

AGENCY FOR INTERNATIONAL DEVELOPMENT
PROJECT PAPER FACESHEET
 TO BE COMPLETED BY ORIGINATING OFFICE

1. TRANSACTION CODE (FAT APPROPRIATE BOX)
 ORIGINAL CHANGE
 ADD DELETE

34 pp
 DOCUMENT CODE
 3

2. COUNTRY/REGIONAL ENTITY/GRANTEE
 Cameroon

3. DOCUMENT REVISION NUMBER

4. PROJECT NUMBER
 631-11-590-201

5. BUREAU
 AFR
 ALCODE
 PE

6. ESTIMATED FY OF PROJECT COMPLETION
 FY 1801

7. PROJECT TITLE - SHORT (STATE WITHIN BRACKETS)
 [North Cameroon Rural Health Services]

8. ESTIMATED FY OF AUTHORIZATION/LEGISLATION
 a. INITIAL [675] b. FINAL FY [79]

9. SECONDARY TECHNICAL CODES (MAXIMUM SIX CODES OF THREE POSITIONS EACH)

10. ESTIMATED TOTAL COST (\$1000 OR EQUIVALENT, \$1K = _____)

11. PROGRAM ELEMENTS	FIRST YEAR			ALL YEARS		
	B. FX	C. L/E	D. TOTAL	E. FX	F. L/E	G. TOTAL
AID ADMINISTERED TOTAL						
(Direct)						
(Grant)						
OTHER						
U.S. 2.						
OTHER GOVERNMENT		20			100	100
OTHER DONOR(S)		150			952	952
TOTALS		170			1052	1052

11. ESTIMATED COSTS/AID APPROXIMATED FUND (1000)

12. AID SOURCE	FY 75		FY 76		FY 77		FY 78	
	B. GRANT	C. LOAN	E. GRANT	F. LOAN	H. GRANT	I. LOAN	K. GRANT	L. LOAN
SD	212		25		25		469	
TOTALS								

12. ESTIMATED EXPENDITURES: 0 120 90

13. PROJECT PURPOSE(S) (STATE WITHIN BRACKETS) CHECK IF DIFFERENT FROM PID/PRP
 [To establish a basic rural health education/community health services system serviced by a local cadre of low and middle level health workers in Northern Cameroon.]

14. BEING DIVULGED HERE IN THE PID/PRP FACESHEET DATA NOT INCLUDED ABOVE? IF YES, ATTENTION CHANGE PID AND/OR PRP FACESHEET.
 Yes No

15. ORIGINATING OFFICE CLEARANCE
 SIGNATURE: *[Signature]*
 TITLE: Office of Central and West Africa Regional Programs

16. DATE RECEIVED IN AID/1, OR FOR AID/1 ELEMENTS, DATE OF DISTRIBUTION
 NO. DAY YR. NO. DAY YR.
 6/24/75 6/24/75

6/24/75 - Cross Release MD75-58
 6/24/75

OPERATIONAL PROGRAM GRANT

PROJECT TITLE: North Cameroon Rural Health Services

PROJECT LOCATION: North Cameroon

PVO NAME AND LOCATION: Catholic Relief Services
P.O. Box 55
Victoria, Cameroon

CENTRAL HEADQUARTERS: Catholic Relief Services
United States Catholic Conference
1011-First Avenue
New York, N.Y. 10222

CONTRACT PERSONS: New York: Monsignor Wilson E. Kaiser, Tel. 212-838-4700
Cameroon: Richard L. Venegoni, Tel. 33-82-17

DATE OF SUBMISSION TO AID: May 21, 1975 ✓

IMPLEMENTING AGENT: Catholic Secretariat;
Bishops of Maroua and Yagoua
Box 49
Maroua, Cameroon

PROPOSED A.I.D. BUDGET: \$469,000

LIFE OF PROJECT: FY 1975 - FY 1980

TABLES OF CONTENTS

	Page
Introduction	1
I. Project Purpose and Description	1
A.1. Project Purpose	1
A.2. Target Group of Beneficiaries	2
B. General Description of Project	2
C. Conditions Expected at End of Project	3
II. Project Background	3
A. History of Proposal Development	3
B. CRS Experience in Project and Related Areas	5
C. Host Country Activity in Project Sector and Area - Past, Present and Proposed	6
III. Project Analysis	8
A. Economic Effects	8
B. Technology to be Used	8
C. Pertinent Socio-Cultural Factors	10
D. Statement of Project Relationship to Following Considerations in PVO Guidelines	12
E. Plan for Institutionalization of Project, Utilizing Domestic Resources	13
IV. Project Design and Implementation Plan	14
A. Implementation Plan	14
A.1. Description of Project Execution	14
A.2. How CRS Plans to Provide for Technical Assistance	15
A.3. Basic Assumptions about the Availability and PVO Management of Resources	15
A.4. Proposed Disbursement and Procurement Procedures	15
A.5. Schedule of Actions Required	16
B. Measurement and Evaluation of Project Accomplishment	17
C. Logical Framework Matrix	17
V. Financial Plan	21
A. A.I.D.	21
B. C.R.S.	22
C. Missions and Dioceses of Maroua and Yagoua	22
D. Government of the United Republic of Cameroon	22
VI. Conditions	23
A. Evidence that Project's Requirements for Supportive Resources Other than that Requested of AID will be Available	23
B. Evidence of Approval of the Proposed Project by the GURC	23

Attachments:

- A - Letter from Minister of Health to CRS Program Director
October 31, 1974**
- B - Bar Chart showing detailed implementation schedule for
first two years of project**
- C - Justification for Foreign-Source Procurement of Vehicles
and Motorbicycles**
- D - Baseline Data on Dispensary at Doukoula**
- E - Northern Cameroon Infant and Child Mortality Rates**

Introduction:

The Catholic dioceses of Maroua and Yagoua in North Cameroon have supervised, since 1948, the work of largely foreign missionary groups in establishing and running 12 dispensaries, including one hospital, for the rural population of the four northernmost departments of the North Province. Over the years, the missions' staffs have been able to advance from providing solely curative medicine to a mix of both curative and preventive medicine. To effect this mix, the staffs have begun training local personnel to be health agents on various levels, primarily with the intent of bringing health education to a wider radius of people in the environs of each dispensary. The ability of the missions to train a sufficient cadre of personnel to carry out these functions has been limited because of lack of resources.

Under this Operational Program Grant (OPG) Proposal for the proposed Rural Health Services Project in North Cameroon, AID would provide technical support, training costs and commodity support through the Catholic Relief Services, a Private Voluntary Organization, to the twelve rural mission dispensaries in an area of North Cameroon located in a broad region stretching approximately from the regions of Mora and Mokolo in the west to Yagoua and Kaele in the East. It is proposed to strengthen the missions' capability to train sufficient cadres of low and middle-level health workers to result in a systematized network of health education among the rural population presently being served in the project area.

The Regional Development Office, Yaounde and Catholic Relief Services Office, Cameroon, submitted a Project Review Paper on January 31, 1975. AID/Washington held a Project Committee Review on March 7, 1975, which approved the PRP and recommended that final project design be carried out. This OPG Proposal represents the final design document for presentation by CRS to AID for final approval.

I. Project Purpose and Description

A. 1. Project Purpose

This project aims to establish a basic rural health education system serviced by a local cadre of low- and middle-level health workers in northern Cameroon. This purpose serves to fulfill several national health priorities as outlined below, which can be expressed in synthesized form as the improvement of rural health delivery systems. By training potentially capable members of the local population, from dispensary aides and extension workers to state-enrolled nurses and health educators, this project seeks, in effect, to indigenize and propagate the work heretofore being carried out in a wide area

of northern Cameroon by mission hospitals and dispensaries staffed for the most part by expatriate personnel. Furthermore, this indigenization would establish a core of health agents on various levels who could provide health services to an increasing number of rural people in the region.

A. 2. Target Group of Beneficiaries:

The beneficiaries of this project will be the people reached by the health system set up as a result of the training program. They are all rural subsistence farmers who eke out a living from rocky or sandy soil. Their production consists mainly of sorghum. They sometimes produce peanuts, beans and cotton for cash crops but these crops are erratic and depend greatly on favorable climatic conditions. These people will learn practical techniques of hygiene, disease control, MCH care, nutrition and sanitation. These techniques will continue to be institutionalized through the village health committees.

B. General Description of Project:

Past and present activities carried out in the health sector by the missions have not fully accomplished what is needed to spread the effects of the mission dispensaries because the resources available for training sufficient numbers to generalize the impact in the northern region have been scarce. With the availability of additional funds, training of health agents on various levels would contribute to the establishment of a modest health delivery system in the region, with a network of coordinated dispensaries which are supervised from a center in Maroua, and provide to a growing area of influence health education and preventive and curative medicine, including maternal/child health.

By expanding the scope of training and numbers trained as shown in Section III., such a health service network can be encouraged. The basic infrastructure already exists in the form of the dispensaries and a hospital. The existing staff will serve to reintegrate the trained individuals into the milieu.

The current in-service training has prepared the more promising aides to undertake further training to qualify them for advancement. Training which cannot be provided locally is available at institutions in and around Yaounde, the capital city of Cameroon.

The project work in the North will be supervised by an expatriate nurse already living there. She has worked in the North for 12 years and her experience will be of immeasurable benefit to the project. CRS will be responsible for the correct administration of the funds and also for gathering the requisite data for reports, financial statements and evaluation for submission to AID. CRS will also supply medicines and their transport to the North.

The proposed five-year project period may not fully indigenize the dispensary staffs. However, it will show whether there are candidates who could continue with training as state-registered nurses and midwives. Furthermore, by the time that Cameroonians are qualified to take over the dispensaries, they will be supported by the dispensary and diocesan budgets. The GURC Ministry of Health has concurred in this project proposal. (See attachment A)

It should be noted, however, that the prospect of GURC assumption of these health services in the foreseeable future is very unlikely. As noted in section II. C., the Ministry of Health budget is typically inadequate to meet even the minimal objectives of the national development plan for the health sector. In effect, the missions are providing a sorely needed service to the rural regions of the north which, if such services did not exist, would simply be without any health services at all. The missions are largely supported by the diocesan budgets and the religious orders which staff the missions. Discussions with the National Catholic Development Office of Cameroon revealed that these sources would assume payment of salaries and support costs of the personnel trained under the project.

In addition to the costs of training and auxiliary support costs, which are low because of their indigenous nature, AID would provide a fixed monthly expense (not salary) and local travel costs of the nurse project director; one vehicle and 48 mobyettes plus operating costs; office equipment and communications.

C. Conditions expected at end of Project:

With numbers of health agents trained as projected in the logical framework matrix (see section IV.C. below), the following conditions will exist at the end of the five year period:

- 1) 360 outreach stations established and manned by trained health agents;
- 2) 120 village health committees formed;
- 3) Each existing dispensary (12 in number, of which the one at Tokembere is actually a 150-bed hospital) will have established a centralized system of data collection.

II. Project Background

A. History of Proposal Developments

Since 1948 missionaries have worked in the project areas building primary schools, hospitals and dispensaries - often the first schooling or medical services ever known to the localities. Attendance was at first hesitant, but today the schools are full and the dispensaries overworked. Although the literacy rate of the population is estimated at barely 20%, improved roads and communications facilities, in addition to primary education and medical.

services, have stirred in the people an incipient desire to learn and improve themselves. The impact of these dispensaries is still quite localized, however.

In recent years, expatriate nurses in charge of the dispensaries and hospitals have formulated plans for training extension workers and have, in fact, begun, in 1971, giving lessons on a weekly basis. Lesson subjects center on anatomy, hygiene, MCH care, environmental health, and disease control. Though attendance is voluntary, a certain number of students have proceeded to spread their knowledge to their villages. As de facto extension workers they teach hygiene, proper health practices (including MCH), sanitation, first-aid and nutrition. They have formed health committees as well, including the chief and village elders who have influence and command the respect of the villagers. These committees oversee the health, nutrition and hygiene work carried out in the villages. They also organize the villagers for projects such as well digging, latrines and garbage pits. These activities are supervised by the dispensary staff.

In essence, this is a very basic form of self-help carried out among relatively unsophisticated and uneducated people by members of their own ethnic groups, to whom they will readily listen. The extension worker, such as he is trained, usually teaches his fellow villagers for a couple of hours a day on a voluntary basis. The abler of these extension workers are employed at the dispensaries as aides and work with the nurses (expatriate, provided by missions). Some of them have acquired considerable experience and ability. Simple as it is, this state of affairs presents the opportunity for a variety of training exercises aimed at producing in the area a cadre of health agents able to provide preventive medicine/health education to the population in the region. The dispensaries have always aspired to extend and intensify their outreach activities, but lack of resources and personnel has so far placed this objective beyond reach.

The Catholic Relief Services organization, headquartered in New York and represented in Cameroon by a field director, is aware of AID's recent FVO directives. Its Regional Director for Africa has made two trips to Cameroon during 1974 for the purpose of embarking on new activities with GURC support and AID financing. This OPG emanates directly from a series of discussions between GURC, CRS and AID (RLO/Yaounde) officials during the past year. While the GURC was able to outline several activities of possible interest to CRS, this activity was chosen because of the degree to which it fits into new AID guidelines, CRS objectives and GURC priorities.

During September, 1974, the CRS Regional Development Consultant for Africa spent several (7) weeks in Cameroon conferring with government and diocesan officials in Yaounde and North Cameroon to do preliminary design work on this project. On the basis of this submission to CRS/New York and the headquarters' acceptance of the proposal, an RLO/Yaounde representative, along with the CRS Program Director for Cameroon and the Director of the National

Catholic Development Office spent several days in the project area visiting the dispensaries and preparing a Project Review Paper. This paper was prepared because the FVO Guidelines had not yet been communicated to RDO/Yaounde and because, in the interest of securing FY 1975 funding, it was judged necessary to present AID/Washington with a definitive PRP by January 31. Thus, the paper was prepared and submitted by the RDO, in close collaboration with CRS Program Director for Cameroon and Diocesan officials in Yaounde, Maroua and Yagoua.

AID/Washington held a Project Committee Review Meeting on March 7, 1975. The Committee concluded that the PRP was analytically sound and that final project design should be undertaken immediately. The Committee cited the need for the final design to take into account the issue of the manner in which this activity is to be integrated or linked with national health infrastructure. Further discussion of this point contained in Section III. B below.

The Committee suggested that end-of-project-status indicators be carefully quantified, in order to avoid unrealistic expectations with respect to project achievements. It also recommended a five-year project life, while the PRP had proposed only four years' duration. Most important, the Committee called upon the final design product to demonstrate the ability of the activity to survive on its own once AID external assistance is withdrawn.

All of these issues are addressed in Section III below as well.

B. CRS Experience in Project and Related Areas:

The Catholic Relief Services organization is presently directing development programs in 22 African countries and 70 countries worldwide. The organization's title reflects its own history: it was begun during World War II by the U.S. Catholic Conference to relieve human suffering in countries devastated by the war. Over the years, however, CRS programs have taken on an increasingly developmental character in less developed countries.

The Cameroon office of CRS is located in Victoria, Cameroon. The CRS has been active in Cameroon since 1962, and a recipient of PL 480 Title II commodities for its pre-school MCH program since 1966. It also distributes medicines, hospital supplies and equipment to clinics, dispensaries and hospitals in the country, especially in the western and north regions and supervises and administers 64 MCH clinics in former West Cameroon.

While CRS/Cameroon enjoys close collaboration with the Catholic church establishment in Cameroon, this project represents the first major effort on the part of CRS in the Northern region of the country. The presence of the Catholic missions in the dioceses of Maroua, Yagoua and Garoua presents to CRS the happy opportunity to collaborate with an existing, viable structure in a priority development area of the country, which, though traditionally backward, has experienced even more hardship due to the

effects of the recent Sahelian drought. The development potential of this area is currently the focus of much attention on the part of the Government of Cameroon and external assistance agencies such as AID, the FAC, the FED, UNDP and the World Bank.

C. Host Country Activity in Project Sector and Area - Past, Present and

Proposed:

AID's preliminary Development Assistance Plan (DAP) for Cameroon identified the Cameroonian Government's (GURC) priorities in the health sector as; inter alia:

- 1) Increasing the ability of the Cameroonian population to participate in development activities by providing comprehensive curative, preventive and health education services throughout the country;
- 2) Shifting the focus of services from curative toward preventive programs aimed at the rural populations;
- 3) Increasing the quantity and the quality of manpower development;
- 4) Increasing the quantity and the quality of health facilities; and
- 5) Decreasing the morbidity and mortality of diseases sufficiently to raise average life expectancy from 43 to 55 years by 1980.

While many of the urban health facilities in the country are staffed by Cameroonian civil servants, employed by the Ministry of Public Health, rural areas are serviced more by private or missionary stations. This is especially true in the Northern Province, where infrastructure, as well as human resources development, lags behind the rest of the country.

On a national basis, the health sector has been hampered by amounts of government credits insufficient to fulfill its plan budget. The DAP cites the fact that during the second plan period (1966-70) the health sector received less than half its planned budget resources and averaged only 9% of the national budget. Although funds received for the period of the third plan (1971-75) increased by 87%, the sector's share of the national budget has dropped below 7%. This disappointing real performance is due largely to sharply increasing competition for official resources, world wide inflation and increased costs for imports of petroleum products. External assistance is expected to provide nearly half of the third plan's health budget.

Due to shortages of funds and personnel, as well as the weight of tradition, the GURC has typically concentrated on providing curative services. It is now attempting to build a more comprehensive system of both curative and preventive medicine by starting at the center and gradually working outward. With this approach alone the rural population would be the last to benefit and the gap in services between urban dwellers and rural people would continue to widen.

There is an increasing frequency of articles in international health publications which question whether Western medicine and the M.D. system is the best approach for developing countries. These articles advocate increased reliance upon auxiliaries and paramedical personnel. The emphasis of much of the external assistance to Cameroon's health sector in the past has been on the traditional M.D. approach, but is now switching perceptibly towards the initiation of a system providing health services which are capable of maximum outreach, i.e., paramedical.

In the region of the north where the mission dispensaries are located, there is little GURC activity in the health sector. The Ministry of Health does, however, provide to the missions, through the National Catholic Development Office in Yaounde, a modest cash contribution each year. The NCDC is in the process of gradually shifting more of these resources to its northern missions, where the need is perceptibly much greater, in such a way as not to deprive too abruptly the missions in other parts of the country of government supplies to which they have become accustomed.

The missions are filling a role which will, we assume, eventually be transferred to the government, although this process will take many years. In the meantime the missions are competently complementing in the countryside what the government dispensaries, clinics and hospitals are doing in the towns and cities in the North and are prepared to continue to do so. There is no overlap or duplication of resources and the government is satisfied and grateful for the efforts being carried out by the mission establishments. Thus, GURC Minister of Health has given his formal approval to the CRS proposal (See attachment A).

This OPG does not contain a timetable for eventual transfer of responsibilities and functions from the missions to the GURC. The missions operate under the sponsorship and authority of the Catholic dioceses of the northern province, which are permanent entities. They function in close collaboration with the government authorities, so that unnecessary duplication or unproductive conflict of policy is avoided. In other words, there is no inherent, organic need for transfer of mission health functions and facilities to government control within the foreseeable future. The two entities complement each other geographically and government assumption of the missions' activities will necessarily be a function of the GURC's ability to devote more resources to the health sector.

III. Project Analysis

A. Economic Effects:

Health projects of this nature have only indirect economic effects on the target beneficiaries and related groups. The target population lives a bare subsistence economy existence. The land they till is either rocky and spatially insufficient for their consumption and nutrition needs or sandy and dry barely productive due to years of traditional use without provision for regeneration, overgrazing by nomadic herds of livestock, etc.

Section II.A. deals with the background and history of the missions' establishments, i.e. the dispensaries which have been set up and managed by expatriate missionaries. With their present resources, the number of people serviced by their health facilities is about 200,000. The total budget for the twelve dispensaries during FY 1974 was \$100,000, for an average expenditure of \$.50 per person. It is expected that this OPG would provide sufficient resources to extend basic health education, preventive medicine and health community organization to an additional 200,000 people. This represents approximately one-half of the total rural population of the Departments of Diamare, Logone et Chari, Margui-Wandala and Mayo-Danai. At a proposed total project cost of \$1,541,000, overall annual cost per recipient would be \$.77 . This should be seen in the context of a national per capita health expenditure of slightly more than \$2.50.

Improved health will lead to more efficient use of time devoted to work and a consequent increase in productivity. Trained cadres of health agents will have incremental spin-off effects on the target population, so that better health services will be available to an increasing number of people and to an increasing area of the north even after project assistance is terminated.

B. Technology to be Used:

Existing institutions in Cameroon and adapted training programs will be utilized to provide the training as outlined below.

The OCEAC (Organization for the Fight against Endemic Diseases in Central Africa) is a regional organization headquartered in Yaounde. It is comprised of five member states: Cameroon, Chad, Central African Republic, Congo and Gabon. In addition to maintaining surveillance of endemic diseases and distributing vaccines to member countries, OCEAC has a division of health education at its headquarters. All, under project 625-510, has been directly assisting OCEAC since 1971 in attempting to strengthen its management of health education by working in pilot zones of Cameroon, Central African Republic and Chad to develop rural health education methodology

adapted to the local context. OCEAC's Health Education Center is ideally suited to provide the training in rural health and microscopy as described in Section I.B.

The Mission Nursing School in Yaounde and the St. Andre Hospital in Pouma were established in 1960 to train nurses and auxiliary nurses in two and one-year courses, respectively. The Yaounde institution has functioned mainly as the learning center, pedagogically, while practical formation has been applied at Pouma. By governmental decree no.66 dated November 1973, degrees in nursing were limited to the National Nursing School. Private institutions could henceforth grant only auxiliary degrees. For this reason, the auxiliary nursing training and the first year of the nursing training envisioned under this project will be given at the two private institutions. The second year of nursing training will be provided at the National Nursing School in Yaounde, which is an adjunct of the Ministry of Public Health.

The appropriateness of the proposed technology is most aptly demonstrated by the history of its application over the past 27 years. Over the years, the missions have methodically expanded their staffs and facilities to the point where further assistance beyond their own resources is now necessary if their efforts are to have a greater impact, in terms of both target population and geographic area covered. Training needs have been identified, matched against available, qualified personnel capable of absorbing the training requirements as follows:

<u>Program</u>	<u>Duration</u>	<u>Place</u>	<u>Number to be trained</u>
Health Extension Agents	6 days	12 dispensaries	240 per year
Dispensary Aides	10 days	4 dispensaries	20 per year
Rural health	3 months	OCEAC/Yaounde and dispa	2 per year
Auxiliary nursing	1 year	Mission Nursing School/ Yaounde and St. Andre Hospital/Pouma	10 per year
Nursing (State enrollment)	2 years	Mission Nursing School/ Yaounde, St. Andre Hospital/Pouma and National Nursing School/ Yaounde	4 per year
Microscopy	3 months	OCEAC/Yaounde	2 per year
Health Educ. Methodology	8 days	Dispensaries	20 per year

The twelve dispensaries involved in the project are listed below. Each dispensary also serves several out-stations providing curative medicine.

<u>Locality</u>	<u>Number of Nurses</u>	<u>Number of Aides</u>
Douvengar	1	2
Lara-Kaele	1	5
Mindjil	1	2
Djiaglia	1	1
Mayo-Ouldeme	1	5
Mokolo	3	16
Sir	1	3
Tokombere	2	8
Zamai-Mokong	1	2
Doukoula	2	1
Grand Viri	1	3
Gobo	1	2
	<hr/>	<hr/>
<u>TOTALS:</u>	<u>16</u>	<u>50</u>

There is one hospital at Tokombere (150 beds). The other dispensaries shelter patients in out-buildings. Patients treated per year vary from 4,300 to 67,000 according to locality.

C. Pertinent Socio-cultural factors:

During the long history of the Catholic mission dispensaries' health activities in the North, minimal interference with traditional values has taken place. Because the rate of literacy is so low, the greatest difficulty has been in imparting to the people an awareness of the causal relationship between living environment and disease; more specifically, in making the people conscious of the degree to which they can control factors in their environment to their betterment.

The Overseas Scientific and Technical Research Organization (ORSTOM) has published several studies on the northern populations, which include some demographic as well as socio-cultural data. Among these studies, the following are particularly relevant:

Les Matakam du Cameroun, J.-Y. Martin, 1970

La Dynamique des Principales Populations du Nord-Cameroun, A.-M. Poslewski, Tome I, 1966

A general study on the pagan populations of the north (usually called Kirdi), has been written by Yves Schaller: Les Kirdi du Nord-Cameroun, 1973. The most relevant study to this project is that by Mr. Poslewski. In his work he devotes a chapter to each of the principal tribes of the North. Each chapter includes data on average marriage ages, infant mortality rate and average life span. This work is well known to the mission staff in the North and has, in fact, been used as background in the writing of this paper.

Among the various tribes in the project area, socio-cultural values and customs naturally vary to some extent. This variance is probably most marked between the Moslem (Fulani) and the pagan tribes (Kirdi). (Kirdi is a Fulani name used to apply to all non-Moslem tribes in the North.)

Nevertheless, certain threads of similarity can be discerned among the various tribes, regardless of whether they are located in the barren, rocky hills of the western area, in the sandy flatlands of the center or the river floodplains of the east. The most common denominator relevant to this project is the people's ignorance of basic health principles. Their values are determined by their close relationship to, and dependence upon, their land. As is the case most often with rural people in backward areas, these people tend to eschew the new, the (to them) untried and the strange.

Role of Women

The high infant mortality rate and minimal understanding of pre- and post-natal care render the role of women a core concern in this project. Maternal/Child health education and care will be inseparable from the overall program scheme.

The role of the women in the family as protector of her children's health and disseminator of values - including health values - to her offspring is clearly supported by this project. Although societal values in the North appear to limit, at least for the most part, the training of health agents to men, women will clearly benefit from improved health education propagation to the population.

As explained in Section II.C., the government's health infrastructure in the north is confined almost entirely to the urban population. This project will extend the mission infrastructure to much of the populated areas outside urban concentrations presently served only partially by mission facilities. In enabling the mission to expand their areas of influence, a delivery system manned by trained Cameroonians will complement the mission expatriate staff and ultimately replace them. When the government is in a position to extend its health delivery system into the rural communities in the North, the mission infrastructure established by this project should provide a valuable source by experienced personnel.

There are neither any interests which will be harmed by implementation of this project nor are there any opposition elements likely to be encountered.

D. Statement of project relationship to following considerations in FVO Guidelines:

- Directness of project impact upon people who constitute the poorest majority and are often beyond the reach of public services;

The project description indicates the extent to which this consideration is fulfilled. The existing mission establishments service a portion of the population of North Cameroon to which the GURC has been unable to bring health services. This proposal would enhance the missions' ability to rationalize, integrate and expand the present facilities to a more viable and extended health delivery services system with a trained cadre of workers drawn from the areas serviced, so that when they are able to do so, the Cameroonian Government can consider integrating these rural services into its Ministry of Health structure. Other health activities being carried out in the project area include immunization and disease surveillance.

It should also be pointed out that the recent Sahelian drought, which affected crops and water availability in the North of Cameroon, has resulted in increased interest on the part of the G.U.R.C. and external donors in that region of the country to protect and enhance its meager resources, especially in the sectors of agriculture and livestock. A.I.D. has submitted proposals to Washington, with the concurrence and participation of G.U.R.C. officials, for projects in seed multiplication and distribution, integrated rural development and centers for training farmers; the French aid organization (F.A.C.) has signed an agreement with the G.U.R.C. to construct catchment basins in the hill area of the Margui-Wandala department where four of the dispensaries are located. The UN is sponsoring an ongoing water resources project to identify subsurface sources.

- Potential for project is spread to larger numbers of people over an extended period of time and how this should best come about. The spread effect of this activity has been explained in Section III.A. With the assurance of continued budgetary support by the diocesan structures, the trained health agents will be able to continue their efforts after the AID support is terminated. In addition, CRS has a long term interest in Cameroon, and expects to continue supporting the project in the North for an indefinite period. Thus final numbers of trained health agents will surpass the figures given in this proposal.

- Potential for wide scale application of the project based on domestic resources. As explained in Sections I.B. and II.C., the GURC is unable to allocate all necessary budgetary resources to fulfill all the priorities in the health sector as listed in the 5-year development plan. The willing presence of the mission dispensaries and staff, along with the GURC's gratitude for their presence, assures the continued viability of this system for the indefinite future. As development projects in the north continue to be designed and executed, the health sector will have to be given more attention. As agricultural and educational (human resources) programs are mounted, increasing demands will be felt in the health sector. This probably will provide, over time, the impetus for the GURC to extend health infrastructure to the north; the missions' efforts and facilities undoubtedly will facilitate the ability of the GURC to assume eventually (and certainly quite gradually) responsibility for health delivery services in the rural areas of the north.

E. Plan for Institutionalization of Project, Utilizing Domestic Resources:

While withdrawal of the expatriate nurses is not anticipated in the foreseeable future, neither are they considered merely a temporary, i.e., life-of-project, input. They and the facilities they staff are permanent establishments under the auspices of the dioceses of Maroua and Yagoua. The mission dispensaries they direct are, indeed, institutions. The manner in which this project will have an impact is as follows: by the end of the five year project period, a total of 1390 Cameroonian health agents, on various levels, will have been trained. Thus trained, they will form cadres of workers who can systematize the ongoing work of the dispensaries and extend the areas of the dispensaries' influence, both in terms of geographical area and numbers of people reached (see Sections I.C. and III. A.).

The ability and willingness of the dioceses to maintain and continue support to the dispensaries, including employment of the health agents trained under this project, is explained in Section II.C.

This differs from the figures presented in Section III.B. because the health education methodology training carried out in the dispensaries themselves is for the expatriate nurses to enable them to impart principles of health education more proficiently to the dispensary aides.

This project represents a first step toward having the GURC work through voluntary agencies in the further development of a rural health service. While primarily focused on improving preventive/curative services for a rural population, this activity is also to improve the training of health manpower for new responsibilities in community health/health education. The project has been examined by the GURC with a view toward replicating its activities elsewhere. The Government of Cameroon is cognizant of the need for close coordination and cooperation with this and other groups so that its evolving health master plan, where emphasis is placed on a step by step development of manpower and services, will be strengthened. We are reasonably assured that the project activity is consistent with the master plan. To this end the activities of the project are reasonably certain to be institutionalized, even though final arrangements for their incorporation into the governmental system have not been made.

For the present, however, the government is providing financial assistance from its regular health budget to the dispensaries engaged in the project activity. Further, the Catholic Relief Services is in the process of obtaining written assurances from the local dioceses that the dioceses will continue the project activities to the best of their ability upon termination of CRS participation and A.I.D. funding. These assurances have already been given informally.

IV. Project Design and Implementation Plan

A. Implementation Plan:

1. Description of Project Execution:

The people responsible for project implementation are the nurses, dispensary aides and a few priests now living and working in the villages of the north. Since they work within the jurisdiction of the Catholic dioceses of Maroua and Yagoua, they are responsible to the bishops of the two dioceses where the 12 dispensaries are located.

All of the mission dispensaries and the hospital in this region of the north are run by expatriate personnel. They have formulated a plan to indigenize medical and other services.

The first phase has already started. Motivation, no easy task in this region, has been going on for several years and is at last beginning to bear fruit. The nurses in charge of the dispensaries and/or the hospital are training extension workers, giving lessons in some basic subject once or twice a week. The subject may be anatomy, body hygiene, female genital tracts with pregnancy and delivery, environmental hygiene, (latrines and the use of clean water included), and prevalent diseases such as malaria, parasites, etc. Anyone who wishes may attend these lessons but not all are prepared to pass on the knowledge they have acquired. Those volunteers who do work in the villages pass on what they have been taught in the dispensaries as extension workers. They teach hygiene, proper health practices, sanitation, first aid and nutrition. They also form health committees in the villages to include the chief and the elders who have influence over the villagers. The committees oversee the health, nutrition and hygiene work and organize the villagers for projects such as well digging, latrines, garbage pits, etc. These activities are all supervised by the dispensary staff. It is the most basic form of self-help carried out among very primitive people by members of their own tribes, to whom they will readily listen. The abler of these extension workers are employed at the dispensaries as aides and they work with the nurses. Some have by now acquired considerable experience and ability.

The nurses have planned the next steps as follows: They consider that the current in-service training has prepared the abler aides to undertake further training to qualify them for advancement.

In addition to seminars in the north for extension workers and dispensary aides, some of the better qualified aides will be sent to 12-month training courses in Yaounde to become auxiliary nurses. Others will be sent to two-year training courses to become state enrolled nurses (R.N.), three-month rural health training courses and three-month microscopy courses.

As the local training advances, the expatriate nurses feel that they will need more knowledge in rural health work and training in teaching methods for primitive tribes and how to apply them. An annual seminar for this purpose is included in the project.

2. How CRS Plans to Provide for Technical Assistance:

CRS intends to execute the project through the Catholic dioceses of Maroua and Yagoua. Moreover, CRS, in addition to administering funds and reporting, will channel and direct medicines, drugs, vaccines and hospital supplies to the north. The total dollar value of CRS inputs including transport costs will be at least \$208,000 over the project life.

The technical assistance will be carried out by the mission staffs in the north, including physicians, nurses, midwives, and nursing assistants. Actual implementation of the project will be the responsibility of the mission staffs. Funding to permit the activities proposed in the project description will be dispursed according to procedures listed in Section IV, A.4., below.

3. Basic Assumptions about the Availability and PVO Management of Resources:

It is assumed that C.R.S. will continue its work in the field of Health/Nutrition and MCH in Cameroon for the life of the project and long after and that CRS will make available medicines, drugs and transport costs to contribute to the project.

4. Proposed Disbursement and Procurement Procedures:

Funds for this project will be channelled by A.I.D. to CRS/New York upon demand according to a format to be arranged between A.I.D. and C.R.S. CRS/New York will provide funds to the C.R.S. Program Director in Cameroon on a regular basis.

The C.R.S. Program Director will make all necessary and valid payments, purchases and reimbursements upon receipt of proper statements and/or bills. The nature of this project will entail a substantial amount of local procurement. The Program Director will submit to CRS/New York a financial report on the project every six months, the first being due six months after the effective date of the OFG.

Receipts and accounts will be retained until the final audit of the project is undertaken.

5. Schedule of Actions Required:

Below is a schedule of actions and responsibilities for the first two years of the project. Subsequent years will follow the same annual schedule and, of course, final reports and evaluation will be submitted. Interim evaluations may necessitate alterations in the schedule as presented herewith.

(i) First Year:

1. UFG Approval
2. Grant Agreement signed between AID and CRS.
3. Hire Project Field Director.
4. Place order for initial tranche of commodities, and provide support costs to Project Field Director
5. Organize 12 seminars for extension workers.
6. Organize three seminars for dispensary aides.
7. Organize nurses' seminar.
8. Select candidates for training in Yaounde - public health, state enrollment, auxiliary nurses, and microscopists.
9. Arrange travel for public health course.
10. Mid-year meeting of CRS Program Director and Project Director to discuss project implementation to date. ChS will compile and submit progress and financial reports.
11. Microscopists return from Yaounde (after three months).
12. Identification of appropriate candidates for auxiliary nursing training and state enrollment training.
13. Planning of 12 seminars of extension workers to be held during following year.
14. Arrange one seminar for dispensary aides and plan three more for next year.

(ii) Second year:

1. First Evaluation: CRS Program Director and Project Director will visit the dispensaries to ascertain to what degree the first-year targets have been achieved and to discuss with everyone concerned the results of the seminars, the impact of additional transport and what level of improvement of services has been attained. Evaluation report.

2. Twelve seminars for extension workers to be held .
3. Three seminars for dispensary aides to be held.
4. Selection of candidates for four courses in the Yaounde area to be made as during the first year.
5. The results of the first courses in auxiliary nursing training and nursing training (state-enrollment) will be evaluated.

(See Bar Chart, attachment B)

B. Measurement and Evaluation of Project Accomplishment:

Evaluation exercises will be carried out each year, using the verifiable indicators listed in the logical framework matrix as benchmarks.

In the PRP, it was proposed that the project director would set about gathering statistics from the dispensaries and establish baseline data in two areas not presently affected by the dispensaries' services, to serve as control points. This has not been possible, due to the press of normal duties on her and all the mission staff. Thus it is proposed to include in the budget funds for consultant services to establish the requisite baseline data for future evaluation purposes. It is anticipated that local services could be utilized, most probably medical students from the University Center for Health Sciences (C.U.S.S.) during the summer months, for a total of 24 man months. This undertaking will provide the needed pre-project status data.

Specific data from the dispensary at Doukoula have been assembled and are included as Attachment D to this proposal.

C. Logical Framework Matrix

1. Program or Sector:

(a) Goal

The sector goal to which this project will contribute is the improvement of rural health delivery systems in Cameroon.

(b) Measures of Goal Achievement: degree to which the health services system established contributes to a national system.

(c) Means of verification:

The following means will be used to verify project success:

- (i) dispensary records;
- (ii) final data-gathering.

(d) Important Assumptions for achieving goal targets:

- (i) Training will continue with increased share of local funding.
- (ii) Extension workers will succeed in educating villagers.
- (iii) Increased GURC priority on rural population.
- (iv) Health activities, whether sponsored by the government, by private institutions, or by traditional practitioners, are regarded as being valid components of a national health system.

2. Project Purpose

(a) Purpose: Establish a system providing basic health package of education, hygiene, and preventive/curative medicine, to the rural population in a region of northern Cameroon.

(b) Conditions that will indicate purpose has been achieved (End of Project Status):

- (i) 30 outreach stations established by each dispensary;
- (ii) 30 village health committees formed.
- (iii) 12 functioning dispensaries with centralized data collection;

(c) Means of Verification:

- (i) observation;
- (ii) annual or twice-annual checking of dispensary and village statistics;
- (iii) project reports.

(d) Assumptions for achieving purpose.

- (i) The trained workers can set up the system.
- (ii) The population will be receptive.
- (iii) Dispensaries will continue to function.

3. Outputs

(a) Outputs (Annual):

- (i) Six-day seminar at each of 12 dispensaries for 20 extension workers;
- (ii) Four seminars for total of 80 dispensary aides;
- (iii) Three-month combination theory/practice rural health education course at OCEAC/Yaounde for two dispensary aides;
- (iv) One-year training in auxiliary nursing at Mission Nursing School, Yaounde for ten dispensary aides;
- (v) Two-year course in nursing training for four candidates at St. Andre Hospital, Pouma; and at National Nursing School, Yde
- (vi) Three-month microscopy course for two candidates at OCEAC/Yaounde;
- (vii) Eight-day seminar at dispensaries in rural health education methods for 20 nurses.

(b) Magnitude of outputs (5 year life of project):

- (i) 1,200 extension workers trained;
- (ii) 400 dispensary aides trained;
- (iii) 10 rural health educators trained;
- (iv) 50 auxiliary nurses trained;
- (v) 16 nurses trained;
- (vi) 10 microscopists trained;
- (vii) 100 nurse/health education methodologists trained;
- (viii) Hygienic measures adopted on village level;

(c) Means of verification:

- (i) Inspection of records and periodic reports;
- (ii) Field visits to dispensaries and pilot villages;

(d) Assumptions for achieving outputs:

- (i) Numbers of trainable Cameroonians are available in quantity projected;
- (ii) Inputs can be provided in timely manner.

4. Inputs

(a) Inputs:

- (1) AID: Field
 - Technician (Project/ Director) support costs;
 - Vehicles and motorbikes (including spare parts);
 - Training costs;
 - Student data gatherers;
- (ii) CRS and Missions:
 - Technicians' salaries and support costs;
 - Local staff;
 - Medical supplies (drugs) and transportation costs;
 - CRS administrative costs.
- (iii) GURC:
 - Annual financial contribution.

(b) Implementation Target:

- (i) Funds obligated (late) FY 75;
- (ii) Orders placed early FY 76
- (iii) Training courses set up beginning September 1975 .

(c) Means of verification:

- (i) Monitoring by RDO and CRS staff;
- (ii) Liaison with CRS/Cameroon;
- (iii) Gathering baseline statistics from dispensaries (74/75) and four pilot villages.

(d) Assumptions for providing inputs:

- (i) Waiver on foreign source procurement of vehicles.

V. Financial Plan (Five-year life of project)

A. A.I.D.:

1. Personnel Costs

Director	
- Project Field/Living Allowance (60m/m)	\$ 30,000
- Student Data Gatherers (24 m/m)	5,000
Total Personnel Costs	<u>35,000</u>

2. Training Costs

- Health extension agents: 240/year X 5 yr.	\$ 10,000
- Dispensary aides: 20/year X 5 years	5,000
- Rural health training : 2/yr X 5 yrs.	8,000
- Auxiliary nursing training: 10/yr X 5	72,500
- Nursing training: 4/yr X 20 man/yr	46,000
- Microscopy training: 2/yr X 5 yrs	6,000
- Health education methodology training: 20/year X 5 years	10,000
- Visual aides	7,500
Total Training Costs	<u>\$165,000</u>

3. Commodity Costs

- Renault 4 (2) plus operating costs *	\$ 60,000
- Mobyettes (48) plus operating costs *	100,000
- Office equipment and supplies	6,500
- Training materials	7,500
Total Commodity Costs	<u>\$174,000</u>

4. Other costs

- Technician's local travel	\$ 10,000
- C.R.S. project-related and adminis- trative costs	45,000
- Invitational travel	10,000
- Contingency	30,000
Total Other Costs	<u>\$ 95,000</u>
TOTAL A.I.D.	<u>\$469,000</u>

* Justification for foreign-source procurement is appended as Attachment C.

B. Catholic Relief Services:

1. Personnel and Administrative Costs

- C.R.S. Cameroon Program Director (1/4 time)
plus C.R.S. Personnel @ \$5,000 per yr. \$ 62,500

2. Commodity Costs

Medicines, drugs, vitamins, vaccines and
transportation costs \$240,000

TOTAL C.R.S. \$302,500

C. Missions and Dioceses of Maroua and Yagoua:

1. Personnel Costs

- Housing, salaries and expenses of 29
missionary nurses \$550,000

2. Other Costs

- Use of existing missionary dispensaries,
clinics and hospitals 100,000

TOTAL MISSIONS AND DIOCESES OF MAROUA AND
YAGOUA \$650,000

D. Government of United Republic of Cameroon

1. Other Costs

- Portion of financial budgotary contribution
of Ministry of Health to National Catholic
Development Office which is applied to the
northern dispensaries \$100,000

TOTAL G.U.R.C. \$100,000

TOTAL PROJECT COSTS \$1,541,000

VI. Conditions

A. Evidence that Project's Requirements for Supportive Resources Other than that Requested of AID will be available:

Other project inputs as listed in the Financial Plan represent, in fact, ongoing activities whose continuation is assured for the indefinite future.

C.R.S. has, for the past several years, been supporting and assisting the mission dispensaries, maternities and hospitals in northern Cameroon. During Calendar Year 1974, \$100,000 worth of medicines from the U.S. were distributed to the North.

In the first six months of 1975, medicines and powdered milk from Holland valued at \$136,000 have been sent to the North through the auspices of the C.R.S. Most of the medical supplies allocated by CRS headquarters to CRS/Cameroon are now being sent to the north. CRS' international donors have responded to the northern need by sending more goods this year than in previous years.

The Catholic dioceses of Maroua and Yagoua supervise the activity of the Catholic missions within their jurisdictions. Their budgetary support, along with the resources of the missions, grouped together under Section V.C., are permanently certain.

B. Evidence of Approval of the Proposed Project by the GURC

Letter of approval from the Minister of Health (see Attachment A).

**MINISTRY OF HEALTH
AND PUBLIC WELFARE**

**UNITED REPUBLIC
OF CAMEROON**

Attachment A. .

31 OCT 1974

REF: Your letter of October 3, 1974

The Minister of Health and Public
Welfare

to Mr. Richard Venegoni

to Mr. Director,
Catholic Relief Service,
P.O. Box 55
VICTORIA
Department de FAKO,
Province du Sud-Ouest

— Mr. Venegoni,

In reference to your letter noted above, you have requested permission to extend your activities to North Cameroon; specifically in assisting the 12 mission dispensaries in the Departments of Margui-Wandala, Diamare and Mayo-Denai. This proposal concerns an important training activity in the area of health education for the Cameroonization of health education work.

I am pleased to inform you that I approve your undertaking this project as a whole.

/s/

Paul Fokam Kamga

Minister of Health and
Public Welfare

Attachment C

Justification for Foreign-Source Procurement of Vehicles and Motorbicycles

The location of the project activity is in the Northern Province, where no repair facilities or spare-parts facilities for American vehicles exist. In case of the breakdown of any vehicle, even French-made, and consequent need for emergency repair in the project area, the only known garage facilities are in Maroua, where the project director is located. The Maroua facilities are suitable for French vehicles only.

The terrain and the roads throughout are quite rugged. Virtually all the dispensaries are located quite far from any paved roads, which constitute a miniscule percentage of the road network in the four departments. In fact, outside of the town of Maroua, there are virtually no paved roads in the project area. It is to be expected, therefore, that the project vehicles will be subjected to considerable wear-and-tear, and will have to be well maintained on a rigorously regular basis in order to assure necessary longevity. An American vehicle could not be maintained in the project area and would quickly become useless.

ATTACHMENT D

Baseline Data and other Information on the Doukoula Dispensary

1 - Statistics of outpatients clinic

a) the staff and its qualifications:

1 worker: illiterate

4 health assistants:

. 1 with 7th grade level

. 1 with 6th grade level

. 1 with 3rd grade level

. 1 with 5th grade level

1 participant: with 6th grade level

Presently: one with the 6th grade level is attending the health attendants school in Douala.

b) Training:

3 training courses per week:

2 professional training courses

1 general studies training courses

c) Number of patients from March 1974 to March 1975: 13,356

Number of consultations: from March 1974 to March 1975: 92,553

d) Common diseases:

Malaria, bronchitis, broncho-pneumonia, amoebiasis, bacillary dysentery, hookworm, schistosomiasis, hepatitis, venomous bites, burns, intestinal trichomoniasis, toxicosis, renal lithiasis, syphilis, gonorrhoea, conjunctivitis, measles, meningitis, leprosy, whooping cough, ascariasis, tapeworm saginata, oxyuriasis, tetanus, phagous ulcer, otitis, kwashiorkor, avitaminosis A (hemeralopia), avitaminosis C (scurvy), poliomyelitis, fibromas, sterility, miscarriage, puerperal fever, hydrocele, inguinal hernia, kidney infections, cystitis, rheumatism, osteomyelitis, cirrhosis, thrush, flu, stomach ulcer, tonsillitis, scabies, tinea, mycosis, diarrhea, trauma and injury caused to soft living tissues, Some: coma, asthma, dental cavities, extra uterine pregnancy, miscarriage, tuberculosis, hemiplegia, cancer.

2 - Description of outpatients clinic site:

North Cameroon, Yagoua Diocese, department of Mayo-Danai, Kar-hay sub-prefecture, Doukoula sector. Doukoula district has 33,119 inhabitants. Tchatabali district has 15,000 inhabitants of the Toupouri tribe. This tribe is a hard-working one open to change and to literacy, especially the boys. Young men with a 6th grade level enlist themselves in the army, mainly in the police. Population is 98% rural.

3 - Food crops

Main crops: millet, peanuts, manioc, green beans, sesame, field peas, herbs for sauces. They eat millet balls with various sauces and also millet porridge. Most people eat twice daily but during periods of shortage only once, if any. They eat few eggs. Herders drink milk. Their diet is very poor in animal proteins. The annual income of about 50,000 CFA per household (average 8 - 10 persons) is used for food, clothing and purchase of livestock (generally goats and sheep). Cows are mainly kept for dowry.

Some of them earn money from local crafts, ropes, straw, bricks, rooves and also from the sale of cotton and their food crops. Women earn income from selling millet beer.

4 - Cash crops: cotton

5 - Housing:

According to the Toupourri tradition the sare (household) is organized as follows:

The chief of the sare has his own hut. Each woman has her own hut, kitchen-hut and granary. The chief's granary is located at the center of the compound. The traditional house is a mud-house with one door. The roof is made of straw and can last about fifteen years if not attacked by termites. The kitchen-hut is made of woven straw. The women's huts also are made of woven straw.

Furnishings are very limited in most sares: a string to hang clothes, a simple bed made of interwoven branches of trees. One millet stone (stone with a mud-base) for grinding their millet, a straw basket used for storing of calabashes, jars of different sizes for storage, some small carved benches, mats and occasionally a storage chest.

Women's duties:

- . Collecting wood and herbs for sauce, drawing water, grinding millet, preparing millet ball with sauce, caring for the children, cleaning and maintaining the sare, during harvest period (rainy season) working with their husbands in the fields. Women also help in repairing fences and millet storehouses.

Kitchen-hut furnishing:

one mud grate (rebuilt every two years), one water jar, one small storage area for beans, herbs and sesame, calabashes, pots and pans for cooking millet ball and sauce and also for serving, wooden stick to stir up the sauce, one piece of special calabash for serving the ball, mortar and wooden leg, jar for millet beer.

6 - Livestock:

cows: kept for dowry and sacrifices but being increasingly used for cultivation;

sheep and goats: kept for sacrifices, breeding and for cash for family needs;

poultry: kept for sacrifices and reproduction; also for gifts to visitors.

7 - Health in general:

Some diseases are due to poor water or lack of water but also to a lack of hygiene. Some are due to temperature variations (mostly cold weather at night). Clothes are considered not as a necessity but as a sign of wealth and magnificence. Toupouris generally eat in sufficient quantities except during famine and shortage periods.

In order to struggle against disease they use several plants, roots and leaves. They see no link between hygiene, diet and disease. They willingly come to the outpatient clinic.

Their diet contains much starchy food and glucides. They eat very few foods containing animal proteins.

Water: During the rainy season people use the water drawn from nearby ponds. They drink well water drawn if there is one. During the dry season they take water from the nearest available source.

Babies receive from their mother a mixture of water and herbs which is about the only boiled (treated) water that they receive.

Diseases due to water:

Schistosomiasis, hookworms, dysentery, cholera, hepatitis, poliomyelitis.

Hygiene in the compound:

Women usually sweep the compound once or twice daily, at least around the kitchen. Very often the fence does not remain closed, which makes it more difficult to maintain cleanliness in the compound. Moreover, sheep and goats are kept within the sare during the night at the foot of the chief's storehouse.

Attachment E

Infant and Child Mortality Rates - North Cameroon

<u>Tribe</u>	<u>0-1 Years</u>	<u>0-5 Years</u>	<u>0-10 Years</u>
Foulbe	12%	21%	24%
Mandara	16	36	43
Kotoko	17	21	37
Choa	15	21	23
Moundang	19	31	33
Guizaga	20	35	39
Toupouri	20	30	33
Mafou	20	45	48
Mafa	17	48	52
Daba	19	32	36
Hina	25	45	52
Goude	13	38	46
Kapsiki	28	67	68
Average	17.3	36.2	41.1

Source: La Dynamique des Principales Populations du Nord-Cameroun, A.-M. Podlewski, ORSTOM, ser. Sci. Hu. Vol III, No. 4-1966