate with members of teams, at all levels and report regularly to the Regional team and Project Directors.

The PCVs' will work primarily in the development of the new Department Level teams. On arrival, the PCV's should spend at least one month observing the Kaolack teams, to be able to offer valid suggestions for the activities of the new teams. If possible, the PCV's would also work with the Kaolack teams. This would be decided upon by the willingness of the Kaolack teams to work in cooperation with PCVs'. Experience has shown that it is often difficult for relatively inexperienced PCVs' to integrate themselves into the activities of an experienced group, jealous of their accomplishments.

Details to be included in PCV training are outlined further. However, the need for a fluency in French and the ability to perform in a new and developing program must be stressed. The PCV's will be working with comparatively well-educated Senegalese, many of whom have had at least three years of medical training. People of the medical profession are often jealous of their position and not open to accepting outsiders. French proficiency will mean just one less barrier to fruitful cooperation.

Training:

Language: French and Wolof or Serrer

Cross-Cultural background, social and administrative systems.

Knowledge of Government Administration, mainly of MOH and PH; hierarchy and protocol to be respected; training received by personnel.

Basic knowledge of nutritional habits, health and sanitation habits, MCF.

- recognize most common diseases and ailments of infants and adults.

- recognize and be able to use local foods in a nutrition manner.

- be familiar with the first aid techniques practiced by the VHW's.

- recognize major village sanitation problems and practical Pedagogy Techniques solutions.

- methods of introducing new ideas on a village level, and encouraging community participation and organization.

- methods of encouraging health personnel (health post and department level) to evaluate their activities and modify as necessary.

- Understand evaluation systems used to measure effectiveness of project.

- visit (1 week) to Kaolack and Fatick to locate and define responsibility of involved agencies, visit villages and health posts to acquaint them with environment and personnel.

Working Conditions:

The PCVs' will live in a village near the department seat they will be working from. Transportation for work will be provided through Project-funded cars, one per department team. USAID will also provide mobyettes for the PCVs' to allow them to commute to their villages and to make unofficial visits to neighboring villages. The PCVs' will be travelling about 50% of their time, but will generally be able to return home in the evening. It will be left to the PCVs' to decide with the Project Directors the best method of dividing the work load.

Certification Pursuant to Section 611(e) of  
The Foreign Assistance Act of 1961, As Amended

I, Norman Schoonover, the principal officer of the Agency for International Development in Senegal, having taken into account, among other factors, the maintenance and utilization of projects in Senegal previously financed or assisted by the United States, do hereby certify that in my judgment Senegal has both the financial capability to effectively maintain and utilize the grant assistance project for the provision of rural health services titled: Rural Health.

For *John H. [Signature]* Acting RDO  
Norman Schoonover  
Regional Development Officer  
USAID/Senegal

## ANNEX M

### PROJECT DESCRIPTION FOR PROJECT AGREEMENT

The present Government of Senegal's health delivery system serves primarily the urban centers and lacks the infrastructure needed to penetrate the rural areas. The Health Post is the last link to the health system as little and no care extends into the village except in one or two demonstration centers where mobile health teams make a circuit over limited areas.

This project which will extend over the period of FY 1977/FY 1980 will create within the region of Sine Saloum a network of staffed village posts to be supported by the local communities and a strengthened backstopping system for secondary health posts, supported by the National Government. Specifically, it provides for the construction of 600 village health huts, the training of 1800 village health workers (VHW's), the establishment for providing medicines to village huts, the renovation of 56 existing secondary health posts, and the construction of 21 new secondary health posts. In addition it provides for the retraining of 237 medical and paramedical personnel through in-service training and the strengthening of the training infrastructure of the Khombole Sanitation School.

This four year project which includes a six month end-of-project surveillance and evaluation period, will have an initial target group of the rural population of Sine-Saloum numbering 600,000 people scattered over an area of 23,945 square kilometers. At the end of the project it is anticipated that the region will have basic health coverage in the rural areas at the rate of one village worker for 600 inhabitants and one Health Post per 10,000 - 12,000 inhabitants. The Project provides for adequate physical infrastructure at level of secondary health post, as well as a full complement of health post personnel in each post i.e. 1 Registered Nurse, 1 sanitarian and 1 orderly. In addition, one matron with basic midwifery training, and compensated by the Community for services rendered, is present in the health posts. One of the health posts personnel will be designated as an Itinerant Worker (usually the sanitarian) who will provide technical backstopping by visiting every month each of the village health huts in his area.

A base line health survey will be done at the beginning of the project which will provide the basis for subsequent evaluations. The activities under this project will be carried out by the Ministry of Health, Promotion Humaine, Génie Rural, the communities, Peace Corps and USAID.

The Ministry of Health (MOH) will staff 21 new health posts, making a total of 79 health posts which are to be operative at the end of the project. The MOH health post staff will train the village health workers through a series of sessions at the health post. After training of the village health workers is completed, the itinerant workers will undertake ongoing advisory support. The MOH will, in addition, upgrade the teaching program at the Khombole Sanitation School to a two-year curriculum and provide 40 graduates for the project's requirements over a period of four years. The MOH will also ensure through normal channels availability of medicines for village

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(continues next page)

The MOH will designate one of its cadre as Project Co-director, to be based in Kaolack and work with other participating agencies. (A regional training team, personnel provided by MOH, will work under the direction of the project management). In addition, each Department will have a MOH Departmental Supervision team which will monitor the training of village health workers and the activities of the itinerant agents.

The State Secretariat of Promotion Humaine (PH) will, through each of its six Departmental-level teams in Sine-Saloum, conduct a series of assemblies with the Rural Community councils to assure each Community's active involvement on the Project through their selection of village health workers, the construction of health facilities (huts) and the management of medicine restocking system. Promotion Humaine instructors will also undertake literacy training of Rural Community councilors who are to be involved in the administration of the Project on a local level.

The Rural Engineering Service (Génie Rural) will participate in the Project through the construction of 21 new health posts. Its assistance will also be required for the renovation of 56 existing health posts.

The Rural Communities' participation will consist of:  
the selection of village health workers; the construction of a village health huts; the management of the sale of basic medicines at cost and the subsequent re-stocking of same. Each village health hut will be staffed by:

- a first-aid man, who will dress wounds and administer medicines for the most common ailments.
- a midwife, who will assist village women during pregnancy, at delivery and with child-care; and
- a young man, who will organize sanitation activities (latrines, refuse pits, drainage ditches, etc).

Throughout project life the major emphasis will be placed upon the training of the village health workers, as well as on the in-service training of Health Post staff. Additional training is to be provided via the Khombole School and others to increase and improve the compliment of skill areas available in the health sector in Sine-Saloum.

The villages will provide support for their VHW's, construct their health huts and in return will have access to health services, medicines and referral services. The medicines, although purchased by the villages' patients, would be in continuous cycle of services, medicines, and extension of medical services and knowledge will be established in this model rural health delivery project.

The GOS will assume additional costs for required personnel, project construction and recurrent budgetary expenditures; these costs will represent a minor proportion of the current MOH budget.

The Peace Corps will provide 6 volunteers who will participate in the project at village and higher levels to facilitate training and achievement of project goals.

USAID will finance a US. Project Manager, a US Public Health Advisor and associated Senegalese support staff; costs for renovation of 56 existing health posts; equipment of the health posts; materials for construction of village health facilities (huts); equipment for village health huts and initial stock of basic medicines; 17 low cost vehicles; and 79 horses and buggies for health post itinerant workers' transportation.

The field action elements of the project have been phased, each of three phases addressing two departments in the region. This will allow adequate opportunity for modification in project implementation without substantial loss of time or resources and will permit the respective ministries involved in the project a more rational use of their scarce manpower.

The first phase of field action, beginning in the spring of 1977, will involve the Departments of Kaolack and Fatick. These departments have been chosen because they presently have the most complete infrastructure and personnel of the entire region. Field action elements affecting the phase one departments (including sensitization of villagers by Promotion Humaine selection and training of supervisory teams and health post personnel by the MOH, construction of health post by the GOS and village health huts by villagers, and training of village workers) will extend through May, 1978 when the village health workers will be fielded. (Re-training and supervision of village health workers continues on a periodic basis; literacy training extends for an additional year).

An assessment of the progress made under Phase I can be made toward the end of 1977 to determine the adequacy of the participation of the GOS technical ministries and the receptivity of the villagers to project concepts. Modifications and changes in the program and in the work plan can be made in sufficient time to allow them to be incorporated into phases 2 and 3.

Assuming no major changes are required, the second phase departments (Foundiougne and Gossas) would be introduced to the project in the spring of 1978. Village health workers would be fielded in May 1979.

The same assessment cycle would obtain for the third phase departments, with Nioro and Kaffrine, beginning in the spring of 1980 and village health workers finally being fielded in May 1980.

ANNEX O - DRAFT GRANT AUTHORIZATION

AID Grant Number:

Provided from : Population Planning and Health  
Senegal : Sine Saloum Rural Health

Pursuant to the authority vested in the Administrator of the Agency for International Development by the Foreign Assistance Act of 1961 (the "Act"), as amended, and the delegations of authority thereunder, I hereby authorize a Grant to the Government of Senegal in the amount of THREE MILLION FOUR HUNDRED AND THIRTY FIVE THOUSAND dollars (\$3,435,000). The Grant shall be used to assist in financing the foreign exchange and local currency costs involved in implementing a project for the delivery of basic health services to the rural population of the Sine Saloum Region. It will be used to finance training, medicine, construction/reparation of facilities, medical equipment, vehicles and technical assistance.

The Grant is subject to the following conditions:

1. Source and Origin

a. Except as hereinafter provided, goods and services financed under the Grant shall have their source and origin in countries included in Code 941 of the AID Geographic Code Book or in Senegal.

b. Based on justification given in the project paper, vehicles shall have their source and origin in countries included in Code 935 of the AID Geographic Code Book. Certain equipment of Code 935 origin for the Khombole School will be purchased locally as shelf items.

2. Competitive Procurement

All procurement of goods and services shall be competitive according to normal AID regulations.

3. The Grant shall be subject to such other terms and conditions as AID may deem advisable.

\_\_\_\_\_  
Administrator

Date \_\_\_\_\_

MINISTRE DE LA SANTE PUBLIQUE  
ET DES AFFAIRES SOCIALES

Annex 0

Dakar, le 24 JUIL. 1975

*File*

*Le Ministre de la Santé Publique et des Affaires Sociales*

Action No: 2405 Roo

Action prise: Date 4/29/75

Jur: litar TOAID A-

NAN: \_\_\_\_\_ : Other: \_\_\_\_\_

Chron. file: With/WD Attachments

Monsieur le Directeur du Bureau  
Régional de l'W.S.A.I.D.  
B.P. n° 49

**DAKAR**

**OBJET** : Santé Rurale au Sénégal programme de l'USAID.

**REFERENCE** : Votre lettre du 9. 7. 75.

Monsieur le Directeur,

Le Docteur May de votre organisation, avait participé effectivement en Avril - Mai 1975 au sein de mon Département à l'élaboration d'un programme de santé rurale auquel j'attache le plus grand intérêt.

C'est avec beaucoup de peine que nous apprenons la disparition tragique du Docteur May dont la foi et le dynamisme au travail constituait déjà des gages de réussite.

Je vous remercie bien sincèrement et j'exprime toute la gratitude du Gouvernement à l'USAID pour la ferme volonté exprimée dans votre lettre de poursuivre le programme malgré la perte du Docteur May. Je vous serais reconnaissant de toutes les informations que vous pourrez me faire parvenir à ce sujet.

Veuillez agréer, Monsieur le Directeur, l'assurance de ma considération distinguée.-



*[Signature]*  
Docteur Victor Niang

OCT 04 1978 info: KALACK DE

30 SEP. 1978

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RÉPUBLIQUE DU SENEGAL

Annex 0

Page 2

RÉGION DU SINE - SALOUM

LE GOUVERNEUR DE LA RÉGION DU SINE SALOUM

N° ..... GR

OBJET

Observations et suggestions  
du projet santé de base au  
Sine Saloum

A Monsieur le DIRECTEUR de l'O.S.A.I.D. Bureau  
REGIONAL du DEVELOPPEMENT - AMBASSADE des ETATS-UNIS  
d'AMERIQUE B.P. 49  
DAKAR

**N° 02851**

Je vous accuse réception et vous remercie du projet de santé de base, qui m'est bien parvenu. L'étude approfondie du projet nous inspire les quelques observations suivantes :

Après six mois d'investigation, votre expert en matière sanitaire, le Docteur VINCENT a mis sur pied un projet de santé de base en collaboration avec les services techniques de la Région du Sine Saloum. Ce projet complète un ensemble d'actions sanitaires déjà entreprises par l'Etat et l'UNICEF. Il s'insère harmonieusement dans la logique de la Réforme administrative qui permet aux collectivités décentralisées d'exprimer leurs besoins réels, de participer à leur réalisation, d'évaluer et de contrôler leurs programmes de développement.

Le projet sera entièrement coordonné par un comité régional d'exécution TECHNIQUE et financière placé sous la responsabilité du Gouverneur assisté de son Adjoint au Développement, des services de santé et de la promotion humaine. Ainsi serait assuré un dialogue fructueux entre les niveaux national et régional. Ici, nous rejoignons les préoccupations du projet dans son chapitre intitulé "Conditions préalables du Projet".

L'utilisation des moyens humains et financiers fera l'objet d'une programmation arrêtée par le comité exécutif qui rendra compte régulièrement de ses activités à l'organisme d'assistance et à l'échelon central.

Dans la pratique de la gestion des projets de Nganda et de l'UNICEF, un problème de prise en charge des dépenses du comité exécutif régional s'est toujours posé. Pour une supervision efficace du projet, il serait souhaitable que soient prévus les frais de fonctionnement destinés à couvrir les postes de dépenses de supervision, de correspondances et d'hébergement des missions extérieures qui seront amenées à visiter le projet. L'ensemble de ces frais est évalué à 6 millions de francs CFA (six millions de francs).

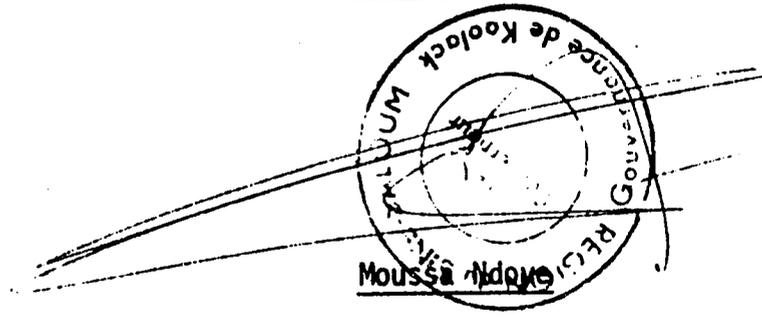
Le principe de la création d'une caisse régie prévu par le projet est excellent. Placée au niveau du Gouverneur de Région cette institution lui donnerait plus de souplesse et de célérité dans l'action.

En dehors de ces quelques observations qui ne vous échappent certainement pas, le projet reçoit dans son ensemble notre parfait accord.

.../... 132

Tout en vous remerciant une fois de plus de l'intérêt constant que vous portez au développement de nos collectivités de base, nous vous assurons Monsieur le Directeur, de notre engagement et de notre entière disponibilité pour la réussite de ce projet./-

Le Gouverneur de Région



ANNEX P

Initial Environmental Examination

Project Location: Senegal, specifically the Sine Saloum Region

Project Title: Rural Health

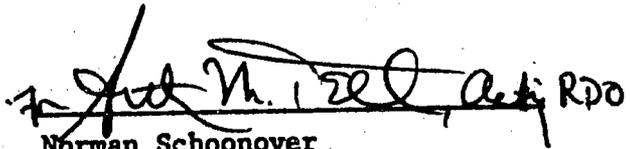
Funding: \$3,435,000

Life of Project: Four Years (FY 1977-FY 1980)

IEE Prepared by: Marc Vincent

Date: 9 March, 1977

Environmental Action Recommended: Negative Determination



Norman Schoonover  
Regional Development Officer  
USAID/Senegal

Date: March 1977

Assistant Administrator Decision: Approval \_\_\_\_\_

Disapproval \_\_\_\_\_

\_\_\_\_\_  
Date: \_\_\_\_\_

## Initial Environmental Examination

### I. Examination of Nature, Scope and Magnitude of Environmental Impact

#### A. Description of Project

See Part II, Project Background and Detailed Description

#### B. Identification and Evaluation of Environmental Impacts

The project is designed to provide a system for the delivery of basic health services to the rural population of the Region of Sine Saloum. The project includes some construction of health posts and distribution of basic drugs but nothing which could be considered of a negative environmental nature.

It is considered that there will be no negative effects on the environment from this project and from the standpoint of the effect on human beings the effect will be beneficial.

The project is designed to respect the social and cultural values of the Senegalese now living within the Sine Saloum region. Thus, it will not have an adverse effect in a social sense.

### II. Recommendation for Environmental Action

Since the project will not have a negative effect on the environment, it is recommended that a Negative Determination be made.

**IMPACT IDENTIFICATION AND EVALUATION FORM**

Impact Areas and Sub-areas 1/

Impact  
Identification  
and  
Evaluation 2/

**A. LAND USE**

- |  |   |
|--|---|
| 1. Changing the character of the land through: |   |
| a. Increasing the population-----              | N |
| b. Extracting natural resources-----           | N |
| c. Land clearing-----                          | N |
| d. Changing soil character-----                | N |
| 2. Altering natural defenses-----              | N |
| 3. Foreclosing important uses-----             | N |
| 4. Jeopardizing man or his works-----          | N |
| 5. Other factors                               |   |
| _____  | N |
| _____  |   |

**B. WATER QUALITY**

- |  |   |
|--|---|
| 1. Physical state of water-----        | N |
| 2. Chemical and biological states----- | N |
| 3. Ecological balance-----             | N |
| 4. Other factors                       |   |
| _____                                  | N |
| _____                                  |   |

1/ See Explanatory Notes for this form.

2/ Use the following symbols: N - No environmental impact  
 L - Little environmental impact  
 M - Moderate environmental impact  
 H - High environmental impact  
 U - Unknown environmental impact

C. ATMOSPHERIC

- 1. Air additives----- N
- 2. Air pollution----- N
- 3. Noise pollution----- N
- 4. Other factors
- \_\_\_\_\_ N
- \_\_\_\_\_

D. NATURAL RESOURCES

- 1. Diversion, altered use of water----- N
- 2. Irreversible, inefficient commitments----- N
- 3. Other factors
- \_\_\_\_\_ N
- \_\_\_\_\_

E. CULTURAL

- 1. Altering physical symbols----- N
- 2. Dilution of cultural traditions----- N
- 3. Other factors
- \_\_\_\_\_ N
- \_\_\_\_\_

F. SOCIOECONOMIC

- 1. Changes in economic/employment patterns----- N
- 2. Changes in population----- N
- 3. Changes in cultural patterns----- N
- 4. Other factors
- \_\_\_\_\_ N
- \_\_\_\_\_

G. HEALTH

- 1. Changing a natural environment----- N
- 2. Eliminating an ecosystem element----- N
- 3. Other factors
- \_\_\_\_\_ N
- \_\_\_\_\_

H. GENERAL

- 1. International impacts----- N
- 2. Controversial impacts----- N
- 3. Larger program impacts----- N
- 4. Other factors
- \_\_\_\_\_ N
- \_\_\_\_\_

I. OTHER POSSIBLE IMPACTS ( not listed above)

- \_\_\_\_\_ N
- \_\_\_\_\_
- \_\_\_\_\_

See attached Discussion of Impacts.

TRANSLATION

Dakar, February 10, 1977

Letter of: Minister of Health  
to: Minister of Plan of Senegal

Reference: Your Letter  
N° 6561/MPC/DFP/PLX  
of November 20, 1976.

I should like, in order to complete the file on the project, to transmit a request to A.I.D. to implement as soon as possible the Rural Health project in the Sine Saloum.

This project has met our agreement and is now being studied by our partners. This document is missing in the file.

S. Matar N'Diaye  
Minister of Health

00522

*D. J. J. J.*

18 FEB 1977

**RECEVU/ V/lettre n°6361/MG/MPT/MLX**  
**du 10 November 1976.**

J'ai l'honneur de vous demander, dans le cadre  
de compléter le dossier du projet, de bien vouloir transmet-  
tre une requête à l'A.I.D. pour l'adoption, dans les mill-  
leurs délais des projets de santé de votre pays et leur  
évaluation.

Ces projets ont été approuvés par nous, et sont  
certainement en cours d'exécution auprès de nos partenaires.  
Cette pièce manque au dossier.

Monsieur le Ministre du Plan  
et de la Coopération

**RAKAR**



Matar Ndiaye

## ANNEX R

### PROPOSED TEACHING TRAINING PLAN

There are, in this project two levels of teaching activities:

1. The training given to the Village Health Workers (VHW) by the Health personnel of the Health post of each Rural Community.
2. The training given to the personnel of the Health Posts by the Regional Teaching and Supervision Team.

The second mentioned activity should take place before the first. But as training of nurses is shaped after what one intends to teach to the VHW's, we will begin here by a review of the training for VHW's.

### TRAINING OF VILLAGE HEALTH WORKERS

There are three kinds of Village Health Workers:

First, AID, MCH and Sanitarian, and three courses have been written (1) which will deal with the following topics:

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(1) Presently in French (see Annex), they are being studied by the Senegalese authorities. When a final version is agreed upon, "Promotion Humaine" will translate them into Wolof and Serer.

A. Course Introduction (for all VHW's).

1. What is a Village Health Worker?
2. What are this tasks?

B. Guide of the first aid person

1. Introduction; a discussion about villagers' conceptions of disease causation;
2. More than three liquid stools a day;
3. Someone coughs;
4. Someone has fever;
5. Five people with the same disease in one week;
6. Someone got burned;
7. Someone got wounded;
8. Broken bones;
9. Someone got bitten;
10. There is a rash or boils on the skin;
11. Someone comes for his eyes;
12. Someone has headache;

C. Guide of the Maternal and Child Health Worker

1. A woman awaits a baby;
2. The delivery has begun;
3. A woman does not want a baby now;
4. How to feed baby?
5. Baby goes at the MCH Clinic.

**D. Guide of the Village Sanitarian**

1. How to have clean water?
2. How to clearly defecate?
3. How to eliminate refuse?
4. How to prevent accidents?

Besides, the VHW's would be taught about record keeping and accounting of monies collected from the inhabitants for drug sales. Drug prices being known, the authorities of the Sine Saloum (with agreement of the Rural Communities) would set a sales price which would be posted in the Health Huts.

Villages and Rural Community leaders, which would have taken the literacy course given by Promotion Humaine, would take the few hours course and exercises on record keeping and accounting together with the Village Health Workers, in order to avoid any misunderstanding about these matters in the villages. This would also provide a common approach to accounting in all the villages involved in this project.

The course on record keeping and accounting has not yet been written: one will have to use those methods known and used by the villagers in their relations with the rural cooperatives. The courses for Village Health Workers would, in part, be given at the Health Post. This carries the advantage that a large number of patients are available every day for demonstration. Also the Health post is located in the largest village of the Rural Community, where the authorities live: this course demonstrates to the Village Health Workers the Rural Community resources:

The Health Post, the Rural Maternity, the Artisanal Workshop, the Cooperatives etc....

However, another part of the courses and exercises should definitely take place in some of the participating villages, in the village hut. This should demonstrate to the villagers that something is done for them.

An equal amount of time (one week at the Health Post, one week in the villages) could be spent in both situations. But there is room for flexibility in the training schedule to allow for geographic factors. This training should be initiated during the training of the nurses, since the course plan for each Department is as follows:

1. One month to give courses and pedagogic exercises to one first half of the personnel of the Health Posts of the Department.
2. One month to assist trained personnel to initiate courses for Village Health Workers in their Rural Communities, and if necessary, give appropriate remedial teaching.
3. One month to run a training cycle comparable to the one given the first month, for the second half of the nurses.
4. One month to guide this second group of Nurses in a manner identical to the one given the first group.

#### TRAINING OF THE OFFICIAL HEALTH PERSONNEL OF THE DEPARTMENT

This training would be given, either in Khembole or somewhere at the Headquarters of each Department. It would be taken by the Head Nurse and the Sanitarian of the Health Posts and by the Midwives of the Health Center of the Department.

It has been expressed to GOS that it is not possible to start the training unless there are two units (Nurse and Sanitarian) in each Health Post.

This should be a condition precedent to beginning the training. The orderly-cleaner and the matron will not participate in this cycle, but as far as possible, the matrons will participate in the Village Health Workers Courses.

This training for this professional Health Personnel should be given by the Teaching and Supervision Team, placed under the authority of the Medical Head of the Region.

This Team will be composed of:

1. A Midwife certified by the CESSI (Superior Nursing Care Institute).
2. A registered Nurse also certified by CESSI.
3. A Sanitarian Graduate from Khombole.
4. An American Nurse Midwife or Health Educator with MPH.

The training, as stated above, lasts one month:

a. Three weeks: theoretical courses on the following topics.

1. Matters dealt with in the VHW's Course:

An in-depth study of all questions that could be asked by the student-VHW's and the appropriate terminology in Wolof and Serer.

2. Public Health Principles:

The justification for the use of Village Health Workers with a cost analysis. Analysis of the new roles of the Health Personnel as a backstop and an advisor of the Village Health Workers.

3. Study of the Legal Institutions:

The impact of the Government of Senegal's Administrative Reform act and of its implications in the field of Health. The new concept: "fend for yourself" in the field of Health, with its financial implications for villages and Rural Community.

4. Principles of Pedagogy and their applications to the active teaching of VMW's.

5. Principles of Statistics: as applied to reporting of the work of the VHW's;

b. During the last week: Practical exercises:

Each student will have a chance to give courses to VHW's and be evaluated by his classmates. Also, the student will participate in group evaluation sessions concerning the work of his classmates.

/ MEDICINES FOR 600 PEOPLE & 1 YEAR /

	Price per unit (± variable)	amount consumed per year	Total Cost CFA frs
1. Chloroquine 100 mg	3000/1000 tab.	6000	18000
2. Aspirin	1000/1000 tab.	2000	2000
3. Sulfonamide	6000/1000 tab.	11000	66000
4. Iron Gluconate	1500/1000 tab.	2000	3000
5. Phenergan Syrup	1000/litre	61	6000
6. Aureomycin Dermic	200/tube	50 t	10000
7. " Ophthalmic	100/tube	50 t	5000
8. Antiscabies (ascabiol)	1000/1 l.	15 l	15000
9. Piperazine	200/50 tab.	200 tab.	40000
10. Rehydrating powder	2000/kg	3 kgs.	6000
11. Gauze	10/compress	1200	12000
12. Bandages	60/Band	600	36000
<b>Total Cost</b>			<b>219000</b>

Justifications. 300 children 300 adults.

1) Chloro : adults : each has 2 fevers/year : 4 tablets x 2  
i.e. 300 x 4 x 2 = 2400 tablets

children : prophylaxis 12 weeks x 1 tablet = 12 x 300 = 3600

plus each has one fever : 2 tablets x 300 = 600

total 2400 + 3600 + 600 = 5600, or say 6000 /

2) Aspirin : Each adult has 2 headaches at 2 tablets

2 x 2 x 300 = 1200, say / 2000 /

3) Sulfa : Adults 1 diarrhea at 18 tablets : 18 x 300 = 5400

Children 3 " " 6 " : 3 x 6 x 300 = 5400

Total 10.800 Say 11000 /

4) Iron: 50 adults at 20 tablets 1000

100 children at 20x1/2 tablets 1000  
2000 /

5) Phenergan Syrup : children each 1 cough: 4 tsp. = 20 x 300 cc = 6000 cc

61 /

6) Aureomycin dermic : 1 tube per week 50 T

7) " Ophthalmic: 1 tube per week 50 T

8) Scabies : 50 adults = 200cc x 50 = 10 l } 15 l  
50 children = 100cc x 50 = 5 l }

9) Piperazine : 200 enfants prennent 5 comprimés

10) Rehydrating powder : 100 enfants prennent 30 grs. 3 kgs.

Total Cost for all items 219.000

or per family : total cost/100 = 2190

(basis = 6 pers/fam) i.e. \$ 10 or \$1.8/pers

Cost of 1,4,6,7,10 = 42.000 frs CFA

& cost per family : 420 frs CFA or 70 CFA frs/pers i.e 30 ₣

Project Management - Senegal Rural Health Project

The project will finance three American technicians, a Public Health Advisor, a Public Health Educator and an Administrative Assistant. The Public Health Advisor will be based on Kaolack, the principal locus of the project. The other two technicians will be based in Dakar with frequent travel to the region. Kaolack is approximately three hours by road from Dakar.

The project will be managed by the AID direct-hire Regional Health Officer (RHO), a position presently encumbered by Dr. Marc Vincent. Dr. Vincent will complete his present assignment in January, 1979. As this is a permanent slot, a replacement would be sought at that time.

Project logistics, etc., which do not fall within the responsibility of the GOS/MOH will be the job of the project Administrative Assistant. Technical direction of the project, from the AID side, will be the responsibility of the RHO, with assistance on documentation, reports, and evaluation from the ADO Dakar Program Office.