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**Financial / Cost Analyses**  
**Shaba Refugee Health Project**  
**USAID/ZAIRE**

**By: Duc Tien Nguyen, Ph.D**  
**University Research Corporation**

**Minuku Kinzoni, MD, MPH**  
**Medical Chief of Sona Bata**  
**Zone and Hospital, Special**  
**Consultant to USAID**

**May 30, 1989**

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## EXECUTIVE SUMMARY

### I. Overview of the Consultancy

The consultancy was sponsored by USAID/Kinshasa through the University Research Corporation under an IQC (contract) mechanism during March and April 1989.

The objective of this technical assistance is to assist the Shaba Refugee health project with the analysis of expected impact on service utilization, recurrent costs and patient revenues of project-financed construction, rehabilitation and equipment investments in assisted health centers in the Lualaba and Kolwezi sub-regions of Shaba, Zaire.

Based on several stratification criteria, eight centers were selected for further investigation. One maternity center, one hospital and one pharmaceutical depot were also included in the analysis. Project ISROS staff, USAID personnel in Lubumbashi as well as Kinshasa were involved in studying the problems and recommending solution. The final formulation of these recommendations and any errors which may have resulted, however, remain my responsibility.

Various techniques were used to collect data including Nominal Group (similar to focus group) discussion, brainstorming, case studies, interview and observation as well as review of existing reports and related documentation. An "Assessment Model" was also developed to collect data on inputs, processes, outputs, outcomes and estimate the impact of the selected health facilities based on a systems analysis approach.

Following is a summary of findings and recommendations based on the analysis of data and information collected during the consultancy.

### II. Summary of Findings

1) The construction of health centers was progressing well despite very difficult conditions for: transportation, supplies and skilled manpower. However, several building types, especially types C and D, have been constructed to high standards beyond local needs and means of maintaining them. Selection criteria need to be reconsidered.

2) Project officials have elicited the participation and collaboration of local health authorities and other churches since the project began implementing activities. However, the project managers have not, until recently, developed a formal

means for documenting and coordinating this collaboration to assure adherence to management procedures and policies.

3) Most of the centers visited did not have an adequate stock of essential drugs nor the required equipment to carry on a program of health maintenance and basic care. Missing items included weighing scales and sterilizers, which are essential in any health institution not only for participation in national priority programs but also to prevent spread of infection and disease.

4) Within the system processes, major problems have been identified in the area of management. No supervision has been done either from the Church or from the health zone authorities. Reporting and record systems are inadequate. A system of uniform reporting and standardized data collection has not been implemented to date.

5) With the serious deficiencies in inputs and processes described above, the system outputs, outcomes and impacts are unlikely to be effective, either in terms of quality of care or in terms of financial performance. Due perhaps to the concentration on construction and equipping facilities, the facilities visited by the consultant team showed little if any involvement in preventive health, child survival activities including ORT, vaccinations and family planning activities. These deficiencies suggest a need for management intervention to establish clear and measurable objectives, provide supervision and follow-through on a range of improvements from quality control, prevention and child survival to statistical collection and financial reporting.

6) Despite these problems, the Methodist Church and the ISROS project have contributed significantly to improving the health institutions originally established and operated by the Church. Most of the problems highlighted in this report are not exclusively the responsibility of the Church or the project. Sustainable changes in systems and operations will require close collaboration with other institutions (e.g., ECZ (SANRU), Medecines Sans Frontieres) and the regional government authorities.

Major Recommendations

The health center system can be viable provided that these major problems can be monitored, corrected and followed-through by either the ISROS project itself or through collaborated assistance with other programs/projects including national, international and bilateral assistance agencies.

A. ISROS project

1. Construction design tapes C and D should be eliminated; only types A and B should be retained for remaining construction of health centers. Budgetary savings from this reduction should be used to build additional centers or to purchase additional drugs or equipment.
2. The Methodist Church should support, especially financially, health centers as it has already done with hospitals run by the Church in the area.
3. Stronger and more efficient management systems should be put into application including regular supervision, both technical and financial. The "Assessment Model" which was developed and used for this consultancy should also be used for supervisory visits with the assistance of a local consultant and/or zonal authorities.
4. Free care should be reduced by strict regulations proscribing non-payment for Church and government officials, leaving free care for indigent as determined by community members not in the employ of the health center. Every effort should be made to recover at least the cost of drugs and supplies consumed for each patient visit.
5. Criteria for selection of centers to be renovated or constructed for minimum required utilization and quality of care as well as for the assurance of the involvement, commitment and leadership from all representatives of the community,.
6. Simple uniform Management/Health Information systems (M/HIS) should be impelmented. Each health center, hospital, etc. would be required to maintain standard record keeping ledgers and report regularly on priority programs, utilization and financial data.

**B. ISROS and Other Programs/Projects**

1. Project officials need to promote more positive relations with local health authorities, health providers from other churches and organizations in the area. These joint activities should eventually be organized on a more regular and formal basis to facilitate information and experience sharing and communications at all levels.
2. Child Survival activities including DRT, Immunization and Family planning should be promoted and made available in all facilities.
3. Project staff should take measures to make preventive health, child survival interventions and health education higher priorities in project-assisted health facilities.
4. Management training should be provided for technical and administrative staff in country or abroad as appropriate and as available resources permit.

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The consultant would also like to extend his special thanks to the staff of ISROS and the health center personnel visited for their contribution to the study and their hospitality. Finally, this work could not have been achieved without the professional wordprocessing skills of Grace E. Shin who typed, helped to edit and printed this report.

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FINAL REPORT

SHABA REFUGEE HEALTH PROJECT  
FEASIBILITY STUDY

Submitted to:

USAID/Kinhsasa  
Office of HPN

By: Duc Tien Nguyen, Ph.D  
of University Research  
Corporation

Minuku Kinzonzi, MD, MPH  
Medical Chief of Sona Bata  
Zone and Hospital, Special  
Consultant to USAID

30 May 1989

## I. BACKGROUND

Under the Cooperative Agreement signed with the United Methodist Church of Shaba, USAID is constructing/renovating and equipping health facilities, including three hospitals and forty-five health centers in the Lualaba and Kolwezi sub-regions of Shaba through the Shaba Refugee Health Project (ISRDS), No. 660-0114. The goal and purpose of this project are to reintegrate the Lualaba sub-region repatriates and refugees into regional socio-economic development by rehabilitating and improving the health infrastructure in these sub-regions which were severely damaged during the 1977-78 Shaba war.

Refugees and repatriates as well as the whole population in the area have been facing major problems of restoring health among refugees arriving in poor physical condition until fields are established and socio-economic infrastructures are rebuilt.

The Shaba Refugee Health Infrastructure Project is related closely to two other USAID-funded projects, the Shaba Refugee Roads Project (660-0115) and the Shaba Refugee Water Supply Project (660-0116) also working in the Lualaba sub-region. The project is also harmonizing well with the National SANRU Program administered by the Federation of Protestant Church in Zaire, in cooperation with the Ministry of Health and USAID through the Basic Rural Health Project and other international donors such as UNHCR, Belgian Government, FAO and the World Bank in the project area.

In order to insure the viability, especially financial viability, of the health facilities to be renovated or constructed, the sustainability of health facilities is a major concern under this project and therefore prior knowledge of sustainable health facilities to be selected is a planning requirement. A technical assistance was recommended by the project start up evaluation team.

## II. OBJECTIVE OF THE TECHNICAL ASSISTANCE

As indicated in the scope of work, the objective of the technical assistance is to assist the Shaba Refugee Health Project with the analysis of expected impact on service utilization, recurrent costs and patient revenues of assisted 40 to 50 health centers in the Lualaba and Kolwezi Sub-Regions. (Appendix A)

In order to meet this overall objective, the following major tasks/activities are to be performed:

1. Review relevant documentation from the project concerning project objectives, accomplishment, and plans, relevant studies and reports.
2. Interview project officials, USAID and GOZ in Kinshasa and in Shaba region to obtain information on health facilities as well as on health zones' structure and management systems.
3. Evaluate and adopt current data collection instruments and reports to devise a simple method for assessing the performance of health facilities and the impact of project activities.
4. Visit 4-6 health facilities selected with collaboration officials and test the data collection instrument and proposed methods of analysis, revising as necessary.

### III. METHODOLOGY

#### 1. Consultants

The consultancy was performed by Dr. Duc Tien Nguyen, Ph.D. of the University Research Corporation, Inc. as the Principal Consultant and by Dr. Minuku Kizonzi, MD. MPH, Medical Chief of Health Zone and Medical Director, Sona Bata Hospital as local consultant. The consultants were well accompanied by Ms. Elizabeth Moracco, HPN Representative, USAID/Lubumbashi throughout the field trip to health facilities within the Shaba.

#### 2. Timetable

The one month consultancy included one week in Kinshasa reviewing relevant documentation from the project and developing the Assessment Model for data collection; nine days in the Shaba visiting eight health centers, one hospital, one maternity to collect data and to meet and interview officials from the United Methodist Church (UMC), health Zones and Region, USAID staff; Project staff; nine days back to Kinshasa to analyze data and to draft report; and five days for travelling and finalizing report.

### 3. Sites (see Appendix E for a list)

The health centers selected did not represent all centers to be renovated/constructed as a representative sample from a statistical standpoint. However, several stratification criteria were discussed and concerned such as construction status (Started, Underway, Completed), proprietaryship/ownership (Church owned, government owned, etc.), and types of health centers (A, B, C, special, health post) in order to include centers of various characteristics. Also, the HPN representative in Shaba suggested centers be included based on her experience and knowledge of the centers through reports or previous visits.

Eight centers were selected, including: Kambalala, Malonga, Divuma, Kasajiville, Garaganze, Mutshatda, Kayembe and Kolwezi. Also, Kolwezi maternity center, Pharmaceutical Depot at Kolwezi and Garaganze hospital were included.

The characteristics of the institutions visited are summarized in Table I on the following page.

### 4. Assessment Model (Appendix B)

The consultants developed a model which can be used not only for this consultancy but also for any other supervisory visits. The model consists of a checklist which requires about two hours to complete, but, which covers almost all essential information of the overall system analysis. This includes assessment of inputs, outputs, processes, outcomes (direct effects) and impacts (indirect effects) of a system and of major sub-systems within the system in the three areas of health care institutions (utilization, quality and cost) which need to be assessed in order to judge whether the system is viable or not. The financial viability of a health system cannot be judged or predicted for a planning purpose without considering the technical viability. The quality outputs are, therefore, at least as important as the utilization outputs of a health care system.

The model includes not only information on inputs, outputs, and utilization but also information relating to the processes and to the quality of care provided. However, dealing with "process" i.e. management and especially with "quality of care" is not easy because we are no longer in the domain of the physical sciences, but approaching the art and practice of medicine. Peter Drucker and other scholars in management of our time have deemphasized the value of using mathematics in management. The JCAH (Joint

Table I. Characteristics of Institutions Visited.

Institution	Type	Construction	Proprietor	Zone
Kambalala HC	A	90% done	Methodists	Kisenge
Malonga HC	C	80% done	"	"
Duvuma HC	C	90% done	"	Dilolo
Kasaji	Sp	Completed	"	Kisenge
Garganze	Sp	Completed	Garaganze	Kisenge
Mutshatsha	C	50% done	Methodists	Mutshatsha
Kayembe	HP	Completed	"	"
Kolwezi Hosp.	R	Completed	"	"
Garaganze Hosp.	R	Completed	Garaganze	Kisenge
Kolwezi Matern.	R	Completed	Methodists	Mutshatsha
Kolwezi Depot	R	Completed	Methodists	"

Key: C=New Construction; R=Renovation; Sp=Special; HP = Health Post

Commission on Accreditation of Hospitals), a review branch of the AMA (American Medical Association) has been trying for many decades to develop a tool to assess the quality of care provided by hospitals in the States through MCE studies (Medical Care Evaluation). To date, they have opposed adoption of one or more quantitative indicators of quality, such as mortality rates, return to operating room after operation, etc. under the belief that "good care" which is very complex and very difficult to determine without considering a panoply of considerations.

In a similar fashion, the consultants have applied the management style, "Management by the Minimum" to develop this assessment model. The minimum is something that "must" be done, rather than what "can" or "should" be done. This management style might be good for developing countries because the "must" is easy and simple to assess while the "can" or the "should" is very flexible and very difficult to assess.

SHOULD

CAN

MUST  
--^--  
Minimum

The "Inputs" includes Building, Equipment, Drugs, Cash, and especially Policy (Government and/or Church)...

The "Processes" include items on General Management, Personnel Management, Financial Management, Maintenance, Training Programs.

The "Outputs" include utilization, quality items.

The "Outcomes" or direct effects of the system included amount of patients of various leading diseases, the extent of malnutrition, of family planning and of immunization.

The "Impacts" or indirect effects of the system are of two categories; a) the health impacts including Health Status, Morbidity and Mortality rates and, b) the financial impacts including net profit (or loss), operating profit (or loss), capital gain (or loss).

EXTERNAL

FACTORS  
Culture

HEALTH CENTER SYSTEM  
PROCESSES

INPUTSOUTPUTSOUTCOMESIMPACTPHYSICALGen. Managem't Utilization

-Building	-Structure	#Vaccination	-Extent of	<u>Health</u>
-Furniture	-Organigram	#Inpatients	Immunizable	Impact
-Equipment	-Planning/	#Outpatients	Diseases	Health
-Labor	Evaluation	#Deliveries	-Extent of	Status
-Drugs	-Supervision	#Outpatients	Malnutrition	Morbidity
-Cash	-Report	#Consultat'n	-Amount of	rate
-Supplies	-Maintenance	#Lab. Tests	Diarreal	Mortality
		#Population	Diseases	rate
		served	-Malaria	Fertility
			Diseases	rate
			- T.B.	
			Infection	

Non-PhysicalFinancial MgmtQualityFinancial

-Policy	-Bookkeeping	-Steriliza-	<u>Impact</u>
Gov't	-Accounting	tion	NetProfit
Church	Simple	-Infection	/Loss
Donors	Double	-Waste	Operating
-Law	-Financial	Mgmt	Profit/
	reports	-Water source	Loss -
	-Inventory	-Energy source	Capital
		-Minimum	Gain/Loss
	<u>Personnel Mgmt</u>	Drugs,	
	-Training	Lab Tests	
	-Job Description		
	-Motivation		
	-MIS/HIS		
	-Record System		

## 5. DATA COLLECTION

Various techniques have been used to collect data information and to identify problems. Nominal Group discussion was used with a group of physicians from three of the four health zones of the sub-region who came to Kasaji to attend the sub-regional Health Conference. The group includes Medical Chiefs of two health zones, physicians from Medecins Sans Frontiere, HPN Representative from SHADO, USAID consultants and the project's construction supervisor.

The group contributed valuable inputs to the establishment of minimum criteria for a health center to be selected for reconstruction/rehabilitation and to the ultimate success of the ISROS project. Brainstorming was used with USAID staff especially with construction staff in order to get the idea of an appropriate building for a health center. Case studies using the Assessment Model applied with the selected health facilities to collect systematic data from each facility in its own condition and context. Individual interviews were held with project directors, the Methodist Bishop, Medical Regional Inspector, Pharmaceutical Depot Director and others to obtain a broad spectrum of opinion on the health centers.

## IV. FINDINGS

The findings encompass five areas: - A) The physical and non-physical inputs to the system; B) The system processes; C) The system outputs and outcomes and D) The system's impact and viability and E) Selection criteria for construction/renovation.

### A. The Physical and Non-Physical Inputs

#### a) Buildings

1. In general, all the old buildings are in unacceptable condition, below the minimum required of health centers: they are small with tiny windows allowing limited visibility and poor circulation. In several instances the roof was too low and damaged by heavy rain. A few centers have locks, but, in many the responsible nurse has to bring drugs and equipment home every night to secure them from intruders. The old buildings usually have only one room. Some old centers (Garaganze and Mutshatsha) are not located in good locations convenient to nearby populations.

2. The new buildings are of six types: Health Post, A, B, C, D, and Special. Health Post is the smallest type having no space for beds.

Type A has four rooms (Appendix C): Registration, Consultation, Treatment and Observation room with bed.

Type B has five rooms: Registration, Consultation, Treatment, Observation and Maternity.

Type C has eight rooms: Registration, Consultation, Treatment, Pharmacy, Laboratory, Observation, Maternity and Storage.

Type D is like type C except that there is no maternity.

Type "Special" which was built before the models described above were settled on, is somewhat similar to type C.

Renovated centers have to adapt and match with the old construction designs.

3. Criteria for selection of centers to be built or renovated include: a) Old Center has been surviving for at least two years, b) Population to be served must be large enough --3000 persons, and c) Distance between selected center and other centers must be at least 15 kms.

4. Construction has been carried out by the Project with the contribution of local community providing bricks.

5. Nearly all of the centers which have been built or renovated belong to the UMC or Garaganze Church. No government owned or Catholic church centers have been selected to be renovated or constructed. The original plan would have included government and Catholic affiliated health centers in the project, however, there are very few state-owned facilities and the Catholic leadership opted out of a cooperative arrangement with the UMC.

b. Equipment/Instruments

1. All health centers have at least one thermometer. All thermometers are technically outdated, difficult to read.

2. Almost all centers have no scales, either for adults or for children. Some centers have scales but keep them stored in a box.
3. All centers have an ice chest for vaccines but not utilized.
4. All centers have at least one stethoscope, but at one center the stethoscope was broken, and can't be repaired locally.
5. Most centers (but all should) have a working sterilizer that functions either by steam or heat.
6. Each center has a bicycle or a motorcycle but none of the bicycles are either not operating -- one was reported stolen.

c. Drugs

1. Drugs are supplied mainly by the nurse in charge of the pharmaceutical depot in Kolwezi who makes one resupply trip every three months.
2. Stock rupture/shortage is very often because quantities ordered are less than needed for a three-month interval.
3. The Kolwezi depot itself has a regular stock of three months which is far under the stock required.
4. There is no recording or accounting system for drugs at almost all centers.
5. There are no stock cards for drugs or for supplies at almost all centers.
6. A minimum drug list is not available at all centers (Appendix F).

Only few usual and basic drugs like Chloroquine, Aspirin and Antibiotics are typically found at health centers, but in minimal quantities.

8. Sometimes drugs are bought locally from pharmacies or the black market.
9. Drugs are not stored carefully, they were found in unlabeled containers in several centers.

10. Drugs are provided in most cases to patients with consultations; consultation fees include drugs. Some centers resell drugs to patients with a 10% mark-up.

11. ORS packets are very rarely available, contraceptives were only available at one of the ten facilities visited.

d. Policy

The consultants understood that according to UMC Policy, as later confirmed by Bishop Katembo at the interview with the consultants and SHADO's HPN representative, all medical services including drugs are free of charge for all pastors and their families. Before the project began, policy for health centers was made by Church members. Recently, the church affiliated health facilities have begun to open representation to the community and to local health officials (MCZ for example), however, their role is still not clearly spelled out and evident to the health workers.

B. The System Processes

a. General Management

1. All centers have a management committee which include around four members. Almost all the members are designated by UMC. There is no community involvement or participation in this committee.

2. There are no plans or formal evaluation of the staff or services provided.

3. There is no formal system of supervision setup by either the UMC not the health zone. Only supervisory visits from HPN representatives were duly recorded.

4. Each center submits a report to the Church in Swahili about the activities, services and financial status.

5. All centers have a Registration book of Consultations recording date, number, name, sex, age and address of patient. Only one center has registration book with diagnosis/symptoms.

6. Simple clinic records are found in all centers, but generally of poor quality: poorly kept, unorganized, and very small (a piece of loose paper) making them difficult to read as well as maintain in the files.

7. No maintenance system either for buildings or for equipment has been identified.

8. Spare parts or repair services are available locally. Motorcycles and bicycles are out of order due to lack of spare parts; especially hard to find are innertubes.

b. Financial Management.

1. The only financial management information system that is usually maintained at all centers is a trimestrial or semestrial report. A typical report indicates:

100%:	Total revenues	<u>Average</u>
72%:	Expenses: - Drugs.....	60%
	- Salaries.....	22%
	- Contribution to Church(Central)	3%
	- Contribution to Church(District)	8%
	- Contribution to Church (local/pastor)	2%
	- Miscellaneous.....	5%
28%	Balance	

2. Most centers have no bookkeeping system. Record of transactions is done at the time of report. No accounting system - either simple or double entry was observed to be in effect at any center.

3. Cost accounting for the purpose of pricing goods and services is also not practiced. Prices are apparently set through back of the envelope calculations and guesswork.

4. Inventory is not found to be done on a regular basis either for drugs or for equipment.

5. There is no internal control system or use of external audits to assure accountability of receipts and purchased/donated equipment and supplies.

6. Cash management is very rudimentary: the nurse responsible collects cash, keeps it and purchases goods as he thinks necessary. Periodically, he turns in the balance of funds in the cashbox to the Treasurer of the Church (UMC or Garganze) who uses it for some other purpose.

7. Percent of non-paying patients is around 5%. The majority of non-paying patients (95%) are not poor or indigent. They are pastors, administrative officers of the church or government officials, e.g., Chief of Post Office. Only rarely are the poor or medically indigent non-paying patients.

8. There is no prepaid system, however, several facilities provided care to employees and would be reimbursed later by their employers. (Tabazaire, Isros.). About 15% of patients have their bills covered by their employers.

9. The average income of the family is estimated to be about 2,500 Zres (\$ 8.00) per month.

10. Consultation fees: 150 Z first visit, 100 Z for 2nd and subsequent visits. Occasionally, these fees were lowered for children.

c. Personnel Management

1. Personnel are recruited, transferred, and terminated by the Church.

2. No job descriptions or work assignments have been prepared at any of the health facilities.

3. Salary is based on and varies with the amount of fees collected.

4. No evaluation has been done for any type of personnel.

5. No personnel policy has been prepared at the health center level.

C. The System Outputs & Outcomes

a. Utilization

1. The total number of consultations is around 400/month. About 35% are new cases.

2. Approximately 90% consultations are for curative purposes, around 10% for preventive activities.

3. Only the two large centers perform any laboratory tests.

4. No health education, nutritional education, few family planning activities have been performed. (in big centers only Kolwezi and Kasaji).

5. Child Survival activities especially immunization are weak and not regular.

b. Quality

1. Waste products and refuse are destroyed in inappropriate ways (not daily, in open holes without incineration).

2. Infection control is not performed, even in maternity delivering room. No sterilized gowns are available even for nurses.

3. Most of the nurses are at A3 level.

4. Mortality is around 1-2 cases/month in big centers.

5. No feedback is obtained from transferred patients.

6. Critical drugs (minimum) are not always available.

c. Other Outputs & Outcomes

1. No training of Community Health Workers (CHW) or of any other staff has been offered except at Kolwezi Maternity.

2. Population served for each center is around 3,000.

D. System Impact & Viability

1. Significant increases in consultations and revenues have been identified in comparing utilization before and after construction/renovation (20% increase) at the centers where construction/renovation has been completed. It is important to note that these centers have only been operating for several months.

2. The financial viability of the USAID-assisted health facilities can be assured if the processes are improved and quality improvements are managed within available means. Of the sites visited, operating profit varied from 1,000 Z to 3,000 Z a month at small health centers where drugs are limited and not always available. At larger health centers located within hospitals and

where serious cases are treated, financial losses of around 35,000 Zs per month were identified.

E. Selection Criteria for Construction/Renovation. After much discussion between the project staff, SHADO and the consultants, the current criteria were agreed upon for site selection:

1. Must have been in existence for 2 years.
2. Population minimum of 3,000.
3. Distance to other center at least 15km

From the construction and marketing standpoint, these criteria are acceptable. However, from the public health standpoint, additional criteria need to be included in order to assure the quality of health care provided and the participation of representatives from the community. Applying the standard of "Management by the Minimum", the "Must" criteria must be met without exception, the "should" criteria are advisable and depend upon local conditions and the judgments of project management.

The recommendations offered by the consultant team and discussed with project and USAID representatives follow in the next section.

## V. RECOMMENDATIONS

### Category A

1. Child Survival activities, especially immunization and family planning should be promoted and available;
2. Health education and nutritional education should be performed;
3. Home visits should be done on regular basis;
4. Preventive health care should be available and provided at all health centers;
5. Training of CHWs and TBA (Traditional Birth Attendants) should be performed in all project-assisted communities;
6. Short term management training in the U.S. is recommended if funding can be made available.

### Category B

1. the design of some newly-constructed buildings is too big and costly, difficult to maintain and oversized for available personnel. It is recommended that Types C and D be eliminated; only three types - Post, A and B should continue to be constructed. Budgetary savings obtained from this recommendation should permit more centers to be constructed.
2. Church policy should be changed; the UMC should provide financial support to health centers and refrain from collecting contributions from the health centers - which are obtained from patient fees. Free care should be limited to only indigent patients in need of care. This category should be severely restricted, to 1% or 2% of all patients seen.
3. Each center should have a board or committee which includes not only UMC representatives but also representatives from other active churches and from administrative and health authorities, especially, the Medicine Chef de Zone.
4. A supervisory system should be established and in place as soon as possible. Supervision should cover both financial and technical concerns.

5. Trash should be destroyed in hygienic fashion: by incineration or in closed dumps.

6.. A uniform Management Information System (MIS) and Health Information System (HIS) should be established to collect minimum data from all health centers throughout the country, starting with centers from ISROS project (Appendix H).

7. Financial management should be trained and applied. Standard operating procedures (SOP) should be available for each major piece of equipment.

8. Maintenance of building and equipment should be trained and applied. Maintenance schedules based on SOP for each piece of equipment.

Criteria for selection of centers to be renovated/constructed should be changes as indicated in Table 2.

10. Technical assistance should provided to implement these recommendations and provide needed reinforcement and follow-through.

## ATTACHMENT I

PID/T 660-0510-3-80023

Project Development &amp; Support

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STATEMENT OF WORK

1. Background & Purpose: Under the Cooperative Agreement signed with the United Methodist Church of Shaba, USAID is constructing/renovating and equipping hospitals, reference health centers and health centers in the Lualaba and Kolwezi Sub-Regions of Shaba. Sustainability of health facilities is a major concern under this project therefore, prior knowledge sustainable health facilities to be constructed/renovated and equipped is a planning requirement in order to insure their future viability. The purpose of the proposed Technical Assistance is to assist the Shaba Refugee Health project with the analysis of expected impact on service utilization, recurrent costs and patient revenues of assisted 40 to 50 health centers in the Lualaba and Kolwezi Sub-Regions.
2. Level Of Effort: The Contractor will provide up to 30 days of technical assistance to be performed in Zaire to USAID and implementing agency of Project 660-0114. The Contractor will work in Lubumbashi and around South Shaba areas of Kolwezi and Lualaba Sub-Regions; therefore, local transportation to be arranged with the project is deemed necessary to accomplish the work described herein and in the best interests of the Government. Work should begin as soon as possible. Six day work week is authorized.
3. Duties and Responsibilities: Under the supervision of the USAID Supervisory Health/Population Officer or his designees, and in collaboration with a local physician knowledgeable about the service area, the Contractor's specific responsibilities will include the following:

ATTACHMENT I

PIO/T 660-0510-3-80023

Project Development & Support

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- A) Review relevant documentation from the project (Shaba Refugee Health Project, No. 660-0114) concerning project objectives, accomplishments and plans, relevant studies and reports;
- B) interview appropriate project, USAID and GOZ Health officials (in Kinshasa and in Shaba Region) to obtain information regarding current project objectives and activities, health zone structures and management systems, and specific information on the health facilities involved in the project;
- C) Evaluate and adopt current data collection instruments and health services reports to devise a simple method for assessing the performance of operating health facilities and the impact of proposed project activities, i.e., devise a method to evaluate health facility performance and financial viability before and after reconstruction. This method will be used as the basis for deciding if rehabilitation or construction of a health center makes sense in terms of financial viability. Information used for the assessment should include that pertaining to: a) service levels, b) service population, c) utilization, d) staffing, e) costs and revenues, f) management and g) long-term viability; the consultant should also consider additional recurrent costs that would result from construction of the new facility, and the services populations capacity to support these costs.
- D) Visit 4-5 health facilities selected with collaborating officials and test the data collection instrument and proposed methods of analysis, revising as necessary;

ATTACHMENT I

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Project Development & Support

PAGE 5 OF 7 PAGES (Continued)

d) Analyze the data collected according to the proposed methodology; issue a report with detailed findings in visited facilities as per C) above, (e.g., service levels, utilization, etc.) and which will include an assessment of the project's likely impact on these indices of performance. The Contractor's report should also include analysis and recommendations on how to: (1) improve services, utilization and cost recovery at visited sites, and (2) apply the data collection methods and analytical methodology to the other proposed project sites.

Appendix B

ASSESSMENT MODEL

INPUTS

A. Physical inputs

- Building: Roof..Door..Lock..Floor...
- Equipment:
  - Sthetoscope
  - Sphgnomanometer
  - Scale
  - Thermometer..
  - Sterilizer.. Heat  
Steam
  - Ice chest....
  - Scale Adult...  
Children...
  - Typewriter
  - Lamp
- Furniture: Desk.. Chairs....Cabinets...Other....
- Labor/Staff:
  - Doctor... Training      Number      Salary/Month
  - Nurses
  - Clerk
  - Cleaner
  - Accountant
  - Other...
- Drugs:
  - Antimalaria      Quantity      Source      Cost/Unit
  - Analgesics
  - Antibiotics
  - Anthelminths
  - Cough
- Supplies:
  - Toilet paper
  - Paper
  - Insecticide
  - Mosquito spray
  - Pen/Pencil

B. Non-Physical

- Government Policy
  - Church Policy

## APPENDIX B Continued

### II. PROCESS

#### General Management

- Structure: Board...
- Organization Chart....
- Work plan....
- Supervisory report: Technical  
Financial
- Maintenance Schedule....
- SOP

#### B. Financial Management

- Bookkeeping
  - Accounting: Simple entry... Double entry
  - Financial report
  - Inventory
  - Financial procedure
  - Stock card

#### C. Personnel Management

- Training of CHW.... Nurse.... Matrone....
  - Job description....
  - Job assignement....
  - Motivation....

#### D. MIS/HIS

- Record System Patient Card (Fiche)....
- Immunization Card....
- Registration book....
- Report: Service... Monthly....Yearly....  
Financial.... Monthly... Yerly....

## APPENDIX B Cont.

III. OUTPUTS & OUTCOMESA. Utilization

- Number of consultation per month
- " " outpatients " "
- " " inpatients " "
- " " deliveries " "
- " " labtests (by category) per month
- Estimated population served (number <5 years)
- " average number of consultations needed by population
- Number of vaccinations per month
- Number of cases of immunizable diseases per month
- " " " " malnutrition " "
- " " " " malaria " "
- " " " " tuberculosis " "

B. QUALITY

- Sterilization of equipment: heat? adequate or not?  
steam? adequate or not?
- Waste management: daily? weekly? proper controls of blood products and syringes?
- Available utilities: Water? Electricity?
- Minimum drugs (essential drugs) available?
- Minimum lab tests available?
- Number of deaths per month?

Staff adequately trained?

- ORT available?
- Family Planning available?

APPENDIX B Continued

IV. IMPACT

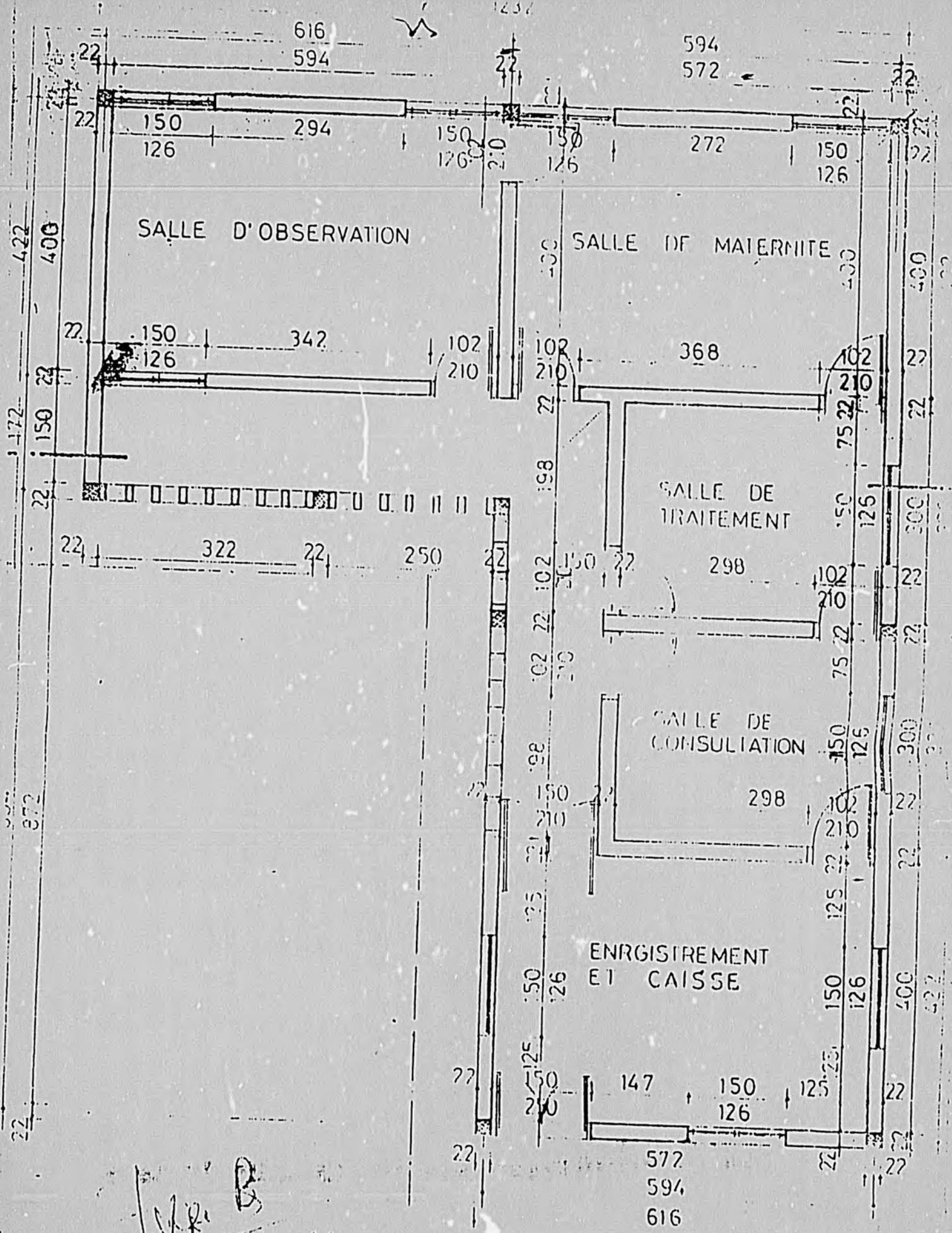
A. PROFIT/LOSS

- Operating revenues: 1) fees collected  
2) drugs sold
  
- Cost of drugs sold
- Gross profit
- Operating expenses
  - Salary
  - Utilities
  - Equipment/Supplies
  - Contribution (to be eliminated)
- Depreciation
- Net Profit/loss
- Other sources of income

B. CAPITAL

- Building
- Cash
- Inventory
- Accounts receivable
- Liabilities
- Balance/Capital





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 11  
 37

SALLE D'OBSERVATION

SALLE DE MATERNITE

LABORATOIRE

PHARMACIE

DEPOT

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1/10 C

03

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# APPENDIX E

## VISITE DES SITES

Le 15/03/1989 : Départ de Kinshasa pour Kolwezi via Lubumbashi . Arrivée à 17 heures .

Le 16/03/1989 : Départ pour Kasadji. Arrivée à 16 heures .  
Nous assisterons à la conférence sous-régionale des Médecins Chefs de Zone du Lualaba .  
Thème : Evaluation du plan d'action des Soins de Santé Primaires dans la sous-Région, élaborée en 1988  
Résultat et contraintes .

Les deux Consultants USAID expliquent le but de leur mission. Avec les Médecins Chefs des Zones, nous discuterons de l'organisation du travail des Soins de Santé Primaires dans Lualaba et avons procédé à la discussion des critères utilisés pour la sélection des Centres de Santé en cours de construction par ISROS .

Le 17/03/1989 : Visite des Centres de Santé .

1. KOMBOLALA : Situé à plus de 18 km de Kasadji. On vient d'y construire un Centre de Santé de type A qui attend encore ses portes . Discussions avec l'Infirmier et 2 malades . Visite de l'ancien et du nouveau bâtiment du Centre de Santé plus la maison de l'Infirmier . Le nouveau bâtiment n'est pas encore occupé . Il faut encore compléter le système d'eau .  
Dans l'ancien bâtiment : absence des meubles, sombre et suintant (il pleut) . Quelques flacons des médicaments sans étiquette, un cahier en guise de registre et quelques papiers servant des fiches . Aucune activité préventive ou promotionnelle . 30 patients par jour dont 4-5 cas de malnutrition .  
Problèmes courants rencontrés : paludisme, verminose, malnutrition, maladies des voies respiratoires . Il y a un dispensaire distant à 500 mètres mais de mauvaise réputation . Rayon : jusqu'à 20 km .

MALONGA : Ici on achève un grand centre de santé de type C . L'équipe de centre (Infirmier et Auxiliaire Fille) nous reçoit dans l'ancien bâtiment étroit mais propre où il y a un minimum d'équipement sauf microscope et balance . L'Infirmier est au courant de son travail et ses documents sont en ordre (registre et fiches) comme à Kambolala, pas d'activités préventives et promotionnelles . 50 % des patients (25-30/jour) souffrent de malaria, 20 % des affections des voies respiratoires .  
Rayon : jusqu'à 30 km . Il n'y a pas un centre de santé et cher lieu de regroupement . La population a beaucoup de confiance au Centre de Santé et de son personnel . Le Comité de l'Eglise existe pour la gestion du Centre Médical .

3. DIVURIA ( à près de 25 km de Malonga ) . On y construit un Centre de Santé de type C . L'ancien dispensaire est une petite bâtisse mal bâtie et ayant pour seul équipement une table sur laquelle tout est déposé ( médicaments, seringues ) et une chaise . Ici les malades ont pas des fiches mais des cahiers qu'ils emportent chez eux .

Il ne reste donc rien au Centre. Les soins curatifs est la seule activité : 30 malades par jour selon l'Infirmier qui à notre avis ne conviendrait pas pour le nouveau Centre de Santé.

B. Divuria est une petite agglomération de près de 8.000 âmes et aussi une gare de chemin de fer.

3. KASAJI-Ville

Le Centre de Santé ici est un modèle spécial. Il est déjà en utilisation. Dispose d'une salle d'attente, de consultation et d'une pharmacie. L'Infirmier Responsable est absent mais nous discuterons avec l'Auxiliaire et le Pasteur. Le Comité existe. Activités curatives (30 malades par jour) et éducation sanitaire.

4. CARAGANNE ( le 18/03/1989 )

Le nouveau Centre de Santé construit avec ISROS est un type spécial comprend plusieurs pièces, un hall, une pharmacie et des bureaux. Ici travaille le Médecin Directeur et il y est prévu le bureau central de la Zone de Santé.

Le staff comprend près de 10 unités. Equipement suffisant sauf un frigo en panne. La pharmacie contient des médicaments essentiels sauf que les médicaments comme la streptomycine, le rifampin ( INF ), rifampicine et autres antibiotiques sont terminés. Près de 40 % de stock est une donation ( IMPAS ). Notons aussi l'absence des verrous, seringues et solutions de réhydratation IV ou orales.

Le système comptable, administratif et statistique sont à jour et exemplaires. L'Administrateur de l'hôpital est un homme très dévoué et joué un grand rôle dans le maintien de l'hôpital après la guerre. Il est au courant de toutes les questions de management du Centre. Le personnel est utilisé aussi partiellement par l'hôpital.

Visite de la maternité réhabilitée par ISROS. Tout est impeccable depuis la salle des malades jusqu'à la salle d'accouchement. Occupation plus de 80 %.

Activités : Le Centre de Santé organise les consultations Périnatales (130/semaine), Postnatales (250/semaine), Préscolaires (40/semaine) et ambulatoires (300/jour) et vaccine une fois par mois. L'éducation sanitaire est intégrée aux consultations des mères que les naissances désirables.

30 % des cas de consultation externe souffrent de malnutrition, mais le centre de réhabilitation nutritionnelle est fermé faute de subventions.

Une dizaine des sociétés ont une convention avec le centre. Opinion de la population : très bonne et les gens viennent jusqu'à 50 km. Le besoin est permanent depuis deux ans déjà. La situation financière mérite quelques attentions car le centre et l'hôpital dépendent plus de dons que de recettes propres. Population couverte : ± 70.000 habitants.

5. MITSATHA  
Le nouveau Centre de Santé de Mitsatha est au niveau des murs. Une charrette.  
Le nombre des cas soignés par jour semble faible (10 en moyenne).  
Le Centre reçoit les vaccins de Kolweri et vaccine une fois par semaine (20 enfants de 0 - 9 ans) mais les données écrites ne sont pas disponibles au Centre.  
Une moto ISROS a été trouvée dans ce centre mais l'Infirmier ne peut

l'utiliser parce que le carburant coûte cher .  
La situation financière peu brillante, pourra s'améliorer avec les nouvelles conditions .

5. KAYEMBE .

Le poste de santé nouvellement construit est terminé mais pas encore inauguré . L'Infirmier est en mutation pour mauvais comportement . Son registre n'était pas à jour depuis janvier 1989 . Ce poste est le plus proche de Kolwezi parmi tous . Reçoit les vaccins mais le système d'enregistrement des activités n'existe pas effectivement . Il faut attendre le travail du nouvel Infirmier pour juger de la viabilité financière de ce Centre qui garde ses promesses .

5. C.S. KOLWEZI ( le 19/03/1989 )

Le Centre est établi au centre ville dans un bâtiment qui fut un ancien hôtel . Le centre a été réhabilité par ISROS . L'Infirmier est très actif et organisé (depuis 1987) . Il est secondé par une équipe de 8 personnes . On peut noter une petite pharmacie (spécialités) . Les données statistiques sont bien tenues . Le centre qui est connexe à la maternité reçoit près de 60 malades par jour . 1 - 2 Médecins visitent le centre . 30 % des malades sont conventionnés . Le centre gère une moyenne de 40.000 zaires de bénéfice par mois .

Maternité et Dépôt médico-pharmaceutique de Kolwezi .

- Avec les apports ISROS et d'autres groupes européens (Danemark, Allemagne) la maternité de Kolwezi est quasi un petit hôpital avec tout l'équipement nécessaire voire en surplus . Exemple : 4 lits d'accouchement . Les différents services sont bien organisés et l'hospitalisation des mères accouchées se fait dans des bonnes conditions .

Il faut discuter en dehors de l'actuelle supervision des missionnaires de la maintenance et de l'autofinancement de ce centre .

- Visite du dépôt médico-pharmaceutique : stock limité à 3 mois

INTERVENTION DU MEDECIN INSPECTEUR REGIONAL .

Il a décrit à l'intention de la délégation les structures de l'inspection médicale qui est une division de planification et de coordination avec 7 bureaux qui s'occupent respectivement de :

- 1<sup>er</sup> bureau : services généraux .

- 2<sup>e</sup> bureau : hôpitaux .

- 3<sup>e</sup> bureau : pharmacie .

- 4<sup>e</sup> bureau : épidémies et endémies .

- 5<sup>e</sup> bureau : relations entre Médecins chefs de Zone et ISROS .

Autres points abordés : relations entre Médecins chefs de Zone et ISROS .

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RESPONSABLE PROJET 115 ( William David )

Points abordés : - objectif du projet eu égard au travail ISROS  
- niveau de collaboration .

Health Com. Ce projet basé actuellement à Lubumbashi et à Kasondo mène des études sur la communication au niveau des sociétés et des écoles . Le message actuel est limité à la réhabilitation orale ; une stratégie à développer au Luulaba .

Hydraulique rurale 116 .

Ce projet de USAID est comme le projet 116 hydraulique au Luulaba . Son but est de contribuer à l'amélioration de la santé de la population de cette Sous-Région, soit environ 150,000 habitants .

Le programme concerne : - 1.300 villages ;  
- 500 sources à réhabiliter sur 800 existantes ;  
- 20 conducteurs d'eau ;  
- 400 forages ( puits ) .

Le travail est organisé sur la base et sur Comité de Village (appelé à devenir un Comité de développement) en collaboration avec les Médecins Chefs de Zone . En effet, le Comité de Santé (son titulaire) est responsable de tous les ouvrages dans son aire .

ENTRETIENS .

\* A Mandji : avec tous les 4 Médecins Chefs de Zone où Centre construit ( Dilolo, Mutansa, Sandoa ) ;

Objet : - plan d'action et supervision ;  
- planification (critères) des Centres de Santé à construire par ISROS .

- Avec les Médecins Sans Frontières (MSF) ; niveau de collaboration avec les Centres de Santé et possibilité d'organiser en collaboration avec le SANRU des formations pour les Infirmiers de ces Centres de Santé .

\* A Kolmani . - Avec la Responsable de la pharmacie méthodiste points traités :

1. Budget du Dépôt : 25.000 US dollar ( à augmenter par l'Eglise ) .
2. Fourniture des médicaments aux Centres de Santé .
3. Supervision par le Pharmacien reconnu .

\* A Lubumbashi . - Avec J. Morocco et J. Hoover .

Questions discutées :

1. critères de sélection des Centres de Santé

4. proposition pour modèle simple des Centres à construire ;
5. commande des pièces de réchange pour les équipements ;
6. problème des fonds de contrepartie ( retard ) ;
7. évaluation du projet ( 1<sup>er</sup> ) en septembre 1986

- Avec Mgr. Katembo ( Evêque )

Points abordés :

1. impression de la visite sur les sites ;
2. proposition sur l'augmentation du budget du D<sup>é</sup>part<sup>é</sup> Médical de Kolwezi ;
3. Organisation de la supervision pour assurer la viabilité financière ;
4. qualité du personnel des future Centres de Santé ;
5. contribution de l'Eglise au financement des Centres de Santé ( actuellement l'essentiel, 2.800.000 Z va aux hôpitaux )

Un magasin central des pièces de réchange existe à Sandoa .  
Des critères ont été retenus pour l'aménagement des sources ou la construction des puits .

a) Critères pour sources :

- 100 personnes au minimum ;
- qualités physiques acceptables
- débit : ( 0-2-0.4 l/sec. = 300 personnes )
- pente suffisante ;
- accessibilité véhiculaire pour transport matériaux ;
- distance du village : 500 mètres
- participation de la population

b) Critères pour puits :

- 450 personnes au minimum ;
- acceptation
- entretien ;
- rayon de 500 mètres .

Maintenance : - un magasin central des pièces existe à Sandoa ( la population peut acheter de sa caisse commune ) .  
- un réparateur et un trésorier sont formés par le projet.  
- un laboratoire portatif existe au niveau du bureau du projet .  
La fin du projet qui est exécuté à 75 % est prévue pour 1990 .

Visite de courtoisie

Des représentants ont été envoyés pour examiner le plan d'installation des Centres de Santé ;  
Le Dr. Katembo est chargé de la supervision . La responsabilité est confiée au Dr. Katembo et au Dr. Katembo .  
L'essentiel est de garantir la qualité de la supervision .  
L'essentiel est de garantir la qualité de la supervision .  
L'essentiel est de garantir la qualité de la supervision .

## APPENDIX F

### SUGGESTED MINIMUM REQUIRED DRUG LIST

- Antimalarials (chloroquine, quinine) tablets; syrup
- Antehelminths (tablets, syrup)
- Antibiotics (tablets, syrup)
- Eye drops (antibiotics)
- Oral rehydration solution; anti-diarrheals
- Multivitamines (Folic acid & B complex)
- Iron tablets
- Antihistamines; antiallergenics
- analgesics (tablets, syrup)
- cough syrups; throat lozenges



## LIST de PERSONNES CONTACTES

---

### KINSHASA

1. Cit, Utshudi, USAID
2. Dr. Franklin C. Baer - Project manager SANRU
3. Cit. Manunga - Aménagement s/c SANRU
4. Dr. Duale - Project Director SANRU
5. Mr. Dennis Chandler - Director USAID/Kinshasa
6. Mr. Chris McDermott - Health Officer
7. Ms. Rhonda Smith - Health Officer
8. Dr. Glenn Post - Chief HPN

### LUBUMBASHI

1. Dr. Jeef Hoover - Director ISROS, Lubumbashi
2. Mg. Katembo - Eveque Eglise methodiste Sud Shaba
3. Cit. Mukengela Kankunku - Directeur Adjoint ISROS, Lubumbashi
4. Ms. Elisabeth Moracco - Representante HPN, USAID Lubumbashi
5. Mr. Joon Schubert - Conseiller Technique Health Cam USAID
6. Dr. Tshiula - Medecin Chef de Zone de Ruashi, Professeur UNILU
7. Cit. Mudahama Terera Sheja - Chef du Projet Hydraulique Rural a Lualaba
8. Dr. David Williams - Projet USAID 115 (routes)
9. Cit. Mayimbi Nzau - Architecte E.C.Z/ISROS
10. Dr. Mongolo - Medecin Inspecteur Regional du Shaba

### KOLUEZI

1. Mme. Laila Horby - Gerante Depot Medical Eglise methodiste Sud Shaba
2. Cit. Infirmier Responsable Centre de Sante de Koluezi

KASADJI

1. Rev. Chikomb Kachung Saupas - Pasteur Paroisse Kasadji
2. Christine Clevalier - Consultante M.S.P.
3. Dr. Marc Arbyn - Coordinateur M.S.P/Shaba
4. Dr. Mbuyi N'shimba - Medecin Chef de Zone de Dilolo
5. Dr. Tshimpanga Mutatshi - Mutsatsa
6. Dr. Kandal a Kamumb - Medecin Sous/Regional de Lualaba
7. Cit. Minga - Infirmier Titulaire C.S. de Kambalala
8. Cit. Yav Suau - Infirmier Titulaire C.S. Kayemba
9. Cit. Kazadi - Infirmier Titulaire C.S. Ndunga
10. - Infirmier Titulaire C.S. Divuma
11. - Infirmier Titulaire C.S. Mutsaba

HOPITAL GARAGANZE (KASADJI)

1. Dr. Coates - Medecin Directeur
2. Cit. Tshilunga - Administrateur Gestionnaire