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REPORT
ON THE
FIRST FORMAL EVALUATION
RURAL MEDICAL ASSISTANCE PROJECT, TRARZA
ISLAMIC REPUBLIC OF MAURITANIA

PROJECT 682-0202
CONTRACT NO: AID/afr-0202-c-00-1014-00

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Nouakchott, May 1982

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PREFACE

The evaluation activities described in this report have been designed to determine whether the project is consistent with the objectives set forth when it was agreed upon.

The evaluation task took place 20 months after the project began. It is a mid-term evaluation.

This mid-term evaluation emphasized the main aspects recommended in the project paper, namely:

1. Procedures for selection and training of Nurses and CHW's in primary health care (PHC).
2. Characteristics of the curriculum used for CHW's training, improvements made during the second and third programs, retraining and approved evaluation tests.
3. Methodology for village organization for PHC program.
4. Steps taken by villagers to restock the medical kit and support the CHW.
5. Characteristics of data collection: treatment (care) forms, census questionnaire, and field survey.

Furthermore, the team addressed supplementary points such as:

1. Development History and Project Execution
2. Administrative Analysis
3. Financial Analysis
4. Technical Analysis
5. Recommendations.

EVALUATION TEAM PERSONNEL

Team Leader:

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DIMPEX ASSOCIATES, Inc.

Team Members:

Ministry of Health and Social Affairs:

- Dr. Mohamed Mahmoud Ould Hacen, Director of Public Health, Ministry of Health, and Director of the Rural Medical Assistance Project, Trarza.
- Dr. Jean Jacques Moskar, Deputy Chief Medical Doctor, Trarza Region.
- Diouf Ibrahima, Supervising Nurse and Administrator, Rural Medical Assistance Project, Trarza.
- Moctar Ould Mezmah, Supervising Nurse and Adviser for Health Training, Rural Medical Assistance Project, Trarza.
- Mamadou Sy, Supervising Nurse, Traditional Midwives Program, Ministry of Health and Social Affairs.

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Mona Y. Grieser, Public Health Adviser and Coordinator of the Rural Medical Assistance Project, Trarza.

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Rebecca Brooks, Deputy Director, Health Program, Peace Corps Volunteers.

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Diallo Amadou Yero, Head of the Cooperation Department, Ministry
of Rural Development.

Ministry of Economy and Finances of the Islamic Republic of Mauritania:

Ba Oumar Fussala, Economist, Ministry of Economy and Finances.

World Health Organization (WHO):

Andre Kitoko, Sanitary Engineer.

ORGANIZATIONS PARTICIPATING IN THE
RURAL MEDICAL ASSISTANCE PROJECT, TRARZA
ISLAMIC REPUBLIC OF MAURITANIA

Project Activities Period covered by the Evaluation:

August 1, 1980 to March 30, 1982.

(20 months)

Mauritanian Organization In Charge of Project Execution:

Department of Health, Ministry of Health and
Social Affairs

Technical Assistance offered under contract with

DIMPEX ASSOCIATES, Inc. New York, N.Y. USA.

with the cooperation of the

United States Peace Corps

FINANCIAL AID

Grant (USAID Project 682.0202) by
Agency for International Development
United States Department of State

I. BACKGROUND

The Agreement for the Rural Medical Assistance Project (Project 682-0202) was signed in August 1979 by the Government of the Islamic Republic of Mauritania (GIRM) and the Agency for International Development of the United States Department of State (USAID). One year later, two high level Supervisors/Nurses, previously trained in Primary Health Care (PHC) at the WHO Regional Training Center in Lome, were assigned to the Rural Medical Assistance Project (RMAP); four Training Nurses were assigned to the project during the following month of October. During the second semester of 1980, the PHC Curriculum was adapted to conditions prevailing in Mauritania; it was also the period of animation of the 36 villages selected as samples for project launching. Four Peace Corps Volunteers arrived in September 1980; the Public Health Adviser and Project Coordinator arrived in December 1980. All of these activities took place after a phase of reflection and in-depth discussions about the objectives and application mechanisms of a Primary Health Care program for the whole country. Dr. Mohamed Mahmoud Ould Hacem, who was then director of the Preventive Medicine Department, was assigned by the Ministry of Health as Project Director, RMAP. Dr. Hacem has participated in all of the preliminary activities for project launching and in execution activities once the project field work was started. Experts from the WHO Regional Training Center of Lome and from SHEDS actively participated in project development, especially in developing the curriculum for the A.S.C. (village health workers, VHW's) and in training the high level Supervisors/Nurses for the head and departmental centers.

In January 1981, the first training session began for the VHW's selected in the 36 villages animated during the month of December 1980. The VHW's were assigned as follows:

| DEPARTMENT of the village | Training Language for the VHW's | | | | TOTAL |
|---------------------------------|---------------------------------|---------|-----------|----------|-------|
| | Wolof | Poulaar | Hassaniya | Haratine | |
| ROSSO | 8 | 6 | - | - | 14 |
| MEDERDRA | - | - | 5 | 1 | 6 |
| R'KIZ | 1 | 6 | 6 | 3 | 16 |
| TOTAL | 9 | 12 | 11 | 4 | 36 |

A second training session for 31 VHW's started October 1981 for a duration of 45 days. A third session for 31 VHW's was conducted in February/March 1982. A total of 98 VHW's (out of a grand total of 192 whose training was envisaged in the Agreement) were trained during the period covered by the evaluation (20 months).

In April 1982, the number of "activated" villages in each zone was as follows:

| | |
|----------------------------------|--------------------|
| Zone 1: ROSSO and KEUR-MACENE | 30 villages |
| Zone 2: MEDERDRA | 19 villages |
| Zone 3: R'KIZ | 29 villages |
| Zone 4: BOUTILIMIT and OUADANAGA | <u>12 villages</u> |
| TOTAL | 90 villages |

Therefore, there was a total loss of 8 VHW's during the period.

| Period of Field Activity | VHW's Training Program | Number Trained | Active, April 1982 | % Losses |
|--------------------------|-------------------------|----------------|--------------------|----------|
| 14 months | First Training Session | 36 | 29 | 19.4 |
| 7 months | Second Training Session | 31 | 30 | 3.2 |
| 1 month | Third Training Session | 31 | 30 | 3.2 |
| T O T A L | | 98 | 89 | 8.2 |

From March to October 1981, the project organized an intensive training program for the Supervisors/Training Nurses (2 of central level, 4 of departmental level assigned in October 1980, and 3 of departmental level assigned in September 1981) : Seminars on supervision, evaluation, management, operations research and teaching methods and techniques. During the fourth quarter of 1981 and the first quarter of 1982, VHW's training activities were intensified, and the training curriculum and teaching material were revised.

The evaluation took place in April 1982 and was coordinated by Dr. Ramiro Delgado-Garcia, Team Leader. The evaluation team personnel is listed in page "i". The activities began with a field visit by the 15 team members organized into three groups of 5 members each. Each group visited two or three project villages and conducted in-depth interviews with the VHW's, the Supervisors/Training Nurses, the Peace Corps Volunteers, and personnel in charge of the health departments in the Regions. After these visits, the team members filed reports presenting the observations of the groups; a series of meetings and discussions took place at the project headquarters under the coordination of the evaluation team leader who prepared the Preliminary Report and the Final Report.

The schedule of the project activities is presented in Annex I; the changes in the original agreement are presented in Annex 2. Annex 3 is a sample of interviews which took place during the observation visit by the evaluation group (French version); Annex 4 is a sample of interviews by evaluation group B (English version).

The evaluation team leader wishes to thank all of those who helped in the success of the evaluation.

II. CONCLUSIONS

A. Adherence to the Schedule in the Project Agreement

The project is now in its twentieth month of operation, which represents about 40% of its scheduled duration. To date, the objectives set at project starting time have been met. Altogether, the project is ahead of schedule for the following components:

1. Personnel training, village animation, setting up of Community Health Committees, and launching of primary health care activities in about one hundred villages.
2. Direct community restocking of community health workers medical kits is presently being carried out in 29 villages out of the 36 included in the first training session. This constitutes an 80% implementation rate. Support activities for the CHWs has been introduced in nine of the above villages, or 25% of the total. At this stage, it is too early to initiate the above operations in the villages included in the second and third training sessions.
3. During the first three months of CHW field activity, the Supervisor/Training nurse will visit the field once per month. Then, the supervising rate progressively decreases until it reaches an average of one visit per quarter after one year of supervising activity.

The general conclusion about adherence to the schedule of activities may be summarized by stating that, considering that in any project, the general trend is of accelerating the activities toward the end of its lifetime, the timely execution of the activities according to schedule, in the Rural Medical Assistance Project, Trarza, is indicative of a continuous concern of the Program Management to execute the schedule as planned.

B. Administrative Aspects

Conclusions concerning these aspects will deal with the results of the analysis of the administrative measures and of the adaptations which were necessary for the execution of the project terms.

First, the role of three relevant organizations will be commented upon:

1. Government of the Islamic Republic of Mauritania
2. Agency for International Development (AID)
3. United States Peace Corps.

Next, an analysis of the conclusions concerning administrative procedures established by the project office in Nouakchott for the coordination and operation of project activities will be made.

1. Mauritanian Government

It was established that project execution needed the participation of several components of the Ministry of Health and Social Affairs, namely: Health Department, Pharmarim, and the Trarza Regional Health Division, which includes: The Rosso Regional Hospital, the Health Regional Center and Departmental Dispensaries of Rosso, Mederdra, R'kiz, Boutilimit, Keur Macene and Ouad-naga.

The Ministry of Health designated a Project Director responsible for project execution who is the Mauritanian counterpart of the Public Health Adviser. The Ministry also had to select a counterpart for the Teaching/Health and Personnel Training Adviser, a position originally included in the technical assistance proposal, to deal with the technical aspects of personnel training; however, it was decided to assign a Mauritanian trainer.

Annex 2 identifies the changes made pursuant to the decision to replace the Expert in Teaching/Health and Personnel Training with the continuous cooperation of the Lome Regional Training Center of the World Health Organization. Simultaneously, it became obvious that the Government Nurses from the Departmental Dispensaries and PMI Centers would not be able to carry out the activities of CHW's training and supervision because of their regular workload. The Ministry decided to assign six full-time nurses and not to detail them, during the initial phase, to the system of dispensaries or PMI Centers. During the first 8 months of field work (March 1981, August 1981), it was also necessary to concentrate the initial activities in three departments only, namely, Rosso, Mederdra and R'kiz.

In October 1981, medical services were started at Boutilimit; and in January 1982, at Keur-Macene. It is anticipated to deliver the same services at Ouada-Naga in October 1982.

The above changes of task assignments for the technical personnel of the project had a certain impact on its administrative organization, especially on the roles of the Public Health Adviser/Project Coordinator and of the two Supervisors/Nurses in charge of Administration and Training, respectively.

The main impact of these changes on this personnel activity consisted in the need for simultaneously assuming training/supervision and management/administration responsibilities. The absence of one of the Supervisors/Nurses from September to December 1981 for participation in a community health program in Lome as well as the reduction in time dedicated to the project by the Nurse/Administrator (elected Member of the Permanent Bureau of the Workers Union of Mauritania -- UTM) forced the Public Health Adviser to devote a sizeable amount of her time to administrative activities. Her technical activities had to be curtailed. This had an unfavorable effect on the necessary monitoring of the project technical

activity. The quality of data collection, the Peace Corps Volunteers activities and analysis of data were affected.

The project administrative organization, relative to coordination and authority lines, aspects was also affected as a consequence of the various adjustments. The organization chart shown in the next page clearly demonstrates the organizational constraints resulting from the present structure. It also shows the bottlenecks which are an obstacle to the decision-making process of the management group. Recommendations are specifically presented in the relevant chapter for the solution of this problem.

One of the departmental level Nurse/Trainer took a sick leave in March 1981; so far, he has not been replaced.

The Ministry of Health was supposed to authorize Pharmarim to license one agent in each Department capital to sell pharmaceutical products at commercial price to the CHW. However, this was found questionable because of the risk of speculation; the authorization of purchasing specific pharmaceutical products (those for CHW medical kits) was given directly to the CHW. Now, all of the CHW's have a signed license by the Ministry to that effect (purchase of basic pharmaceutical products).

2. Agency for International Development (A.I.D.)

USAID signed a contract with DIMPEX ASSOCIATES, Inc. from New York City to provide short and long term foreign technical assistance.

Changes in the contract are shown in Annex 2.

Presently, an amendment is under way about administrative aspects related to local Mauritanian personnel and the job description for the Public Health Adviser. There is a local Administrative Office in Nouakchott with with an Administrative Assistant, one Secretary-Typist, 7 drivers and 6 custodians. A local account, under the responsibility of the Public Health Adviser, is used for payments in Nouakchott. (1). The organization chart presents the related authority and coordination lines.

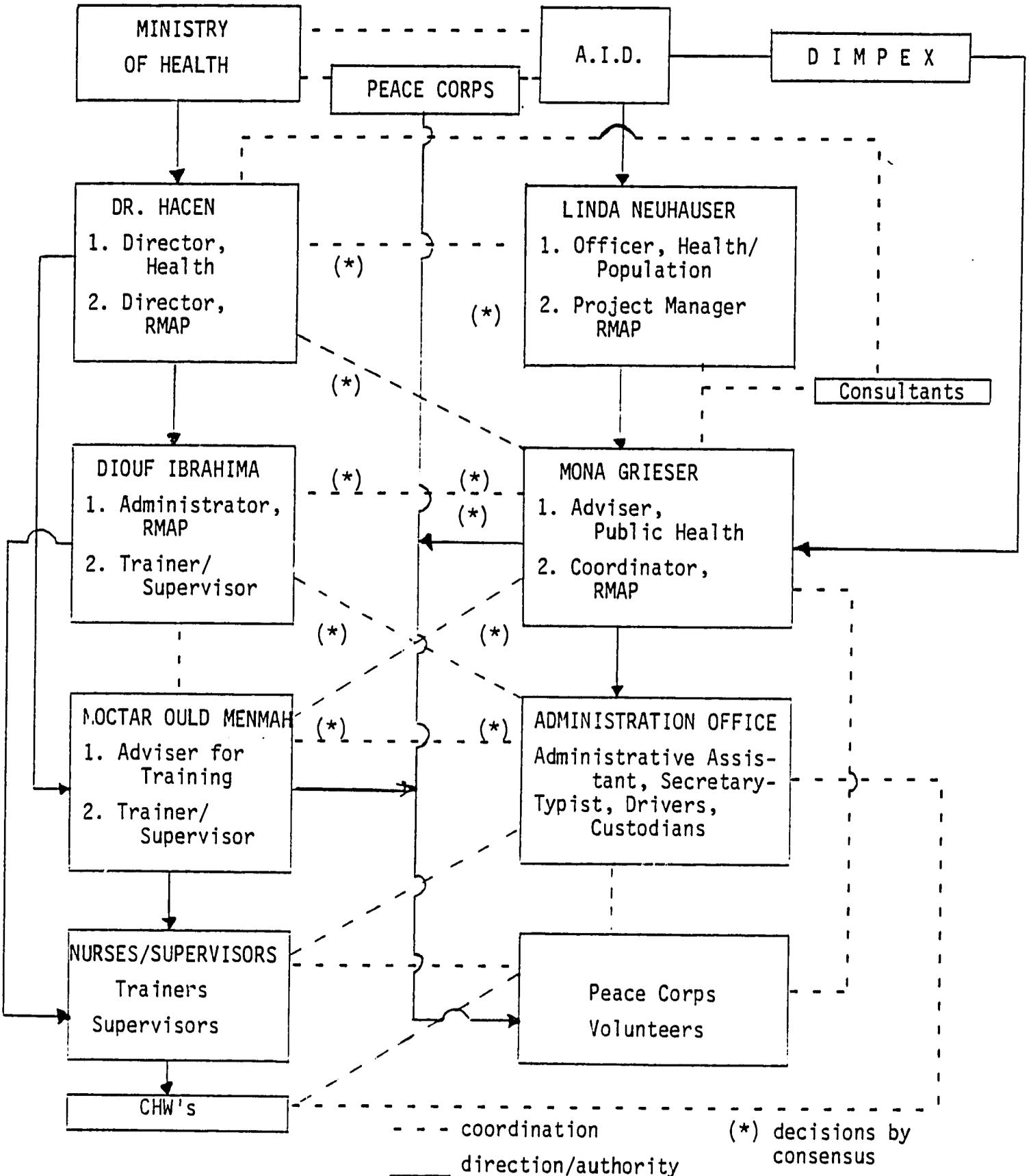
This organization chart shows that operating difficulties and potential conflict sources result from the multiplicity of interrelations. The role of the Public Health Adviser/Project Coordinator presents a problem as far as program management is concerned, especially because there are two lines of authority which divide her activity and which do not deal with field work. As for the administrative aspects, there are difficulties as well.

(1) operating expenses in UM

PROJECT MANAGEMENT ORGANIZATION CHART

G I R M

UNITED STATES OF AMERICA



Another potential problem is the veto power exercised by the authority on the decision-making process of the management group. (2).

The evaluation team has observed that the system, complicated it may seem, is functioning relatively well in spite of the above limitations because of the adaptation capabilities of those in charge of the project.

Following up this review, it is possible to understand how the partial or total absence of any component of the system may cause serious difficulties in the program. So far, the activities have been relatively homogeneous; however, logistics will become very complicated once the CHW's will be fully operative. It is anticipated right now that significant short term difficulties will occur if the organization of the system is not immediately improved.

3. Peace Corps Volunteers

Administratively speaking, the five Peace Corps Volunteers (PCV's) work under the project direction as for their field work and under local Peace Corps management as far as general administrative aspects are concerned. Actually, they coordinate with the whole system and without formal supervision since they work in 4 Departments and accompany the departmental Trainers/Supervisors. PCV's job description is vague; their activities are poorly defined. As a consequence, they have to define their own role, and such role varies according to the capabilities of each PCV and to the needs of each center, namely: teaching methods, logistics for training and supervision programs, on-the-job training in the dispensaries, organization of orchards, practical nutrition demonstrations, preparation of water filters, etc. The lack of sufficient knowledge of the French language -- especially when the PCV's arrive in Mauritania --, of the local language, and of basic knowledge in primary health care has been a handicap in the initial stages of the project. However, a marked improvement in their contribution has been identified as they gain familiarity with the languages and with the project.

C. Economic and Financial Aspects

Project expenses began in 1980. They were as shown in the following table till March 31, 1982, as compared with the budget:

-
- (2) a health service program resulting from an agreement between a sovereign country and a foreign government agency involves peculiar ways and means for management and administration; this results in peculiar relations which shall be taken into account.

| Items | Budget (+) | Expenses | Balance |
|--------------------------------|------------------|----------------|----------------|
| <u>A. Technical Assistance</u> | | | |
| a) U.S. contract | 450,000 | 153,920 | 296,080 |
| b) Support to contract | 140,000 | 78,120 | 61,880 |
| <u>B. Operational Support</u> | | | |
| a) Local personnel | 180,000 | 31,000 | 149,000 |
| b) Vehicle operation | 150,000 | 75,610 | 74,390 |
| c) Supplies (1) | 330,000 | 301,320 | 28,680 |
| <u>C. Training</u> | | | |
| a) Personnel Training | 177,000 | 39,560 | 137,440 |
| b) Health Teaching | 6,000 | - | 6,000 |
| <u>D. Contingencies (2)</u> | | | |
| | 229,000 | - | 229,000 |
| T O T A L US \$ | 1,662,000 | 679,530 | 982,470 |

(+) budget items representing needs which were estimated during the project life

(1) vehicles, medical or office equipment, pharmaceutical products, office supplies, maintenance, repairs, etc.

(2) reserves for needs of other items

The Mauritanian Government was committed to contribute the equivalent of US \$224,000 to the project. However, because of government difficulties in handling increasing local expenses in administrative personnel of the Nouakchott Office (secretary-typist, administrative assistant, draftman, drivers and custodians), USAID accepted to pay for the costs of this personnel and to modify the Agreement accordingly. Also, USAID accepted to pay the rent for the Departmental Centers for non-permanent training.

I. Training Costs and Viability of Family Sharing

The following table presents the components taken into account for calculation of training costs and CHW installation cost:

| Cost of Training and Installation | US \$ | UM |
|---|--------------|---------------|
| Average cost, training of one CHW (1) | 700 | 35,000 |
| Average cost, annual re-training, one CHW | 200 | 10,000 |
| Cost of pharmaceutical product stock (3 mos.) and of the medical kit | 250 | 12,500 |
| T O T A L | 1,150 | 57,500 |

(1) project expenses: salaries, transportation, supplies, rent and training direct costs. Also included is supervision cost. Information obtained from second program expenses (average).

Recurring costs for maintaining one active CHW would be:

| Recurring Costs (1) | US \$ | UM |
|--|--------------|----------------|
| Cost of pharmaceutical products (year) | 800 | 40,000 |
| Annual salary (12 mos. x 160) | 1,920 | 96,000 |
| T O T A L | 2,720 | 136,000 |

(1) if pharmaceutical products were given free of charge to the public.

Estimation of the monthly income of a family of six persons is 5,000 UM in the average (US \$100).

2. Financial Support and Role of the Mauritanian Government in the Project

Table I shows estimates of budget forecasts by the Ministry of Health; they take into account investment costs and special projects. These estimates represent wishes rather than reality because the operating budget for the three preceding years was not higher than 400 millions (UM) -- i.e., US \$ 8 millions --, as shown by the following table:

| Item (million) | 1978 | | 1979 | | 1980 | |
|-------------------------|---------------|------------|---------------|------------|---------------|------------|
| | UM | US \$ | UM | US \$ | UM | US \$ |
| Personnel | 167 | 3.3 | 194 | 3.9 | 213 | 4.3 |
| Operations | 75 | 1.5 | 126 | 2.5 | 119 | 2.4 |
| Pharmaceutical products | 54 | 1.1 | 65 | 1.3 | 55 | 1.1 |
| T O T A L | 295 | 5.9 | 385 | 7.7 | 387 | 7.8 |
| GIRM Budget % | 11,330 2.6 | 226.6 | 11,400 3.4 | 228.0 | 10,500 3.7 | 210.0 |

Table I

BUDGET for the FOURTH HEALTH PLAN

| Estimates of budget forecast (in millions of UM) ⁽¹⁾ Fourth Health Plan | | | | | | | |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Item | 1981 | 1982 | 1983 | 1984 | 1985 | Total | % |
| <u>Recurring Costs</u> | | | | | | | |
| 1. Personnel | 237 | 260 | 286 | 315 | 347 | 1,445 | 24,3 |
| 2. Operations | 124 | 129 | 130 | 131 | 134 | 648 | 10,9 |
| 3. Pharmaceutical Products | 219 | 246 | 258 | 271 | 286 | 1,280 | 21,4 |
| Sub-Total | 580 | 635 | 674 | 717 | 767 | 3,373 | 56,6 |
| <u>Investment Costs</u> | | | | | | | |
| 1. Buildings | 64 | 143 | 109 | 150 | 16 | 482 | 8,1 |
| 2. Rehabilitations | 53 | 87 | 93 | 65 | 37 | 335 | 5,6 |
| 3. Equipment | 252 | 301 | 190 | 185 | 114 | 1,042 | 17,5 |
| 4. Vehicles (2) | 42 | 33 | 21 | 14 | 18 | 128 | 2,2 |
| Sub-Total | 411 | 564 | 413 | 414 | 185 | 1,987 | 33,4 |
| <u>Special Projects</u> | | | | | | | |
| 1. PEV (vaccination program) | - | 12 | 13 | 15 | 16 | 56 | 0,9 |
| 2. Manufactured Unities/ Sp. Eq. | 34 | 38 | 41 | 45 | 50 | 208 | 3,5 |
| 3. Bilharziosis/Malaria | 28 | 14 | 14 | 16 | 21 | 93 | 1,6 |
| 4. Anti-Tuberculosis | 56 | 56 | 55 | 34 | 34 | 235 | 4,0 |
| Sub-Total | 118 | 120 | 123 | 110 | 121 | 592 | 10,0 |
| G R A N D T O T A L | 1,109 | 1,319 | 1,210 | 1,241 | 1,073 | 5,952 | 100,0 |

(1) constant prices of 1980

(2) costs of vehicles, spare parts and maintenance included for years 1981, 1982 & 1983.
The budget will involve a tri-annual replacement cycle for the following years.

The following are general concluding comments about the economic and financial aspects of the project:

- i - During the discussions with the GIRM when the project paper was developed, a certain distribution of responsibilities was defined for developing the Primary Health Care (PHC):

Government Commitment:

- a) training and re-training of the CHW's;
- b) supply of medical kits and of stock of pharmaceutical products for three months; and
- c) support activities (village animation; supervision of CHW's; compilation and analysis of data collected by CHW's.

Village Commitment:

- a) identify, recruit and support one CHW according to the project recommendations;
 - b) restock periodically the pharmaceutical supplies for the medical kit (in different ways according to the village characteristics); and
 - c) establish a village health committee responsible for a good program operation in the village.
- ii - The study of the figures presented in the table show that both the Mauritanian Government and the village people would have difficulties to live by their commitments, based on the above projected costs. In other words, the expenses rate of a demonstration project cannot be used as a basis for calculating the cost of expanding the project to the whole country.

The training and installation cost for one CHW (i.e. about US \$ 1,200) is too high. If one thousand CHW's were needed for the whole country, the cost would be US \$ 1,200,000.

For an average of 350 persons per village, the recurring costs per person and per year for maintaining one active CHW in the village would be:

$$2,750 : 350 = \$ 7.80$$

and for a family of six persons:

$$7.80 \times 6 = \$ 46.80$$

while the family annual income is:

$$100 \times 12 = \$1,200.$$

The average family contribution (\$46.60) is about 3.9% of the family budget. Therefore, each family should regularly contribute about 1 dollar per week (50 UM).

The expenses of the Ministry of Health for training and installing 1,000 CHW's within a 4 years time-frame, for instance would be:

$$250 \text{ CHW's} \times \$ 1,200 = \$ 300,000$$

The average annual budget forecast of recurring costs of the Ministry are: \$ 13,600,000.

The above \$ 300,000 is 2.2% of the operating budget. In conclusion, it will be necessary to develop more efficient strategies for training, installing and paying the CHW's and for purchasing pharmaceutical products, than applying the costs of the project RMAP.

- iii - It would be rather difficult for the Mauritanian Government to undertake in other regions of the country the delivery of primary health care using this project components, namely: regional group of Trainers of trainers, Training Nurses/Departmental Supervisors, Administrative Office, Training Centers, advanced logistics, as a model. The technical methodology could be the same, but the administrative, economic and financial model should be integrated to the executive governmental model. The chapter on Recommendations presents suggestions by the evaluation team about the institutionalization process for the primary health care (PHC) program.

The following preliminary conclusions concern the administrative, economic and financial aspects:

1. the feasibility of expanding the project RMAP to other regions in the country will depend above all on the degree of institutionalization and regionalization of the selected training and supervising methodologies;
2. the project model for training and supervising Nurses/Trainers/Supervisors of the project RMAP allows for developing a methodology which is well suited to the conditions in the rural areas of Mauritania;
3. this project shall be considered a demonstration and experimental project. Its application to other regions in the country should follow an appropriate integration to the national health system of Mauritania.

The PHC institutionalization will necessitate a change in the structural organization of the Ministry of Health which is presently very fragmented. With the present structure integration would be difficult.

D. Technical Aspects (see Annex I : Project Activities)

I. Selection and Training of Nurses and Village Health Workers

a) Nurses

When the Agreement was signed by the Mauritanian Government and USAID (August 1979), two Registered Nurses (M. Diouf and M. Moctar) were selected by the Ministry of Health to be trained in Primary Health Care. The selection of these two candidates (made by the Director of Health) was based on their experience in training/supervision and their motivation for primary health care. They attended the Primary Health Care Program in Lome (Togo) from September to December 1979. When the project activities began in August 1980, they were detailed from their activities at the Ministry of Health and assigned to the Trarza project. They were put in charge of the training and supervision of the Trainers/Supervisors of the Community Health Workers (CHW's). In October 1980, the WHO Training Center in Lome conducted a training program in Nouakchott for 18 Mauritania Registered Nurses.

Following this course of action, the Ministry of Health selected (with the assistance of those in charge of the program) the four Nurses who were best suited for the tasks of training/supervising the CHW's. The two Nurses/Supervisors of the project also participated in the selection; they had participated since September 1980 in the preparation, execution and analysis of the Sanitary Survey, labeled "Village Diagnostic", for 8 villages in the Trarza region. In November, they also participated in the adaptation to Mauritania of the training program for the CHW's which was developed by the Lome Training Center. In December, the six project Nurses conducted the animation of 36 villages in the Trarza region which had been selected by the Ministry of Health according to precise criteria: distance to the dispensaries, a minimum population of 300 representing well the social, ecological and ethnical diversity of the region. Final selection was made after the animation, once the villagers and the Community Health Committee had explicitly expressed their intention to accept the responsibilities related to the primary health care program, i.e. to support the CHW in his work and to periodically restock the pharmaceutical products in the medical kit. The Trarza Region government, the Prefects of the three Departments (Rosso, Mederdra and R'kiz) and the Health Director also participated in the animation of the villages.

The Nurses/Trainers/Supervisors participated in two seminars in Nouakchott about: supervision (March and June 1981); curriculum (July 1981); management (August 1981); techniques for scientific research (September 1981). The following personnel was sent to the WHO Regional Training Center in Lome to attend a Community Health Training Program: the Project Nurse/Trainer/Supervisor (September-December 1981) and the 4 Nurses/Trainers/Supervisors assigned to the project in August 1980 for a 3 months training period (April-June 1981) in Primary Health Care.

The second group of three Nurses/Supervisors of Departmental level were nominated in September 1981; they attended a training course in teaching and supervising delivered by one of the Nurses/Trainers/Supervisors of Regional level (September 1-15, 1981).

In conclusion to the review of the selection and training process for Regional and Departmental Nurses/Trainers/Supervisors, it may be stated that the process gave them excellent training background. Out of the 9 Nurses, only one was assigned elsewhere and, later, replaced.

b) Community Health Workers

98 CHW's have been trained until now (51% of the projected total for the whole project life). The CHW selection is completely under the village responsibility; the CHW is selected during the animation activities, generally according to project criteria:

- 1) minimum age of 25
- 2) to reside in the village (be married or have a permanent job)
- 3) to be motivated by primary health care activities and, if possible, to have been first-aid helper (secouriste)
- 4) to be willing to work as a CHW regularly, and with a positive attitude
- 5) to belong to the major ethnic group in the village
- 6) to know the Arabic or French language; however, an illiterate CHW is acceptable.

Among those 98 CHW's, 35% are women. Based upon a global study of the service activities reviewed during the evaluation (about one year), the attrition rate would be low, i.e., 8.2%; it is a little higher for women (3 women out of 34, i.e., 8.8%) than for men (5 men out of 64, i.e., 7.8%). The average age of the women who quit would be 21; that of men, 32. Reasons for quitting were as follows: one woman got divorced and left the village, and two others were promoted Auxiliary Midwives, PMI Division (salaried job); two men quit because of the lack of salary, one left the village and got married in another village, one was married and worked in another village, another had a conflict with the village chief and went elsewhere. In general, the reasons were of economic type and change in civil status. Age plays an important role, especially for women.

It may be said that the CHW's selection, as measured through the low attrition rate (under 10%), was very well done by the village and its Community Health Committee. Most of the losses would result from the incomplete application of the criteria for the project. Also, in a certain number of villages, the selected CHW was the only volunteer at the time of selection.

However, an in-depth analysis, based upon the date of the training session, shows that attrition rate calculations may be made only with the first trained group (January - March 1981). The two other groups are too recent to calculate the attrition rate: the second group was trained from October to December 1981, and the third one between February and April 1982. For the first group of 36 CHW's, the total attrition rate is 19.4%, being 17.4% for men, and 23.1% for women (4 out of 23 men, and 3 out of 13 women). Average age of the 23 male CHW's is 40; average age of the 13 female CHW's who were trained is 32. Average age of the men who quit is 32, and that of women, 21.

An annual attrition rate of about 20% is high. It will be necessary to present with more insistence to the villagers and to the Health Committee (during the animation) the importance of applying the selection criteria more strictly. Otherwise, by the end of 1983, 192 CHW's will have been trained, but only 150 would be operative. This calculation is based on an annual decrease coefficient of 20% applied to the number of CHW's trained at the planned dates.

2. Curriculum Used for CHW's Training

The curriculum used by the project for CHW's training involves two complementary aspects: health care for main diseases in the village area, and health training about preventive measures, sanitation, individual and environmental sanitation.

The curriculum topics were selected with a view to arrive at reducing the morbidity of children under age five and of mothers and to prevent and control the most important contagious and communicable diseases.

CHW's training was originally scheduled to last 3 months (12 weeks), but an intensive program of 45 days (6 weeks) was deemed sufficient, based on the regular attendance by the Nurses/Supervisors and on the planned re-training program of the project.

The evaluation team visited 4 major towns and 8 villages in the Departments of Rosso, Mederdra, R'Kiz and Boutilimit (see, in this report, the descriptions of the visits and interviews made by the team of Nurses in dispensaries, PMI Midwives, Nurses/Trainers/Supervisors of regional and departmental level, Peace Corps Volunteers, Community Health Committees, villagers and CHW's).

It was found that there are CHW's who are motivated by their village health work and also have a good knowledge of basic prevention and treatment aspects. Although the sample of visited CHW's may not be considered as representative of all of the CHW's, a good homogeneity was found in their answers and general knowledge. They were able to answer with self-confidence to the questions asked by the evaluation team on topics such as identification and treatment of benign diseases, children nutrition improvement, hydration procedures, pregnancy troubles detection, infants nursing procedures, communicable diseases prevention and control, reasons for emergency medical evacuation, utilization of pharmaceutical products and medical kit, and emergency treatment of accidents (burns, snake bites, fractures, etc.).

Data collection by the CHW's is insufficient, especially because of the lack of treatment check-lists. In the Rosso Department, the CHW's were found to lack sufficient training to fill out the statistical forms correctly.

CHW's knowledge about before and after birth care, and pregnancy spacing is rather superficial. Perhaps, this results from cultural conditions, these activities being perceived as part of the domain of

the traditional delivery-helper or of the midwife. Another difficulty seems to be the insufficient knowledge of problems related to intestinal parasites and of their treatment, of ear diseases, stomatitis, skin diseases, and problems related to the genital-urinary system and cardio-vascular system.

The evaluation team feared that CHW's might have a natural tendency to give more importance to the use of pharmaceutical products than to the educational and sanitation aspects of their activity. However, an acceptable balance was found between these two activities. Similar conclusions were drawn by Dr. Moumouni from the WHO Training Center in Lome and by Dr. Delgado when they visited 12 villages with VHW's in 1981.

Another encouraging aspect is the acceptance of CHW's by the villagers. They not only accept CHW's advice on village sanitation and individual sanitation, but also appreciate their influence in village organization. Periodical visits by the Nurse/Supervisor also arouse interest and sometimes are an opportunity for celebration by the village.

However, medical kit restocking and village support to the CHW's may become significant problems in the near future. The cooperative spirit will remain as long as the CHW's and the village are motivated; but some villages already show signs of lesser interest. This situation must not be allowed to deteriorate; appropriate measures by the project and government must be taken in the near future.

Operations research studies in primary health care were proposed by AID/Mauritania and the Mauritanian Government and PRICOR; they should be carried out because they may bring answers to these important aspects.

The curriculum was revised before the second and third programs but the effected changes were very superficial, more about the format than the substance. The topics sequence, for instance, was changed and some illustrations (figures) were adapted in a way more suited to rural life conditions in Mauritania.

During the formal retraining (10 days) of the first group, emphasis was put on preventive aspects of CHW's activities; they were taught how to give an injection. The preventive model stressed environmental control, water treatment for potability, and nutrition.

The evaluation team found that the knowledge evaluation testing system is ineffective. The practice is not monitored and the theoretical aspects only are addressed in a superficial way.

3. Data Collection

In January 1982, the materials and forms used during the animation, supervision and training were revised. This revision was made by the Public Health Adviser and the Nurses/Trainers/Supervisors.

Similarly, project personnel designed the household and census surveys.

The evaluation team carefully reviewed all of these forms and materials. It was concluded that, generally, the forms used for the household survey and the census were not properly designed as to clarity and questions, sequence and distribution. More work would have been necessary to improve these tools: detailed explanations for surveyors, pre-coding of information, etc. It is doubtful that information collected in such a way may be of sufficiently good quality.

A seminar on survey techniques should also have been organized for the Nurses/Trainers/Supervisors. Sampling, for instance, is difficult to put into practice, and necessitates assistance by a specialist and an excellent knowledge of the sampling population. The Census Bureau and the Statistics Department in Nouakchott have a good experience in sampling based on the census and the fertility survey in which they actively participated. Their technical assistance could have been requested.

The census should have been conducted based on detailed definitions of residing population, migratory population, age, and family and parental relations. Polygamy, which prevails in certain villages which were surveyed, involves significant technical problems.

A revision is also needed for such other data collection forms, such as medical treatment forms, supervision forms and survey forms. The fundamental point for designing a suitable form is the necessity to answer such questions as: what do we want to know and why? As to direct questions, all the alternative answers should be presented; as for indirect questions, the answer shall not be prompted. The design of survey forms for repeated observations, it shall be such as to make possible the recording of any positive or negative change that may occur.

As for village animation, the evaluation team think that the project must give it more importance. A light animation, as performed in some villages, jeopardizes the project justification. Villagers must first understand clearly the advantages of having a CHW in the village, and also their own responsibilities. Therefore, the Mauritanian Government should make very clear statements about its primary health care policies as part of a mutually shared responsibility between government and village. The villages should also be told about the experiences of other villages, and be given enough time for reflecting, discussing and, thus, making a rational decision.

As a matter of fact, it would be good to repeat the animation sessions in villages which begin to lose their motivation. One day and a half per village seems to be the needed minimum to arrive at an adequate animation.

E. Project Integration Aspects

It is important to determine the Mauritanian Government's ability to continue the Rural Medical Assistance Project, in order to finalize

the USAID grant, and for estimating the viability of expanding primary health care (PHC) to other regions in the country.

Primary health care needs a close integration with the secondary and tertiary levels of the state health system, and an adequate representation at the central level of the Ministry of Health. It is also necessary to put in place systematic mechanisms defined for personnel supervision and training.

To date, the Rural Medical Assistance Project operates independently from the regular network of health centers. If such a situation was necessary during the project development phase, it is not convenient during the village integration phase which has already begun in a certain amount of villages. A government decision for creating an appropriate central organization for PHC is much needed. At the peripheral level, it would be necessary to establish the coordination, supervision and information lines between the Departmental Health Center (dispensary) and the field stations which would become its satellites. At the regional level, the Regional Health Division should establish similar connections with its Departmental Health Centers. At the central level, it might be possible to create (during this transitory phase) a National Commission for Primary Health Care, including a Committee for Intersectorial Coordination, a Technical Committee, and an Executive Committee.

Before establishing the new organization, it would be necessary to undertake the delicate task of personnel training at the Ministry of Health; this personnel would be the one which would be involved in the primary health care program. This activity can and shall begin soon to benefit from the training mechanism of the Rural Medical Assistance Project.

III. RECOMMENDATIONS

A. Training Schedule: Strategy

1. The selection of the precise dates for the remaining programs (IV, V and VI) must take into account the raining season, vacations of training and management personnel, needs for retraining and supervision, and dates of finalization of the field activities at the end of the project (the Public Health Adviser will end her contract in December 1983). The evaluation team recommends that, because of these conditions, the months of September 1982, February 1983 and July 1983 be considered as the most favorable for beginning the training sessions of the IVth, Vth and VIth 45-day programs for the CHW's. The retraining of the second group of CHW's should take place during the last 10 days of the IVth training program, and that of the third group during the last 10 days of the Vth program; that of the fourth group should be in November 1983. The fifth and sixth groups cannot be retrained by the project because of the schedule, and this shall thus be considered to give them a thorough training during the regular training phase.

2. The supervision activities will be more difficult to achieve because of their significant increase as a result of the increased number of CHW's: limitations in supervising personnel, and in logistics. The evaluation team recommends the designing of a schedule involving priority for more frequent supervisions of recently trained CHW's.
3. By July 1983, the nurses from the dispensaries of each of the five Departments will have to begin to replace the departmental level Nurses/Trainers/Supervisors. This will be the progressive application of the institutionalization of PHC. The evaluation team recommends a strict planning for this phase, taking into account logistics and supervision aspects.
4. The group of central and departmental level Nurses/Trainers/Supervisors should address the training of the trainers: regional divisions of Nurses/Trainers and Nurses/Supervisors. The former in the regional capital, and the later in the departmental chief town. The evaluation team recommends the preparation of a training plan of that type for the whole country, by the end of 1982. Mr. Moctar Ould Nemmah, Project Nurse/Supervisor and Health Training Adviser for the RMAP, seems to be the most fit person to coordinate that activity.
5. The selection of the villages which will be included in the project (94 villages) shall take into account the geographic location in each of the 4 selected zones (48 villages were planned for each zone, i.e., a total of 192) and the ethnical composition of each Department. The evaluation team recommends:
 - 1) that the selection of new villages be made on the basis of the most concentrated population communities which, however, shall have a minimum number of 350 persons;
 - 2) that the most remote villages be served first.

B. Administrative Aspects

1. Mauritanian Government

- a. The Medecin-Chef (chief medical doctor) of the Trarza Region should be in charge of all of the coordination and supervision activities of the RMAP Project. The evaluation team found that the Medecin-Chef or his Deputy had little interest in the project activities. The evaluation team thinks that the RMAP is important enough for the future of rural health in Mauritania to deserve a better sustained attention at the regional level.
- b. The project organization chart shows certain communication problems between technical personnel, service personnel and administrative personnel. The project operational effectiveness has suffered on account of this situation. The evaluation team recommends that more clear and functional roles be established between Mauritanian personnel and expatriate personnel.

- c. Project administration should also be improved especially if the roles of each member of the administrative personnel were better defined, and if other administrative aspects such as vehicle control and dispatching, their trips, etc. were improved. The evaluation team recommends:
- 1) the design of a more detailed job description and activities description for all personnel;
 - 2) the recording of all expenses according to the activity type, e.g., personnel training, supervision, retraining, etc. (this information will be necessary for calculating the recurring costs that the government will bear later).
- d. The activities of the Public Health Adviser and Project Coordinator should be intensified in their technical aspects, and decreased in their administrative ones.

2. Agency for International Development (USAID)

The activities planned in the agreement between USAID and the GIRM follow their normal course, as anticipated in the schedule. However, a clear primary health care policy remains to be defined. If such a policy is not decided upon in the short term, the project runs the risk of not having the necessary continuity because of the slow pace toward institutionalizing primary health care. The evaluation team recommends that, before the end of 1982, the Mauritanian Government and USAID agree upon strategies related to the possible expansion progress of the RMAP toward other regions in the country, and to the future training and supervision models for the CHW's. If the RMAP field activities gradually decrease by the end of 1983, it would be necessary to plan a transitory phase, or a demobilization phase, or a continuation phase, at an early date.

3. Peace Corps Volunteers

It is a pity that their presence will end in November 1982 because the five PCV's are now able to work more efficiently as a result of their experience in the country. Their contribution was very useful for preparation of training material, solution of logistical problems (control of medical kits and pharmaceutical products), evaluation of CHW's knowledge, and development of orchards. Three of the PCV's were well integrated in the villages to which they were assigned. Four of them attended a statistics course in Nouakchott, which will benefit the project.

The evaluation team thinks that, in general, the PCV's have fulfilled an important role as assiduously cooperating with the Departmental level Nurse/Trainer/Supervisor. At the project headquarters, one of the PCV's was in charge of classifying the CHW's technical training material and of the statistics and archives system.

The evaluation team concludes that, if the PCV's had had a precise job description, they would have rendered even better services. Altogether, the PCV's are an important resource for the primary health care programs, but their assistance shall be better planned and guided.

C. Economical and Financial Aspects

Considering that most of the Sahel countries spend in the average 2.50 dollars per capita per year for health services which benefit only one quarter of the population, Mauritania can be rightly perceived as a country which devotes sizeable resources to health (about 5 dollars/capita/year in 1980). This governmental priority about health has not yet been translated into more explicit political decisions in primary health care. The main portion of government spending is concentrated in urban areas and is mainly for medical treatment. Under such conditions, the success of a primary health care program cannot be guaranteed.

The evaluation team recommends the implementation of a more clear governmental policy for the village participation in the resolution of village health problems, both in rural and urban areas. The RMAP project experience may be used as a starting point for designing such a policy.

Purchase and distribution of pharmaceutical products were identified by the GIRM as fundamental aspects in providing for health services. Such aspects are important in the case of primary health care. However, the government may be more efficient in proposing real solutions based on a program similar to the RMAP. Accordingly, the evaluation team recommends a careful revision of the economic and financial aspects of primary health care in Mauritania, especially as related to:

- i) - sustained financial support by the GIRM to PHC;
- ii) - CHW's training and retraining costs according to various strategies; and
- iii) - viability of familial financial contribution for PHC continuation.

D. Technical Aspects

1. Personnel Selection and Training

a) Nurses

It is obvious that all Ministry of Health personnel should know the principal aspects of the difficult task consisting in setting up a primary health care program in the country. This information and motivation campaign shall be made by the Ministry of Health, using communication mass media. Because of the RMAP and of the definite cooperation of the WHO Regional Training Center in Lome, Mauritania has now a well experienced and qualified pool of Nurses/Trainers/Supervisors. The intelligent use of that personnel in the

training of regional trainers will be a task that the Ministry of Health must undertake very soon. The evaluation team recommends the study of strategies for such use through technical and administrative discussions including the participation of personnel in charge of health in the regions, health personnel training organizations and the Department of Health of the Ministry.

Each region should have, as a result of this training activity, a team for training CHW's. A specific action plan would be necessary to carry out this recommendation.

b) Community Health Workers

The importance of strict application of criteria for selection of the CHW's by the villages has been noted in this report. This would involve the planning of a sufficient number of animation days for clearly communicating the message, about the need for a good selection of CHW's candidates. The evaluation team considers that, in order to also obtain more benefit from such an effort, it should simultaneously be asked for the selection of a traditional "midwife" who would be trained by PMI (Protection of Mother and Infant). The traditional "midwife" and the CHW should work in full cooperation in the village; therefore, they should be trained at the same time. During village animation, sufficient time should be allowed to the villagers to understand the responsibility associated with the selection they want to make, and their obligations toward the CHW or the traditional "midwife" they select. The evaluation team recommends that the project give a special attention to the strategies for motivating and animating villages. The project experience shows that this initial phase has a fundamental importance in the success of the primary health care program.

2. Curriculum for CHW's Training

The evaluation team recommends that the last version of the CHW's training manual be printed and translated in Arabic language, including the matching series of figures and illustrations. This task will necessitate the technical aid of an expert in training material production.

Revisions needed in the manual include:

1. diagnostic and treatment of malnutrition;
2. skin diseases;
3. cardio-vascular system diseases of Public Health importance;
4. lactating techniques; oral rehydration;
5. ear diseases;
6. intestinal parasites.

3. Data Collection

Treatment (care) forms and forms generally used by the CHW's for data collection, or by Nurses/Supervisors for animation, supervision or home surveys, shall be revised. Detailed explanations to each form are

needed. The evaluation team also recommends the revision of the system for information storage and for project historical series archiving.

Data collected by the CHW and the traditional "midwife" are part of the information system of the Ministry of Health; therefore, they shall be consistent with the standards of SIS (division of information and statistics) for processing, analysis and circulation. An important step in that process is the establishment of a feedback mechanism by the Division of Statistics where the information data base was produced. This exercise, to be made in a more or less systematic way, will significantly improve data quality.

The evaluation team also recommends the design of a bi-annual or annual bulletin which would be used as an information and comparison source for project activities.

E. Integration Aspects for the Project

The need for an integration system of the project to the regular activities of the Ministry of Health has been noted in this report.

This institutionalization will necessitate the implementation of certain organizational reforms in the Ministry as well as political decisions.

Health policy and village participation in the solution of health problems are two inter-related aspects which deserve a close attention by the government.

The evaluation team recommends that a primary health care commission be nominated and in charge of studying technical and practical aspects for integrating the project to the activities of the Ministry of Health.

This commission will be permanent and shall have a multi-sectorial make-up. It shall be supplemented with a Technical Committee and an Executive Committee.

V. CONCLUSION

The evaluation team has addressed primarily the personnel training aspects. The team work plan emphasized those aspects as being the most important for this first formal evaluation.

After the field visits that the team had the opportunity to achieve, and the discussions with the government officials in charge of primary health care at the Ministry of Health and at the RMAP, the team was able to have a precise insight into the achievements by the government.

These achievements are sufficiently important to consider that the project was successful in establishing a good methodology which will serve as a basis for the possible expansion of the project to other regions in the country.

However, there are still important issues that must be resolved before drawing final conclusions about the project. These issues are centered around financial and logistics aspects as well as considerations related to village participation.

The team addressed these issues in this report so that they serve as a basis for discussion. The second formal evaluation will have to address them in a more systematic way.

Annex I

PROJECT ACTIVITIES

- 1977 1. Design Phase
- 1978 2. Planning Phase
3. Government Policy for Primary Health Care
- 1979 4. Agreement signed in August by the GIRM and A.I.D.
5. Training of two Nurses at the WHO Regional Training Center, Lome (Togo)
6. Request for identification of Consultants
- 1980
January/
July 7. Arrival of Ms. Linda Neuhauser, AID Health/Population Officer and Manager of the Rural Medical Assistance Project, Trarza (RMAP)
8. Project preparation phase
9. Purchase and delivery of materials and equipment for the project (equipment, supplies, pharmaceutical products)
10. Request for assignment of two Registered Nurses to the project
11. Seminar on Primary Health Care (PHC) at Atar (Adrar PHC Program) with participation of 3 RMAP members
- August 12. Village animation by the Mauritanian Red Crescent (MRC)
13. Assignment of two Registered Nurses to the project, as requested in April 1980
- Project activities are about to begin.
- September 14. Arrival in Nouakchott of 4 Peace Corps Volunteers (PCV's)
15. Training of first-aid agents (secourists) by the MRC in Rosso, Mederdra and R'Kiz
16. Arrival of Mrs. Dicko from the WHO Regional Training Center of Lome for the preparation of the Training Program for the Village Health Workers (CHW's)
17. Preparation of the Sanitary Survey "Village Diagnostic" by Dicko, Diouf, Moctar and Neuhauser

Annex I (cont'd)

- October
18. Implementation of Sanitary Survey in 8 villages of the Trarza Region, by Moumouni, Dicko, Diouf, and Moctar
 19. Analysis of the Sanitary Survey in 8 villages of Trarza, by Moumouni, Dicko, Hacen, Diouf, Moctar and Neuhauser
 20. Seminar on Training of Trainers (18 Nurses, out of which 4 were selected for the project)
- November
21. Adjustment of the Training Program by the WHO Regional Training Center to the Mauritanian situation, by Sif Erikson (SHDS), Moctar and Diouf
- December
22. Selection and animation of 36 villages (Rosso, Mederdra, R'Kiz)
 23. Organization of 36 Health Committees in the selected villages
 24. Arrival of the Public Health Adviser/Project Coordinator
- 1981
- January
25. Opening of 3 Training Centers: Rosso, Mederdra, R'Kiz
 26. Beginning of the first CHW's/training program (36 CHW's)
- February
27. Opening of a bank account for the project
 28. DIMPEX (U.S. contractor) begins contract execution for local project personnel
 29. Organizing a pharmaceutical products supply system for the project
 30. Arrival of 40 medical kits for the project
- March
31. End of the first CHW's training program (36 CHW's)
 32. Assignment of the 36 CHW's to villages
 33. Seminar on supervision for the 4 Departmental level Nurses/Supervisors
 34. Revision of the Training Program
 35. Preparation of Supervision Forms
- April/May
36. Supervision of the CHW's by the Trainers/Supervisors
 37. Delivery of medical supplies in Nouakchott (for sanitary training)

Annex I (cont'd)

- June 38. Seminar on Revision of Supervision and Data Collection Activities; Moumouni, Diouf, Moctar, Neuhauser, Dicko, Hacen. Visit of 4 villages
- July 39. Revision of the curriculum of the Primary Health Care Program. Dr. Moumouni with 6 Nurses/Supervisors
40. 2-week holiday for the Nurses
41. 1-month holiday for the drivers
- August 42. Seminar on retraining in management
43. Seminar SHDS on management/supervision
44. Field visits for CHW evaluation/supervision; Rosso, Mederdra, R'Kiz
45. Conference in Kaedi on integration of the project to PEV (Expanded Vaccination Program)
46. Formal ceremony for granting equipment to the Rosso Hospital and the 6 Departmental Dispensaries in the Trarza Region
47. Leave to Lome of one of the Nurses/Trainers/Supervisors of regional level to attend a Village Health Program at the WHO Regional Training Center of Lome
48. 1-month vacation for the Public Health Adviser/Project Coordinator (R n' R)
- September 49. Seminar on scientific research for the 5 Nurses/Trainers, the Peace Corps Volunteers and government officials from the Ministry of Health
50. Teaching program for 3 Trainers/Nurses of the project
51. Informal evaluation visits to the CHW's in Rosso, Mederdra and R'Kiz by a DIMPEX consultant
52. Another 3 Nurses/Supervisors are assigned to the project
53. Overall revision of the project by a DIMPEX consultant and specific recommendations for improving project efficiency
- October 54. Contract signed with a Project Assistant Administrator
55. Animation of 32 villages, organization of 32 Health Committees and selection of another 32 CHW's (second group)

Annex I (cont'd)

56. Beginning of the second CHW's training program (Departments of Rosso, Mederdra, R'Kiz and Keur Macene)
- November 57. Supervision of the first group of CHW's
58. Revision of treatment (care) forms of the project according to the DIMPEX consultant recommendations
59. Updating of project statistical data, with the collaboration of the Peace Corps Volunteers
60. Project Director and Public Health Adviser attend a Primary Health Care Regional Conference at Lome
- December 61. End of the second CHW's training program
62. Statistical analysis of project data with the collaboration of the Peace Corps Volunteers
63. 2-week vacation for the Nurses/Supervisors
- 1982
January 64. Translation in Arabic of the Household Survey
65. Beginning of the census in all of the project villages
66. Preparation of the retraining program for the students of the first training program
67. Revision of Statistical Forms
68. Preparation of the Household Survey
69. Revision of the curriculum and preparation of the training models for retraining the CHW's of the first training program
- February 70. Animation of 32 villages in 5 Departments: Rosso, Mederdra, R'Kiz, Keur Macene and Boutilimit
71. Supervision of CHW's of the first group
72. Opening of the Boutilimit Center
73. Continuation of census activities in the project villages
74. Beginning of the third CHW's training program (32 students)
75. Preliminary analysis of data
- March 76. First retraining of the CHW's

Annex I (cont'd)

77. Preliminary revision of the Information System of the project
78. Retraining of the first group of CHW's (17 in Rosso, 1 in Mederdra and 6 in R'Kiz)
79. End of the third program for CHW's training
80. Beginning of the mid-project evaluation and arrival of the evaluation team leader and of the Regional Health Officer, Abidjan Office (Ivory Coast)
81. Evaluation visit in 3 Departments of the Trarza Region (the evaluation team visited 8 villages)
82. Interviews by the evaluation team (15 members) w/ the Trainers/Supervisors, the Peace Corps Volunteers, the AID health personnel, the project managers and coordinators
83. The Mauritanian Red Crescent (MRC) trains a second group of first-aid agents (secourists)
84. Four Nurses/Trainers/Supervisors of departmental level leave for Lome to attend a village health training program (April - June 1982)
85. Preparation, with the assistance of the DIMPEX consultant, of a proposal to receive a grant by PRICOR for the theme "Village Participation" (PRICOR = Program for Operations Research in Primary Health Care, USAID financing)

20th Month

| EXPECTED RESULTS | CHANGES | DOCUMENTS | ACHIEVEMENTS | PLANNED CHANGES |
|---|---|-----------|--|-----------------|
| Beginning of Project: August 1979 | <ul style="list-style-type: none">- Delay in arrival of the person in charge of the project (Dec. 1979)- Signature of technical assistance contract (Dec. 1980); arrival of PCV's and GIRM Nurses is delayed | | Official beginning of project is Aug. 1980 (48 mos/4 yrs/July '84) | |
| Signature of technical assistance contract, December 1979 | <ul style="list-style-type: none">- Tender for contract, December 1979- Slow contract documents processing in Washington, A.I.D.; difficult identification of suitable advisers | | Contract signed in December 1980 | |
| Arrival of Peace Corps Volunteers, April 1980 | <ul style="list-style-type: none">- Request for PCV's in Jan. 1980 (only possible date) | | Arrival of PCV's, September 1980 | |
| Arrival of Nurses/ Trainers/Supervisors, April 1980 | <ul style="list-style-type: none">- Assignment of Nurses is in September of each year | | Arrival of Nurses/ Supervisors/Trainers September 1980 | |

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| EXPECTED RESULTS | CHANGES | DOCUMENTS | ACHIEVEMENTS | PLANNED CHANGES |
|--|--|---|---|---|
| I. <u>Personnel</u> | | | | |
| A. GIRM | | | | |
| 1. 1 Project Director | Job description of one of the trainers of trainers modified to include daily tasks of the Project Director | P.I.L. 14 Job Description, Administrator | 1 Project Director assisted by Trainer of Trainers "Administrator" (+) | |
| 2. 1 Training Adviser | Job description of one of the trainers of trainers expanded to include these tasks | P.I.L. 14 Job Description, Training Adviser | Training Adviser tasks by one of the Nurses trained at Lome Technical Assistance by WHO Regional Center, Lome | |
| 3. 10 Nurses/Trainers/Supervisors from dispensaries & PMI (part-time project work) | Nurses/Trainers/Supervisors directly assigned to training centers | P.I.L. 14 | 8 Nurses/Trainers (++) Supervisors (full-time project work) | Several new nurses and midwives assigned to project |
| B. AID | | | | |
| 1. 1 Project Officer (USAID) | | | 1 Project Officer (USAID) | |
| 2. 1 Public Health Adviser | Adviser's tasks under review | Amendment to DIMPEX contract | 1 Public Health Adviser | |
| 3. Employment of local personnel which was not planned | Revision of project to allow for employment of local personnel and better central & local administration | P.I.L. 14 | Employment of local personnel: secretary, drivers, custodians | Hiring of Researchers in operations research is planned (data collection) |
| | | | (+) Nurse/Trainer/Supervisor | |
| | | | (++) 1 of the Nurses is on sick-leave | |

| EXPECTED RESULTS | CHANGES | DOCUMENTS | ACHIEVEMENTS | PLANNED CHANGES |
|---|---|--|--|-----------------|
| 4. 1 Training Adviser | cancelled | PIO/T Amend- ment No. 1 | Technical Assistance by WHO Center of Lome (since Sept. 1980); short-term technical assistance by DIMPEX | |
| 5. 4 Peace Corps Volun- teers (PCV's) at beginning; 4 addi- tional later | Details about PCV's number cancelled; 1 additional PCV joined the project | P.I.L. 14 | 5 Peace Corps Volun- teers | |
| <u>Short-term Assistance</u> Logistics assistance (12th month) | Foreign technical assistance not necessary | Amendment No. 2 of DIMPEX con- tract can- celling details about type of short- term assis- tance | Tasks about implementa- tion of a logistics performed by project management | |
| Assistance, Rosso Hospital (18th-19th month) | Determined that initial ana- lysis of technical assistance needs necessary before arrival of tech. assistance (analysis shown that tech. assistance to hospital was not advisable at that time) | | Assistance by the Regional Health Adviser for the Sahel Development Program by AID (February 1980) | |
| Assistance for manage- ment of funds of Health Committees | Determination made that these tasks do not necessitate speci- fic external technical assis- tance, except that by advisers for other project objectives | | Tasks performed by project management with complemen- tary advice by various advisers assisting in the project | |

PIO/T = Project Implementation Order/Technical Services

P.I.L. = Project Implementation Letter of Execution

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| EXPECTED RESULTS | CHANGES | DOCUMENTS | ACHIEVEMENTS | PLANNED CHANGES |
|--|---|--|--|-----------------|
| II. <u>Training</u> | | | | |
| 1. <u>First Aid Agents</u> (securistes) 300 securistes trained throughout all Trarza Departments | Decision made to begin project activities in Departments of Rosso, Mederdra and R'Kiz; same for Red Crescent activity Details about number of securistes to be trained and their origin Departments were cancelled | P.I.L. 4, 6 P.I.L. 14 | 150 securistes trained in Departments of Rosso, Mederdra, R'Kiz Preliminary planning for training another 40 securistes | |
| 2. <u>Community Health Workers (CIW's)</u> 32 CIW's trained | Training of CIW's accelerated with training assistance by WHO Center of Lome; planning re-done after arrival of the Public Health Adviser | Planning outline for project activities in 1981 & 1982 | 96 CHW's trained in the Departments of Rosso, Mederdra, R'Kiz, Keur Macene and Boutilimit | |
| 3. <u>Health Committee</u> 32 Health Committees animated and trained | | | 96 Health Committees animated and trained | |

| EXPECTED RESULTS | CHANGES | DOCUMENTS | ACHIEVEMENTS | PLANNED CHANGES |
|--|---|------------------|--|---|
| <p>4. <u>Nurses</u> (formal training) 2 Nurses/Trainers of trainers were trained at the Lome WHO Center</p> | <p>Training item of the project budget was increased to allow for training of more nurses (on the job, and in other countries)</p> <p>(on-the-job training usually included other personnel from Ministry of Health but they are not included here)</p> | <p>P.I.L. 14</p> | <p>2 Nurses/Trainers of trainers trained at Lome WHO Center, Fall 1979 (training pgm for PHC trainers)</p> <p>1 Nurse/Trainer trained at Lome WHO Center, Dec. 1981 (Public Health pgm)</p> <p>4 Nurses/Trainers/ Supervisors presently attending the training pgm for primary health care at Lome WHO Center (April 1982)</p> | <ul style="list-style-type: none"> - at least 4 additional Nurses will be sent to Lome training pgm - 1 or 2 Nurses may be sent to Dakar for a training pgm in communications & health teaching - Project plans to assist with development of a pgm for PHC at School of Nurses & Midwives |

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| EXPECTED RESULTS | CHANGES | DOCUMENTS | ACHIEVEMENTS | PLANNED CHANGES |
|--|---------|------------------------------------|--|-----------------|
| <u>Training</u> | | | | |
| 4. <u>Nurses (Con't)</u> 10 Nurses trained as Trainers of trainers | | Reports on programs attended | - 4 Nurses (incl. 4 presently in project) trained in a program for training trainers in PHC teaching (by advisers of the Lome WHO Center, at Rosso, Mauritania, 22 October to 11 November, 1980) | |
| | | " | - 4 Nurses trained in adaptation of teaching materials to trainers (by an adviser from the Lome WHO Center, at Nouakchott, November 4 to December 5, 1980) SHEDS | |
| | | " | - 4 Nurses/Trainers/Super- visors trained in super- vision. (Trained by Diouf Ibrahima and Moctar Ould Nemah, at Nouakchott, March 20-27, 1981) | |
| | | See reports on training pgms | - 5 Nurses retrained in supervision of the CIW's (pgm by advisers from the Lome WHO Center, at Nouak- chott, August 14-29, 1981) | |

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| EXPECTED RESULTS | CHANGES | DOCUMENTS | ACHIEVEMENTS | PLANNED CHANGES |
|--|--|---|---|-----------------|
| <u>Training</u> | | | | |
| 4. <u>Nurses</u> (Con't) | | | | |
| | | | - 4 new Nurses trained in teaching for primary health care (pgm by Mohamed Ould Alew, Nouakchott, Sept. 1 to 15, 1981) | |
| | | | - 7 Nurses trained in evaluation techniques and nutrition (seminar by Dr. Delgado - DIMPEX, Miss Sy - Division PMI, & Dr. Kreysler - CMS, October 5-16, 1981, Nouakchott) | |
| 5. <u>Peace Corps Volunteers</u> (PCV's) | | | | |
| 4 PCV's trained | project accepted addition of 1 PCV who wanted to stay another 1 year (Nov. 81) | Letters, Peace Corps | 5 PCV's trained | |
| III. <u>Seminars for Project Development</u> | | | | |
| 1 orientation seminar | number and type of seminars was increased | Planning outline of project for 1981 & 1982 | at least 8 seminars were conducted to assist in project development | |
| 2 seminars for the study program | | | | |

| EXPECTED RESULTS | CHANGES | DOCUMENTS | ACHIEVEMENTS | PLANNED CHANGES |
|---|---|-----------|---|-----------------|
| IV. <u>Pharmaceutical Products Supply System</u> | <ul style="list-style-type: none"> - "licensed agents" system cancelled (speculation risks); CIW's licensed to purchase their own pharmaceutical products - project request at Ministry of Health for permitting purchasing by Pharmarim of pharmaceutical products packaged for hospitals, to reduce price paid by CHW | P.I.L. 14 | <ul style="list-style-type: none"> - 96 CHW's obtain license for purchasing pharmaceutical products at Pharmarim - Pharmarim received authorization and ordered (Jan. 1982) pharmaceutical products packaged for hospitals to be sold to CHW's at reduced prices (15-20% discount) - about 60% of the CHW's of the first training group have already purchased pharmaceutical products | |
| V. <u>Data Collection</u> Beginning of data collection during 13th month | <ul style="list-style-type: none"> - beginning of data collection postponed to allow for the training of project management in evaluation - cancellation of details about precise data types to be collected (pages 30 and 31 of Project Agreement will serve as a guide for this point) | | Data collection started (18th month) in January 1982; village census | |

| EXPECTED RESULTS | CHANGES | DOCUMENTS | ACHIEVEMENTS | PLANNED CHANGES |
|--|---|------------------------------------|--|-----------------|
| <p>VI. <u>Radio Transmitters</u> Decision will be made later for possible project use of radio transmitters</p> | <p>study made as to the possibilities of using radio transmitters</p> | <p>P.I.L. 14</p> | <p>Decision made to not use radio transmitters, and to allocate the planned budget for that item to the item "health extension" (mass media)</p> | |
| <p>VII. <u>Equipment</u> Arrival of medical and teaching equipment, 14th-15th mo.</p> | <p>extension of limit date for equipment arrival</p> | <p>Amendments to PIO/C of AACP</p> | <p>Most equipment arrived by the 18th month of the project, but the order was placed one year before first delivery</p> | |
| | <p>equipment list revised to to better adjust orders to actual needs of health units</p> | <p>PIO/C of AACP</p> | | |
| | <p><u>note:</u> - cancellation of tents for Community Health Centers (not practical)</p> | <p>P.I.L. 14</p> | | |
| | <p>- cancellation of radio transmitters (not technically & politically feasible in Mauritania)</p> | <p>P.I.L. 14</p> | | |

PIO/C = Project Implementation Order/Contract Services

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ANNEX III

REPORT FROM "C" GROUP
SITE VISIT: April 6, 1982
DEPARTMENT OF BOUTILIMIT

Evaluation Team: Sy Mamadou, Team Leader
Ba Oumar Fussala
Linda Neuhauser
Mona Y. Grieser

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1. PREFACE AND METHODOLOGY

The group C evaluation team left Nouakchott the morning of April 6, 1982 and arrived the same morning at the Rural Medical Assistance Training Center at Boutilimit. The team spent much of that day with the nurse/trainer, Ramdan o/ Ramdan, and then visited the village of Rabie in the afternoon. The night was spent at Boutilimit and the team returned to the field early the next morning, after only a brief protocol visit to the Prefect and to the PMI center to visit the nurse midwife.

Two things should be noted about the visits that were made. Although two villages were evaluated, the same nurse/trainer was not responsible for the education of both community health workers. M'Bareck o/ Bilal had previously been responsible for the training center at Boutilimit and had been transferred to Keur Macene. In a brief discussion with the nurse/trainer it became apparent that his replacement had developed close and efficient ties with both the PMI center and the Dispensaire. The Dispensaire had also had a change in personnel and the new Major seems to be highly motivated and very receptive to the principles of the Project. He had not yet returned to his post from attending a seminar in another region and could therefore not be interviewed. The evaluation team did not visit the dispensary.

The team would like to express its thanks to the nurse/trainer Ramdan o/ Ramdan who answered all questions put to him and who clearly and efficiently had prepared the villages for the team's arrival.

Our thanks also go to the various representatives of the two villages with whom we came in contact and who showed extraordinary hospitality and kindness not soon to be forgotten.

In most cases the entire group was present at the interviews. In the home visits, however, it was felt that such a large group would appear intimidating so representatives were selected to accomplish the tasks.

There was no interview with the Peace Corps Volunteer normally residing in Boutilimit. His vacation began simultaneous with the evaluation and was unavailable for questioning.

2. INTERVIEW RESULTS -- BOUTILIMIT

Name: Ramdan o/ Mohamed Ramdan, Nurse/trainer/supervisor
Length of time in the department: 2 months

The nurse/trainer in Boutilimit was seconded to the project in February 1982, approximately ten days prior to the opening of the third training program. He was transferred to the project from the Dispensaire at Boghe where he had shown remarkable initiative and had made a request to be transferred to a primary health care program. Because of his recent transfer, he had not received formal training either in pedagogical skills or in public health. His orientation to the project had been brief consisting only of several interviews with the counselor on Public Health,

and experience with the animation activities under the assistance and supervision of one of the other nurse/trainers. When he finally attended the training program he was assisted by the counselor in health education, Moctar o/ Memah.

Question: What, in your opinion, is your role in the Project?

Answer: Training and "encadrement" of the CHW with special emphasis on prevention. Animator and coordinator between the health agent and the community, and between the health agent and the dispensary.

Question: Which part of your own training seems to you the most interesting in relation to your work?

Answer: The supervision of the health agent.

Question: Why?

Answer: The success of the project depends on this follow-up work.

Question: Which part of your own training seems the least interesting in relation to your work?

Answer: All activities are of equal importance. There is nothing I am asked to which is not important, but I would stress on supervision more than others.

Question: What are the most important points raised by the Community Health Committees (CHC) during your interviews with them?

Answer: The question of payment of the health worker by the State even though they are aware of the project's stance on that subject. In spite of this, 2 out of 5 villages have already paid their health workers.

Question: What schedule do you use for supervision?

Answer: At the moment I supervise them every month, but bear in mind that my group has graduated only four days ago. I have, however, visited all the previous community health workers during the past two months, taking time out from the training program to do so.

Question: What are some of the important problems you encountered during your last supervision?

Answer: a. Restocking the medical kits. One out of my five villages has already re-purchased medications.
b. This region is not noted for malaria and yet they have a large amount of unnecessary Nivaquine in their kits. This quantity could be deminished and replaced with other, more vital drugs.

Question: Is the curriculum you use adequate?

Answer: Yes! But it could be supplemented with a projector and slides or films. A small generator could be borrowed from SONELEC for the purpose.

Question: What does the curriculum lack?

Answer: (See above)

Question: Would you alter the curriculum in some way?

Answer: Yes!

Question: How and why?

Answer: The health workers in this region have a certain knowledge level and the curriculum they study is medically speaking insufficient. I would like to see a module on each of the following subjects:

- o Otitis (common to this department)
- o Stomatitis
- o Anatomy using visual aids
- o Urinary infections
- o Venereal infections

I would also provide reference material (manuals) in Arabic since most of the community health workers are literate in that language.

Question: Are all the criteria of the Project generally respected when it comes to selecting CHW?

Answer: In general, yes. One exception was a youth of 20 years, selected by the committees.

The evaluation team asked the following supplementary questions of the nurse/trainer:

Question: What do you think of the community's and the CHW's understanding of their economic and financial responsibilities?

Answer: In two of the participating villages, the CHW has already received an average of 3,000 UM from the committee. In both villages there is an influential chief who is supportive of the CHW. One CHW wishes to be supported by the State and the village agrees. Two others do not seek remuneration, obviously perceiving their activities as part of their duty to the village.

Question: What other solutions have you seen?

Answer:

- Sale of medications to the villagers at a small fee to offset their cost and the cost of the CHW;
- Support of all health activities by the wealthy families in a village;
- One wealthy village has refurnished its stock at a total sum of 45,000 UM and expects to do it on a month basis.

3. INTERVIEW RESULTS -- RABIE

3.1. General Evaluation of the CHW.

Evaluate the degree of knowledge of the health worker in the following activities.

Name: Fatimetou Mint Mohamed, Community Health Worker
Village: Rabie
Department: Boutilimit
Date: June 4, 1982

Question: What would you counsel a village which you consider in need of proper maintenance?

Answer:

- o Clean all residential areas;
- o Throw garbage into a pit and bury it;
- o Utilize leaves as part of personal hygiene after excreting;

(The CHW omitted to mention the following...)

- o Protect the wells from dirt and debris.

Question: How would you advise someone about personal hygiene?

Answer:

- Utilize leaves for excreta;
- Wash the body at least twice a week;
- Wash clothes at least once a week;

(The CHW omitted the following possible responses...)

- Washing of hands after relieving oneself;
- Washing hands prior to eating;
- Covering food and water.

Question: How would you best advise a mother or family on how to feed their infants?

Answer: . Keep nursing at least for 18 months;
 . Start the infant on solids (in the form of soup) around the 6th month;
 . Give a wide variety of foods to the child.

(The CHW mentioned specifically meat and beans.)

Question: How would you treat diarrhea?

Answer: - Give plenty of liquids (rehydration fluid);
 - Give Ganidan (according to patient's age).

Question: How would you treat fevers?

Answer: Give Nivaquine and Aspirin (according to various age and dose requirements).

(While the CHW knew what she should use as treatment her knowledge of dosage was faulty. As mentioned earlier there is very little malaria in this area and she would have had no opportunity to practice what she had learned theoretically.)

Question: How would you treat headaches?

Answer: With Nivaquine or Aspirin according to age and dose requirements.

Question: What do you look for in making a home visit?

Answer: o Whether there is a sick person or not;
 o If the residence is clean.

(The CHW omitted the following possible responses...)

- o Check if there are pregnant women;
- o See if there is a woman in labor;
- o Check if there are unvaccinated children under 5.

Question: If a village asked you to recommend certain vaccinations, which would you emphasize?

Answer: - Measles;
 - Whooping cough;
 - Polio.

Question: Which specific habits of the village, would you advise, need to be changed?

Answer: . Drinking untreated water;
. Relieving themselves in the immediate vicinity of their residences and close to their source of drinking water.

(The CHW omitted to mention the following points...)

- . Forgetting to vaccinate their children;
- . Not washing their hands after relieving themselves;
- . Not washing hands before eating;
- . Everyone washing hands in the same water.

3.2. Community Health Worker, Practical Examination

Question: In this examination the CHW was asked to identify various items in her medical kit and explain the use of each.

Answer: With the exception of Nivaquine, she was able to do this accurately. She also accurately described the composition of rehydration solution although admitting that thus far she had had no cause to use it.

Question: The CHW was asked to demonstrate how to treat wounds.

Answer: Her response was inaccurate only in that she said she would use antibiotic ointment on the wound and failing to mention the need to first check if the wounds were infected or inflamed.

Question: The CHW was asked to pretend she was counseling a group of mothers on the best way of introducing solid foods to their infants.

Answer: While she responded correctly to the types of foods, she was vague as to the method and needed reinforcing.

Question: She was asked to explain how she would proceed on a home visit.

Answer: Her response was weak and vague.

Question: The CHW was asked to demonstrate how best to cut the umbilical cord and how to bandage it.

Answer: While she answered correctly according to her training, it was made evident to the group by M.Sy Mamadou that the training given to a health worker and that given by the PMI to a traditional birth attendant differ, and the project would do well to coordinate in this domain with PMI to assure standardization of procedures.

Question: The CHW was asked under what circumstances she would evacuate a pregnant woman or a woman in labor.

Answer: She responded correctly to this, giving both criteria, and elaborating on her responses.

3.3. Community Health Agent

Name of village: Rabie
Population: 262 and more according to project census
Distance from health center: 14 kms.
Name of Trainer: M'Bareck Ould Bilal
Date of training: October 1981 - December 1981
Date activities began: December 22, 1981
Number of visits received since return from training: 3
Number of evacuations to the dispensary: 1

Question: Do you see these people who have been evacuated once they return to the health center?

Answer: Yes. Even they don't report to me, I go to see them.

Question: Have you any information on what treatment they received?

Answer: Yes. I ask for information from them.

Question: Have you heard any complaints on the manner they were treated?

Answer: No. I accompanied each case.

Question: How many times have you met with CHW?

Answer: Five times.

Question: List some important questions discussed by the community health committee. What problems were raised by the committee?

Answer: Remuneration of the health agent; medications (kind and quantity); properte du village.

Question: What problems were brought up by the health agent?

Answer: o Patients demanding to be treated outside regular clinic hours and which are not emergency cases;

(Her regular hours are 8-12 every morning.)

- o Certain patients insist that she must give them medications even when they were not part of the original trousse and accuse her of hoarding them;
- o Her advice is not always accepted by those she counsels.

Question: What solutions were decided to resolve these problems?

Answer: - The committee would ask the villagers to respect her hours;
 - The medications would be replenished and were expected
 within the week;
 - She would be reimbursed (9,000 UM was owed by the cooper-
 ative and 4,500 of that already paid back to her).

Question: Are you seeing more and more people?

Answer: Yes. For the first two months many people came, but as the
medications diminished less people came.

Question: Do people come often?

Answer: (See above)

Question: Do people come less and less?

Answer: (See above)

Question: What ailment do they bring to you?

Answer: . Wounds or sores;
 . Bronchitis;
 . Conjunctivitis.

Question: What changes have you noted in the residences since your arrival?

Answer: They now get cleaned.

Question: Do you think there are some traditions that require further
changing?

Answer: No.

(The questions on "fiches techniques" were not asked since the CHW
do not have "fiches techniques".)

3.4. Community Health Committee

Committee membership:

Ali Ould Ismail Ould Sidi Abdallahi - President and school teacher
Mohamed Mahmoud Ould Mr. Salem - Iman
Dahmard Ould Ebeti - Chief of the cooperative

(2 other committee members were absent)

Question: Does the committee know the major tasks of the CHW?

Answer: Yes. She takes care of emergency patients; takes regular care particularly of mothers and children; advises on hygiene.

Question: Does the CHW actually accomplish these tasks?

Answer: Yes.

Question: Which does she accomplish most often?

Answer: Curative care.

Question: Which task is accomplished least often?

Answer: Don't know, none.

Question: Which task does she do the best?

Answer: Don't know, all.

Question: Which task does she do the worst?

Answer: Don't know, none.

Question: How many times have you met with the CHW?

Answer: Once a month.

Question: How many times has the health worker asked to meet you?

Answer: Four or five times.

Question: How many times have you initiated a meeting?

Answer: Never.

Question: Members of the committee most often present?

Answer: The three present.

Question: Members of the committee most often absent?

Answer: The ones currently absent -- they are traders by profession and travel often.

Question: How long do your meetings last?

Answer: About one hour.

Question: What do you talk about in your meetings?

Answer: o Important cases of patients (pneumonia);
 o Diarrhea;
 o Conjunctivitis (infectious diseases);
 o Payment for the health worker;
 o Purchase of medications.

Question: What solutions have you suggested to meet these problems?

Answer: We have decided to purchase medications and to stock by asking families with medications (contributed by other family members) to put these into a village stock. Also to charge a fee per family based on their income.

Question: Who, aside from the committee members and the health agent, has participated in your meetings?

Answer: The nurse/trainer and the volunteer.

Question: What contribution do they make?

Answer: They give advice and drop off medications.

The committee had the following observations:

- The CHW has herself refused payment suggesting that the money be spent on medications;
- Her working hours are fixed at 8-12 hours;
- When she wishes to travel she must give her reasons for the absence;
- She give priority to children;
- Because the amount of medications she has is meagre, the adults prefer to go to Boutilimit for treatment;
- There have been no measles cases this year;
- The PEV team comes by once a year.

4. INTERVIEW RESULTS -- BOULENOUAR - PREFACE

The CHW of the village of Boulenouar graduated from the health training center at Boutilimit on the 3rd of April. Since our own visit was on the 7th of April he had very little time to establish himself.

His situation is also somewhat different from other health workers. He

is simultaneously the chief of the village and the health worker -- he had sought around for another candidate for health training at the time the RMA team came through on its animation tour, but finding no volunteers, and himself well-aware of the benefits to be gained by his village, he volunteered himself. Part of his evident impact is due to his position as chief of the village so that even his health impact preceded the arrival of the RMA team. Last year he had made a personal visit to the Director of Health (Dr. Zein, at the time) to enlist his support to getting the Enlarged Program of Vaccination (EPI) team to come to his village. The EPI team had been through his village twice and he proudly stated that when recently measles broke out in neighboring encampments his own village was unaffected. Thus, he already has an interest in primary health care.

As chief of the village he is already thinking along lines of community organization and it is a natural step to use the same tools (community organization) for the accomplishment of the project's goals.

The department of Boutilimit was opened in October 1981 with its first training session in Hassaniya. The nurse at that time was N'Bareck of Bilal who, although a Naure, was raised in Senegal and speaks better Wolof than Hassaniya. He was among the first group of nurses selected and had been trained under the SHDS in country training program. He does not read Arabic. The Peace Corps Volunteer at that time and today still is Mark Stribling, a volunteer who transferred to Mauritania from Oman and who speak Omani arabic.

In February of 1982 N'Bareck of Bilal was transferred to Keur Macene to teach at that training center in Wolof. He is the only Wolofone nurse/trainer in the project. In his place was transferred a nurse completely new to the project and Boutilimit, Ramdan o/ Mohamed Ramdan. Ramdan, as part of his duties, has made an attempt to visit the CHW previously trained under N'Bareck, to open contact before supervising.

The Peace Corps Volunteer had chosen April 11 - June 1 as his vacation time and was therefore unavailable for questioning or advice.

4.1. Community Health Worker

Name: Edab Lehsane
Village: Boulanouar
Date: April 7, 1982

Evaluation of the Community Health Worker's Theoretical Knowledge

Question: What advice would you give to a village so that it would be maintained in a hygienic condition?

Answer: Clean around all residences. Throw garbage in a pit. Utilize leave for excreta. Protect around well.

(The CHW answered all questions in full.)

Question: What advice would you give about a person's individual hygiene?

Answer: Wash hands after relieving himself. Wash hands before meals with soap. Use leaves for excreta. Cover food and water. Wash the body at least twice a week. Wash clothes at least once a week.

(The CHW answered all questions in full.)

Question: What advice would you give a mother or a family about feeding her children?

Answer:

- Organize nutrition education classes,
- Breastfeed up to 18 months,
- Begin solid food by 6 month in the form of semi-liquids,
- Give a variety of foods, particularly meat, beans, peanuts, fruits and vegetables.

(The CHW answered all questions in full.)

Question: How would you treat diarrhea?

Answer:

- o Make the patient drink plenty of liquid (particularly, rehydration fluid);
- o Administer GANIDAN according to patient's age;
- o Drink rice water.

Question: How would you treat fevers?

Answer: Give NIVAQUINE or ASPIRIN according to age and directions. Recommend good food and rest.

Question: How would you treat headaches?

Answer: Give NIVAQUINE or ASPIRIN according to age and directions.

Question: What would you check when making a home visit?

Answer:

- . If someone in the house was ill;
- . If the residence was clean;
- . If the people themselves were clean;
- . If there were pregnant women who were not making pre-natal visits;
- . If there was a woman in labor;
- . If there were children under 5 who were not being vaccinated;
- . Check for malnutrition among children;
- . Check for contagious illnesses.

Question: Against which illnesses would you recommend that a child be vaccinated?

Answer: - Measles,
 - Whooping cough,
 - Polio,
 - T. B.,
 - Tetanus,
 - Diptheria.

(The CHW further specified the calendar for each vaccination and had himself visited PEV the previous year and requested they visit his village. They have since been visited twice.)

Question: What customs or habit among the villagers would you advise them to alter?

Answer: o Drinking impure water;
 o Relieving themselves in the immediate vicinity of their residences;
 o Not vaccinating their infants;
 o Not washing hands after relieving themselves;
 o Not washing hands before eating;
 o Everyone washing hands in the same bowl of water;
 o Eating uncooked foods;
 o Forbidding children to eat at night, specifically boys, and allowing children to eat earth.

4.1.1. Practical Test

1. The CHW explained in detail each item in his medical kit, its use and application.
2. The CHW explained the differences in dosage between adults and children for NIVAQUINE and ASPIRIN.
3. The CHW demonstrated a knowledge of preparation of rehydration solution..
4. The CHW demonstrated how to treat a wound.
5. The CHW explained how he would advise a mother on weaning her infant onto solid foods, through the gradual introduction of semi-solid to solid foods.
6. In describing how he would proceed during a home visit the CHW brought forth the following points:
 - o The cleanliness of the children;
 - o The cleanliness of household tools, particularly cooking utensils;
 - o The overall cleanliness of the residence (interior and exterior);

- o Check to see if children were sick;
 - o Check to see if latrines were used and if not, where the household go to perform bodily functions;
 - o If the mother was nursing, he would enquire as to her personal hygiene to insure clean breasts;
 - o Check to see if clothings were clean, and while doing this, impress the importance of cleanliness to the household, stressing certain illnesses that are related to poor hygiene, such as diarrhea and conjunctivitis;
 - o Check water supply including the water source, its filtration (if any) and its vessel (container) to ensure a good potable supply -- educating the household the importance of maintaining good hygiene;
 - o Check the food supply and the menu to determine if it is adequate and if it is well cooked to avoid illnesses;
 - o Check if infants have been vaccinated;
 - o Check if there is any one currently ill among the household members; if there are cases he himself has treated or is following up; if there are cases treated elsewhere (i.e. dispensary) which also require follow-up either through further treatment or surveillance;
 - o Check if there are children at weaning age (18 mos.) and if they are adequately fed;
 - o In general, check the health of the child in relation to nutrition, adequate sleeping hours, normal emotional development, etc.
7. The CHW demonstrated how to cut the umbilical cord of a newborn child and bandage it. However, he stated that in his village it would not be he who would attend to the mother in labor but the traditional midwife, who had not received training. He requested that if possible the midwife receive training to ensure that aspect of risk is covered.
8. The CHW stated that he would evacuate a pregnant woman or a woman in labor if she needed pre-natal care -- was bleeding, or had a history of problem births, or was overly anemic, after having observed them himself for a week or so. He would also evacuate a woman if it could be determined that the presentation of the foetus was breached -- no foetal movement -- oedema -- genital infections.
9. The CHW effectively demonstrated how he would check for anemia and oedema in pregnant women and specified the signs or symptoms he would look for.

4.1.2. Interview with Community Health Worker

Village: Boulenuar
 Population: Unknown - no census yet
 Distance from health center: 46 kms.
 Trainer: Ramdan o/ Mohamed Ramdan
 Date of training: February 22, 1982 - April 3, 1982

Date activities began: April 4, 1982
Number of visits received since training: 1
Number of cases treated in the village: 100 consultations,
4 pre-natal
Number of evacuations: none
Number of cases seen after the return from evacuation: n.a.

Question: Have you any information on the treatment these patients received at the center?

Answer: Not applicable.

Question: Have you heard any complaint from patients on the way they were treated at the center?

Answer: Not applicable.

Question: Number of meetings with the village health committee?

Answer: 1

Question: List the important questions discussed at that time?

Answer:

- o Cleanliness of the village;
- o Nutritional problems;
- o How to achieve collaboration with satellite villages that depended on them for health care;
- o How to establish a women's cooperative to obtain adequate fruit and vegetables;
- o The role played by nutrition in the establishment of health;
- o How to make funds available for health.

Question: What problems were raised by the committee members?

Answer:

- Questions regarding the necessity of nutrition;
- How to pay for medical evacuations;
- Misconception as to the "fiches d'evacuation";
- Inadequacy of the medical kit in general;
- Inadequacy of kit for adults.

Question: What problems were brought up by the CHW to the committee?

Answer:

- o Cleanliness of the village;
- o Nutritional problems;
- o How to achieve collaboration with satellite villages that depended on them for health care;
- o How to establish a women's cooperative to obtain adequate fruit and vegetables;
- o The role played by nutrition in the establishment of health;
- o How to make fund available for health.

Question: What solutions were adopted to resolve these questions?

Answer: A women's cooperative was formed and 900 UM was raised towards the purchase of fresh fruit and vegetables to go towards a common stock that would be dispensed when needed.

Question: Do patients come with greater frequency?

Answer: 61 consultations his first day at work
59 consultations his second day at work

Question: What health problems occur most frequently?

Answer: . Diarrhea
. Headache
. Malnutrition
. Conjunctivitis
. Cough

(difficult to say due to insufficient time at post)

Question: What changes have you noticed in the population since your arrival (good or bad)?

Answer: None yet observable.

Question: Do you think there are areas of knowledge which you would like to learn more?

Answer: How to prepare a water filter.

Question: Do you think there are practical techniques you would like to learn more about?

Answer: No.

Question: Are there problems in the village that you would like resolved but for which you have not received specific training?

Answer: How to provide adequate water in terms of quantity and quality.
How to begin a small vegetable garden.

(The questions on "fiches techniques" were not asked as none had been provided to the CHW.)

4.2. Interview with Community Health Committee

Membership:

Iman of the Mosque - Chairman - trader
Mohamed o/ Hadna - lay clergyman
Ahmedan o/ Thahi - herder
Meriam mit Lehdana - traditional midwife (absent)

(The latter although present in the village was not invited to the meeting in spite of hints dropped by the evaluation team, suggesting that she is probably not consulted otherwise.)

Question: Does the committee know the tasks of the CHW?

Answer: o Give advice to the community (health education)
 o Treat the sick
 o Impress the population in 3 specific areas:
 1. Gardening
 2. Health factors
 3. Community organization -- so that they can enlist the government's help for schooling and to prevent migration, because in their opinion, it should be healthier and easier to live in a village than in a town. To achieve this, two conditions must be met:
 a. health information must be available
 b. food must be available

The committee cited traditional health practices which were harmful and which exacerbated the poor health condition -- tuberculosis and weaning practices.

o That mental health must be considered (particularly in pediatric care) as CHW's domain to avoid sending such individuals to the marabont or other more ignorant traditional healers. These people asked large sums of money and accomplish little.
o To overcome traditional prejudices towards food (e.g. eggs are unclean).

The committee further suggested that if the Trarza project could provide them with a nutritional educator or nutritional demonstrations they would be very happy. The committee stated that the village is currently going through a profound sociological transition period. In this phase they are exchanging traditional values for modern ones and are in a period of doubt and suspicion. Old values are no longer relevant and functional and new ones are not yet proven.

Question: Does the CHW actually accomplish these tasks?

Answer: Yes. He tries to but his kit is inadequate.

Question: Which task does he accomplish the most?

Answer: Nutrition education.

Question: How many times have you met amongst yourselves?

Answer: Once.

Question: How many times has the CHW requested to meet with you?

Answer: Once.

Question: How many times have you requested to meet with the CHW?

Answer: Never.

Question: Which members of the committee are the most regular at meetings?

Answer: Those present.

Question: Which committee members are most frequently absent?

Answer: Those currently absent.

Question: How long did your committee last?

Answer: One hour.

Question: What problems did you discuss?

Answer:

- . The CHW described his training and his future role;
- . He described his medical kit;
- . Discussed nutritional problems;
- . Discussed renewing the medical kit.

Question: What solutions did you accept to overcome the problems discussed?

Answer:

- . Decided to investigate methods of extracting funds to pay for medical kit;
- . Decided to dig holes to deposit household trash;
- . Decided to establish a women's cooperative and collect funds for a regular supply of fresh foods.

Question: What actions have you undertaken?

Answer: Raised 900 UM towards the women's cooperative.

Question: Who apart from the members and the CHW take part in your committee meeting?

Answer: No one so far.

Question: What did you learn from them?

Answer: Not applicable.

Question: What would you suggest would improve the work of the CHW in the village?

Answer: . Assure future re-training;
. Ensure continuity of medications;
. Use other people in the village, particularly, the women, and some from satellite encampments to aid him in his work.

4.3. Summary and Conclusions of the Evaluation Team C

4.3.1. The Community Health Worker

It seems that the project criteria in selecting the village worker has in these two instances -- Rabie and Boulenouar -- been respected by the community. The CHW's are in the correct age category, stable in their villages and motivated.

The CHW in Boulenouar seems to have a particular aptitude for animation and community organization and is highly respected in the village. He does hope to train another health worker to assist him.

The following additional questions were asked of the CHW in Boulenouar:

Question: How could you reconcile your work as health worker with your work as a salesman (trader)?

Answer: I was formerly a wandering trader -- a profession I have since abandoned in view of the importance of my present undertakings. If my present work succeeds, if the villagers see it as important it will not be a problem. I do not ask for remuneration, what I want is universal effort for universal good.

Question: What do you expect from the Project?

Answer: I was the first to throw a stone in this locality (ground breaker). I was the first to bring a radio into this village bringing in the benefits of mass education which, I could see, could only profit the village (this was in 1956). The Project has great many things of interest, not the least is reminding the people that treatment of family illnesses can be through application of sound nutritional practices, thereby avoiding lengthy and expensive trips to town. There are no nurses in this area who have attempted to study our problems and only this project has cared to do that and proposed solutions. I wish to give it my continued attention.

Question: Do you think that people are aware of the need and ready to renew their medical kit?

Answer: I think it is a little too early to broach the subject of money to this committee. I must, first, work and attempt to convince, through my work, the community. I will attempt to make them sensitive to the issue. Currently, the committee is focusing on social problems, and that's good. Later, we can discuss financial ones. Perhaps, a head tax on all families, poor and rich (not to make the poor feel left out), and then ask for additional contributions from the rich. The amount from the poor might be symbolic. Finally, we, the villagers, ask that you keep your promises to us, continue to make visits, collaborate openly with us and respect us. Help us to coordinate the assistance of other services which might have an interest in the village, such as development rurale or the sage-femme in Boutilimit.

4.3.2. Training of the Nurse/Supervisor

The nurse/trainer in Boutilimit, Ramdan o/ Ramdan, has received no formal training in pedagogy or primary health care so far. He was transferred to the project from the dispensary in Bogue, and was immediately sent to Boutilimit to be in charge of the training center. He received on-the-spot assistance during the animation activities from one of the nurses, and during the first weeks of the training program from the nurse/supervisor, Moctar o/ Memah. However, he has administrative experience and a great deal of personal motivation. It is evident that he has contributed greatly to the success of the project in this area. The nurse/trainer had apparently shown an interest in the project and his interest in primary health care should be fostered. He is obviously well-organized and well-motivated and these should be fostered.

4.3.3. Training Program

Ramdan has laid stress particularly on problem-solving, community organization, animation and, above all, practical training through the PMI and CREN.

There is a definite accent on prevention. His training seems to be excellent as evidenced by his product, the health agent.

He is aware of high risk group, mothers and children, and seeks to address the problems in that area. The qualities seen by the team in the nurse/trainer, the health agent, and the community are very impressive.

Weakness in the training program are:

- . Delivery and labor;
- . Pre-natal care;
- . Gardening;
- . Informing the CHW of resources available to him through other services of the MOH;
- . Otitis, stomatitis, skin ailments, in spite of obvious prevalence of such ailments in area;
- . Over-emphasis in this region on malaria.

The team recommends that the curriculum and the medical kit be adapted by region.

5. GENERAL SUMMARY

It is the evaluation team's opinion that this stress on community organization and community training is very important. In Boulénouar the CHC is very dynamic and the chief, in his role of health agent and primary counselor for the village, has already established a commission to take care of financial problems of the village. This commission would oversee the collection of money, the payment of the health agent's salary, and the disbursement of funds to re-supply the medical kits. There is another commission responsible for social problems (water, food supply). The community health committee would then see its role as counselor to provide orientation to these commissions.

The evaluation team made a detailed tour of the village and several interesting features were pointed out in Boulénouar.

First, the village has set aside a special room as the dispensary for the CHW. The CHW is supplied with clean washing facilities, his kit is well displayed and the "consulting room" has relative privacy. It is a stone structure with walls and can be locked. We were told that during his first two days after returning to the village the lines of patients waiting to consult him stretched a fair distance. Because of the number of child malnutrition cases he has seen he tends to find it more efficient to prepare every day some rehydration solution, although he also educates mothers in its preparation and use.

In Rabie, the CHW worked out of her own tent and stated that as long as the villagers continue to show interest in her treatment of their illnesses she would continue to work. In Rabie, it is the CHC itself that handles the financial problems and follows up suggestions from the CHW. The CHW is a woman but she has their confidence and is allowed to make decisions.

Remuneration of the health worker

Apparently the concept of volunteerism has been readily accepted. Both health agents seen by the evaluation team were ready to accept their duty without immediate thought of recompense. Apparently, both considered the regular supervision by the project and the project respecting engagements it has made as more important than recompense.

Priority has also been given to animation, health education and community organization as means of convincing the community of the need to use the CHW.

Renewing the medical kit

It appears that the kits are being replenished but not necessarily at Pharmarim but through a complicated family network. Without distinction, families are tithed, the reason given that in health all must pay even the healthy -- universal participation is the key element. Rabie had already acquired 4,500 UM towards its medical kit.

The CHW at Rabie did mention that when she went to purchase medications at Pharmarim she didn't receive the discount which the project had informed her of when last October Pharmarim agreed to supply wholesale drugs to the project and the CHW.

The team see a possible problem once these wholesale drugs are purchased by the health worker. They do not at all resemble, in packaging, the previous drugs given to the CHW and there may arise problems of identification of drugs if they are not re-trained by their nurse/supervisor. Not all the health agents are literate and the new packaging and quantities may prove to be confusing at first.

The kits do not seem to be entirely relevant to the needs of this population -- too much nivaquine, not enough aspirin, no drug for otitis, etc. It does seem that the training program should stress drug abuse and the dangers of over-use even of common drugs and injections, particularly those not known to the CHW.

Characteristics of the Data Base

Since the census data was as yet unavailable it was difficult to evaluate the data base. However, it seems that the health agents, both in Rabie and Boulénouar, have difficulty using the forms provided to them. The CHW in Boulénouar was particularly offended at the suggestion that they might be too complex.

It is evident that a need exists for a "fiches techniques" or some sort of memory aid for the CHW to aid him in recalling specific illnesses and treatments. This should be provided in Arabic since both health agents are literate in that language.