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SOMALIA RURAL HEALTH PROJECT DELIVERY (RHD) PROJECT

PROJECT EVALUATION

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CDD	- Controlling Diarrhea Disease (a Who Program)
CHW	- Community Health Worker
DMO	- District Medical Officer
EPI	- Expanded Program for Immunization
IDA	- International Dispensary Association
LPA	- Local Peoples' Assembly
MSCI	- Medical Service Consultants Incorporated
NTC	- National Training Center
PHC	- Primary Health Care
PHCC	- Primary Health Care Coordinator
PHCNO	- Primary Health Care National Office (Central Office in Mogadishu; Director: Dr. Kassim Aden Egal
PHCP	- Primary Health Care Unit
RMO	- Regional Medical Officer
RPHCC	- Regional Primary Health Care Coordinator
TBA	- Traditional Birth Attendant
UNICEF	- United Nations Childrens' Fund
WHO	- World Health Organization
COP	- Chief of Party (MSCI)
MOF	- Ministry of Finance
MOH	- Ministry of Health
MOP	- Ministry of Planning
ORS	- Oral Rehydration Solution
ORT	- Oral Rehydration Therapy

I. INTRODUCTION

"Every year whites come and measure and nothing happens. What's this? You people come here and then nothing happens. We've been ready for 2 years. When are we going to get some drugs and the buildings?" - Member, village health committee.

"We've heard about the PHC for so long but we just hear words." Mayor of district town.

In the Fall of 1980 USAID initiated a primary health care project by bringing a health management firm - Medical Service Consultants, Inc. to Somalia. The overall objective of the project was to train health trainers and practitioners and organize several layers of a primary health care delivery system. There were to be two national training centers, 64 Primary Health Care Units 16 in each of four regions, structural improvements for 32 district health centers, nurses, midwives and sanitarians trained to staff the DHCs and the PHCUs who had special knowledge in primary health care, and training programs in the four regions for community health workers and traditional birth attendants to staff the health posts in the villages.

"Why insist on these big fancy buildings? Why not just give us some materials and we'll get them built by local funds?" Mayor of another district town.

After three and one half years the limited extent to which project goals have been achieved is the result of the efforts of the field staff of expatriate teachers at the training centers and their Somali counterparts. A good deal of training at the first level has taken place, at least of the DHC and PHCU staffs in Bay and Toghdeer regions (the areas for the first phase of the project).

Beyond that, however, the project has been a dismal failure. None of the 62 PHCUs have been completed; none of the DHCs have been improved. TBA and sanitarian kits, drugs and other medical supplies have only been supplied in very small quantities. The training courses at the center were given in English and translated into Somali by the tutors. None of the teaching materials were translated into Somali. And the condition of the compounds at the training centers is so bad that they are public health and safety hazards.

The reason for this strong statement right at the beginning of the report is that the Somalis with whom we spoke - in the ministries, at the training centers, in the health units, and the mayors, district commissioners and villagers - all expressed dismay, disillusionment and anger. They wanted to know what had happened, where the drugs and supplies were and why the Americans had failed them for two years. They told us to convey these messages in our report and we are doing so.

We are a three member team: an economist, a physician/epidemiologist and a logistics expert. When we first came to Somalia in mid-February, 1984, our initial information led us toward recommending that the project

be closed down, that the issue of recurrent costs and the ability of the Somalia Government to shoulder them at the end of the project was insignificant compared to the project failures. However, we soon decided that it was far more important to deliver primary health care to the people of Somalia, especially since this project constituted by far the most important effort in the PHC field. We were also sensitive to the damage that had been done to the image of the United States and the further blow to that image that would result from closing the project.

For these reasons, we decided to put all our efforts into seeing what lines might be pursued to put the project on the right track. Since we found little information available where it should have been - in the files of USAID, MSCI and the MOH, we had to reconstruct the project and gather all the relevant information through basic research. The results were both rewarding and surprising. We found an extensive commitment on the part of nearly all of the Somalis in the project and a good deal of talent as well. We found problems that seem to lend themselves to correction and people in positions of authority who were eager to hear new ideas and lines for improvement. We found bottlenecks - especially in the logistics area - that, if eliminated, would quickly launch a new level of activity in the project and begin the process of actually delivering PHC to the people in the villages. We found new ideas among the Somali tutors at the training centers and the expatriate staff that are worthy of being initiated.

The report addresses the Scope of Work but goes far beyond it. We have attempted - successfully we think - to provide the basic information about the health system, the logistics system and the financial and management systems that are required by USAID, MSCI, and the MOH to effectively plan the remainder of the project, to monitor the results and to make needed financial, management, logistical and health training and supervision decisions that will acheive the project aims.

The main body of the report is divided into three sections. Section I deals with finance and management. Section II covers the health aspects of the project. Section III is concerned with the logistics issues. Each section details the current problems and makes specific recommendations for solutions.

There is an extensive set of appendices to the report. These are divided along the same lines as the report. In Appendix A a description of the research methods, models and limitations of the data used in the recurrent cost analysis is presented. There are also detailed budgets for the models of the PHCP system and a background description of the budgeting and planning systems employed in the GSDR and the PHCP. In Appendix B there is a description of the health information available in the PHCP and in the PHC sector in Somalia, and medical recommendations for reducing drug overuse and misuse. Appendix C contains an important report on the physical conditions at the Baidoa training center and a variety of instruments that would be useful for logistic management in the PHCP.

Let us close this introduction by stating our belief that the project can be saved, that the change in personnel in USAID, MSCI and the MOH in recent months is an extremely positive move toward success. Much remains to be done, some of it immediate and requiring extraordinary action, especially on the part of USAID. It would be a great mistake, we believe,

to close the project or to bog down the progress toward change, in conservative, bureaucratic approaches. The time to repair the past and forge a successful future is NOW!

SECTION I.

SUMMARY

1. FINANCE AND MANAGEMENT

a. FINANCE

The GSDR should be able to meet the recurrent costs of the PHCP, providing the cost-reducing recommendations we make are followed and USAID gives at least five years financial support after the project is turned over to the Somalia Government.

We analyzed the recurrent costs of the PHCP with two models; one of the system as it is currently structured and would, therefore, operate after taken over; and a model of a modified system, based on changes in the current system that would improve the efficiency of delivery and significantly reduce costs. In both models we separate the health delivery system - the PHCMO, the LC, the PHCC, the DHCs, the PHCUs and the health posts, from the training system - the training centers and the various courses. The former constitute the ongoing recurrent costs of providing primary health care to the people in the project regions and the latter involve finite investment costs.

The existing system would cost between Sh. 34 and 40 million per year to operate. The delivery system makes up about 78% of this total and the training programs the remainder. The entire system is dominated by three main components: (1) drugs/medical supplies (35%); (2) salaries and allowances (27%); and (3) transportation (23%). Fuel consumption, including that of training center generators, account for only 9% of the total recurrent costs. This was a surprise. If we remove the CHW/TBA salaries (to be paid by the villages), salaries and allowances fall to 14%; another surprise. Training costs are extremely low, ranging from Sh. 77 to Sh. 109 per day of instruction. The system is centralized, with the PHCMO, LC and training centers spending 26% of the entire costs and 36% of the costs without the courses and CHW/TBA salaries. The per capita costs are Sh.51 ($3.00).

We identified a number of ways to reduce costs throughout the main categories. These amount to Sh. 6 million (20%) per year for the two regions now in the project (excluding CHW/TBA salaries). Comparing the improved system with the existing system, we find the following. Total annual costs fall to between Sh. 30 and 35 million. The ratios of the delivery and training components remain about the same. Drugs and medical supplies fall to between 23 and 37 per cent, while salaries and wages rise to 34% (because of a "raise" in CHW/TBA salries). Total fuel costs fall by nearly half to 4.8 per cent. The system is somewhat decentralized, with PHCMO, LC and training centers spending only 21% of the total and 25% when the courses and CHW/TBA salaries are excluded. There is a consequent 16% reduction in per capita costs to Sh.43 ($2.58).

The program, however it is modeled, is relatively low cost. The delivery system costs about Sh. 12 million per year per region. Thus, if the improved system were extended to all four project regions (which we do not recommend), the annual recurrent costs (delivery system only) would be about Sh. 48 million.

In evaluating the capacity of the GSDR to pay for the system, we included Lower Juba and Mudug at costs identical to Bay and Togdheer in a cash-flow analysis, thus, overstating the costs. Total recurrent costs of the entire system level off at just over Sh. 50 million by 1990. GSDR expenditures level off at about Sh. 38 million after support is entirely withdrawn in 1993. We recommend that the project be extended for two years and that USAID give recurrent cost support from 1988-92 at the rates of: 75% for two years, 50% for two years and 25% for one year. The budgetary claims of the PHCP will add about 10% (at the peak) to the recurrent health budget of Somalia.

Foreign exchange costs dominate the entire project at about 50 per cent. These are made up of drugs/medical supplies (66%) and vehicle maintenance and repair and fuel (34%). These foreign claims peak and remain constant at about Sh. 27 million annually by 1989.

Thus, a key question in terms of the foreign exchange costs and the annual recurrent costs of the system is whether or not it is possible for Somalia to find long-term donor support for drugs and other medical supplies. If that were possible, yearly foreign exchange costs to the GSDR would drop Sh. 8.3 million ($500,000) and the recurrent costs of the project to the GSDR to Sh. 19 million per year in 1993. This would reduce the PHCP recurrent costs to 5% annually of the recurrent health budget. In either case, the costs should be well within the capacities of the GSDR to meet them.

b. MANAGEMENT

As a general statement it is fair to say that we found this project was the worst managed of any we have ever seen. Incorrect decisions were made from the outset and continue to reverberate throughout nearly every aspect of the project. There is virtually no project planning. There are no management instruments, either in USAID, the MOH or MSCI and the MSCI head office has failed to provide the management support normally attendant to such a project. Furthermore, there are only scant financial records (with the exception of the USAID controller's accounts, which we found in order with one exception). Thus, it is nearly impossible for any of the three partners in this project to follow its progress or to make intelligent management decisions. Each is continually bogged down in small details and none have either an overview of the project or a clear plan for the future.

We found some large discrepancies between the project contracts and the activities on the expenditure side. First, the project paper clearly indicates that only a small amount of support will be included in the budget for the purchase of drugs and other medical supplies - $153,000 over the life of the project for drugs. Yet, with one exception, everyone with whom we spoke believes that the project commodities include full drug and medical supplies for the PHC units in the four project regions. In fact, MSCI has placed orders for a total of nearly $275,000 worth of drugs and an additional $32,000 of medical supplies. None of the project contracts includes these items.

Second, there is considerable confusion about the amount of commodities to be purchased under the project. The range of figures we found in the budgets was from $1.5 million to nearly $2.2 million. Again, there was no explanation, either from an individual or in the contracts or records.

Many of the problems stem from the actions of people previously in each of the three institutions concerned with the project. More fundamentally, however, we found that many of the present problems have their roots in structural aspects of the project and internal inconsistencies within the institutions. For example, the project paper locks the project into building rather expensive PHCUs, when the realities of the rural areas in which they are to be located suggest cheaper units. Vehicles are assumed to have a life of only three years. Thus, they have a life of three years. There are planning and management weaknesses in each of the three institutions which have not yet been corrected and continue to hamper the progress of the project.

The budgetary processes of the MOH and GSDR are complex and need to be changed. The financial arrangements between the MOH and the CIPL fund are based on mistrust, are too complex and and involve, what we believe, are incorrect practices.

With respect to the MOH and USAID, we make a wide range of specific management recommendations which, if followed, could successfully correct the inadequacies. In the case of all three institutions, the personnel in

Somalia has recently changed and create an optimism on our part. We feel that with the implementation of suggested recommendations the project can be turned into a successful one.

Finally, we identify the need for nine new expatriates in support of the entire system, some for one year and others for three years. Four of these are for the PHCNO and one is an aide to the MSCI COP. We see a separation of the training aspects of the system from the delivery of primary health care in the regions, and from the support given by the PHCNO. Thus, we recommend that MSCI's contract not be extended beyond September, 1985 and that an agency with experience in primary health care in Africa, be contracted to recruit and manage additional personnel for the PHCNO and the PHCCs offices. We demonstrate that these additions are feasible within the confines of the funds remaining in the project budget, provided that drugs/medical supplies are removed from the responsibility of the budget, and other development cost-reducing measures are taken.

SUMMARY- HEALTH DELIVERY

The potential benefit from the USAID primary health care project is immense, given the extremely high mortality rates and general poor health in rural Somalia. We feel an effective, sustainable health care system can be completed if modifications and new energy and expertise are introduced into the project (PHCP).

The PHCP has approached the implementation of primary health care in Bay and Toghdeer by concentrating its energy on training nurses, sanitarians and midwives for the PHCUs and district health centers at two National Training Centers. A multiplicative effect was expected: the PHCU staff were to train then supervise cillage level CHWs and TBAs under the supervision of the regional Primary Health Care Coordinator (PHCC) and the district PHC teams.

The delivery of health care has been delayed and stymied by immense delays in commodities and buildings, logistical difficulties, understaffing, lack of medical coordination and underlying problems with the adequacy of health manpower in Somalia. As a result, at this time PHCU (PHCU) staff are working out of temporary PHCUs, delivering curative, preventive and health promotional primary health care. The training of community health workers (CHWs) has only just begun. Some TBAs have been trained.

Despite these delays, the villagers remain eager (impatient) for health care, appear willing to support village health workers and respond well to sanitation efforts. The MSCI technical advisers have recently redirected their energy to supervision and training in the field while the Somali tutors assume the major responsibility for teaching at the National Training Centers (NTC). To regain excellence within the project, we feel an infusion of new energy with a clarification of the three goals of the project is necessary:

(1) to train PHCU and district staff at the National Training Centers

(2) to develop and supervise primary health care delivery in Bay and Toghdeer regions and later in Lower Juba and Mugdug

(3) to strengthen the Primary Health Care National Office(PHCNO) in the Ministry of Health .

Although major curricular and manual revisions are necessary, the concept of National Training Centers in primary health care has been institutionalized within the Ministry of Health. Steps are being taken to establish a firm academic calendar and requirements for graduation. The conversion to the Somali language and teaching by the Somali faculty are major steps toward making these true national centers. Additional assistance from a curriculum specialist and committee and the provision of a training expert in the PHCNO to work with Cabdi Guri should ensure improved training. This phase of the project should be completed by the end of MSCI's contract in September 1985 after which the

NTCs will be fully run by the MOH with continued input from the PHCNO training expert.

To insure adequate training and supervision of village health workers and PHCU staff, the MSCI technical advisers should continue to .work predominantly in the field to assure the competency of PHCU staff and the quality of CHW and TBA instruction and supervision. This should be augmented by the hiring of medical advisers with strong supervisory and management skills to counterpart with the PHCC in both regions. The incompatibilities of some PHCU staff with their posts must be faced and alternative approaches to staffing the PHCUs are suggested. Upgrading CHWs, auxiliaries and TBAs will require flexibility and some experimentation but offers a way to provide committed, enduring staff at less expense. Specific suggestions for an improved formulary and more cost-effective empiric approaches to disease are made.

The health information system within the PHCP is deficient and unable to provide the data needed for health planning and project evaluation. We have made recommendations to simplify the surveillance system, supplement it with simple surveys, and guide the development of an adequate health information system by the provision of a epidemiologist to the PHCNO. The PHCNO should also be strengthened by a medical adviser to assist in the integration of vertical disease control programs into primary health care and health planning.

The opposite direction of primary health care implementation- starting with the training of village health workers by district training teams then later adding the PHCUs- is recommended for Lower Juba and Mugdug with implementation by a PVO.

SUMMARY

Logistics Management

1. In assessing Logistics Management in the PHC Project we examined its components:

   - Logistics Management Planning
   - Procurement Management
   - Distribution Management
   - Logistics Management Training

   a. Efforts to develop a Project Logistics Management system have not yet realized the goal. Commodities are being ordered, procured, received and distributed, but without the controls and ease that good management techniques and an integrated, organized system would provide

   b. Procurement planning, i.e., the coordination with technicians, project developers and others to assist them in the development of requirements and to provide advise on commodity characteristics, potential sources, specifications, environmental considerations, etc., has been somewhat neglected. Further, there is no day to day composite record of the status of procurement. To determine where a commodity is in the procurement cycle, it is necessary to dig into the individual case file and search for the "what, where, when" information. In this respect there is a need to develop a Procurement Status Control system in a format that will record this essential information, as it is received or generated, in a single document for all commodities in the procurement cycle.

   c. In the Distribution Management component, progress was noted in port clearance operations. Previous bottlenecks appear to have been eliminated and goods are now removed from port without undue delay. Receiving Report procedures have improved with the inspection of commodities when received and the issuance of proper receiving documentation. This is followed by entry on inventory control forms and ultimately on stock record cards. There was noted some lack of uniformity in the methods of maintaining stock record accounts by PHCUs. Logistics Management must standardize these practices as soon as possible as new drug supplies are due in momentarily.

d. In Transportation Management there was little evidence of advance planning for delivery routes and scheduling. No plans were in evidence for alternate methods or routes in the event of environmental constraints. On the other hand progress was noted in obtaining the cooperation of drivers and persons to whom vehicles are assigned to comply with information reporting and the use of pertenant forms for this. One major improvement in the Transportation Management area was the recent arrival of a highly qualified expatriate Maintenance Management Officer. Within a few days of his arrival two of five deadlined vehicles were on the road again.

e. Logistics Management Training is grossly difficient. Part of this stems from the lack of a qualified counterpart to the Logistics Management Officer, but mostly it is because logistics management has not been developed as a system in the Project. There needs to be formalization of the system, policies, procedures, organization, functions and positions. All must be written into a good policies and procedures manual and this then translated into the Somali language.

2. Recommendations made in Section VII for immediate action included, briefly, the following:

a. The appointment of a highly qualified, trained and experienced expatriate Logistics Management Officer.

b. The appointment of two expatriate management officers to handle administration, logistics, general services and maintenance of Baidoa and Burao.

c. Assignment of a qualified counterpart to the Logistics Management Officer.

d. A crash program for the immediate renovation/rehabilitation of project support facilities at Baidoa and Burao.

e. Development of a Procurement Status Control system in Logistics Management.

f. Completion of renovation of the Logistics Center soon.

g. Examine the possibility of MOH auctioning off fully depreciated vehicles with the revenues returned to the PHC Project.

h. Develop a formalized, documented Logistics Management system and issue a comprehensive procedures manual. Have this translated to the Somali language.

FINANCIAL AND MANAGEMENT RECOMMENDATIONS
FINANCIAL

USAID

1. Extend the life of the project by two years.

2. Remove drugs and other medical supplies from the project commodities list and negotiate with other donors to supply them to the PHCP regions.

3. Shift to an overhead formula for giving CIPL funds to the MOH for expenses not wholly related to the recurrent costs of the PHCP. Require the GSDR to make a contribution to the PHCP recurrent costs in the first and subsequent years following the completion of the project.

4. Support recurrent costs through 1992. Introduce the recurrent and development cost-saving measures specified in this report.

5. Cease financing project commodities out of the CIPL budget and refund CIPL for the project commodities that have been purchased with CIPL funds.

6. Replace the items shown to be missing in the 1983 inventory of USAID commodities purchased for the PHCP.

7. Audit the CIPL account expenditures on the PHCP with an independent auditor.

8. Conduct a full management and financial audit of the MSCI head office accounts and activities in support of the PHCP.

9. Seek ways to reduce the costs of future PHCU construction and vehicle costs.

10. Abandon the search for ways to justify private drug purchases.

MOH

1. Simplify the budgeting and spending procedures.

2. Shift PHCP drugs to another donor agency.

3. Increase the incentives for PHCU staff.

4. Seek donor sponsorship for PHCP training courses.

Management
USAID

1. Extend the life of the PHCP by two years after September 1985.

2. Do not extend MSCIs contract beyond September, 1985.

3. Add expatriate support, as specified, to the PHCMO, the PHCC offices, and the training centers. Contract with a PHC organization with experience in Africa to supply the expatriates for the PHCMO and PHCC offices. Add the others to MSCI's contract.

4. Settle the question of whether drugs and other medical supplies are to be supplied by USAID for this project.

5. Secure the files and video tape missing from the MSCI/Mogadishu COP office.

6. Speed up the decision-making and funds transfers on this project.

7. Implement a simplified version of the project monitoring system in USAID Handbook 4.

8. Use the data base in this report in planning and monitoring the project.

9. Improve the DHC's as soon as possible.

10. Delay turning over the training center compounds to GDSR until the completion of the project.

11. Ensure that all relevant parties have full sets of all reports related to the project and that the PHC Director has a complete set of PHCP contracts and CIPL papers with assistance given in interpretation.

MOH

1. Simplify and decentralize the PHC system. Involve local government.

2. Increase the authority and autonomy of the PHC National Office and remove the RHO's from the PHC system.

3. Use the data base in this report as a planning and monitoring tool.

4. Seek to have a health planner with a manpower speciality, hired by the MOP.

5. Eliminate donor control over PHC policies and practices.

6. Restrict PHC vehicle use as suggested.

MSCI

1. MSCI Home Office should fill the management gaps indicated in this report.

2. Use the data base in this report as a planning and monitoring tool.

3. Urgently improve recruiting practices for the PHCP, with assistance from USAID/Washington.

HEALTH DELIVERY RECOMMENDATIONS

USAID, MSCI AND MOH

1. Revise the manuals and curricula of the National Training Center with the aid of a curriculum specialist and all involved donor agencies.

2. Set up an external committee to establish requirements for graduation from the National Training Center in each discipline and for certification after successful performance at the PHCU. (PHCU staff already sent to their posts without adequate written evaluations should also be required to pass this exam and all PHCU staff should be certified competent to train and supervise CHWs and TBAs.)

3. Adopt a project drug list consistent with NHU numbering and the formulary now used in the majority of primary health care projects in Somalia. Train a Somali storekeeper-pharmacist and assistant in the NHU general medical store.

4. Deliver drugs to the Bay and Toghdeer PHCUs directly from the logistics center, accompanied by the central pharmacist and the PHCC.

5. Establish the numbers of CHWs and TBAs according to health needs and geography rather than quotas.

6. Assess the effects of different training arrangements on the TBAs chosen and the resulting coverage of mothers and infants in the villages; modify training approaches accordingly.

USAID AND MOH

7. Improve supervision of primary health care in Bay and Toghdeer and medical direction of the project by providing a medical adviser expert in management and supervision to act as a counterpart to each PHCC.

8. Accept and train upgraded CHWs, auxiliaries and TBAs for some PHCU staff positions.

9. Provide technical assistance or coordinate with other agencies to provide assistance for water development in the villages, especially at the PHCU and health post sites.

USAID

10. Negotiate a contract with a PVO to extend primary health care into Lower Juba and Mudug within 1 year, starting with the training of village health workers by district and regional teams <u>before</u> the establishment of PHCUs. Aim to use renovated buildings or local materials to reduce the costs of the PHCUs.

11. Provide the following technical advisers to strengthen the Primary Health Care National Office: a medical adviser, an epidemiologist, a training expert and an administrator.

RECOMMENDATIONS: LOGISTICS

1. Hire a highly qualified, trained and experienced expatriate logistics management officer for the Logtistics Center.

2. Hire expatriate management officers for the two training centers.

3. Recruit a qualified counterpart for the Logistics Management Officer.

4. Immediately and totally renovate and rehabilitate the training center compounds. Remove all public health and safety hazards.

5. Develop a procurement status control system.

6. Complete the renovation of the logistics center.

7. Auction fully-depreciated project vehicles.

8. Develop a transportation plan with alternatives for commodity deliveries.

9. Hard-surface the interior yard of the logistics center.

10. Develop a logistics management policies and procedures manual.

11. Standardize drug records.

12. Build a workshop in Burao, with a fully qualified mechanic in charge.

13. Arrange for part-time training of the LC pharmicist at the KNU pharmacy.

14. Increase the salaries of the key logistics center people.

15. Arrange for the Saidoa training center to use the Bay Project's maintenance facilities.

16. Adopt the KNU's system for labeling and coding drugs.

17. Develop a full scale training program for LC counterparts.

18. Expand the LC's functions to cover the entire FMC sector.

SECTION I

FINANCE AND MANAGEMENT

CHAPTER 1

This chapter is divided into four parts. The first part reviews the overall project budget and expenditures. The second part looks at the recurrent costs of the project as it is currently designed. The third part shows the recurrent cost implications of an improved system. The fourth part examines the question of who will pay the recurrent costs.

A. GENERAL

The PHCP as originally designed, was expected to have a life of five years. During those years $15,200,000 of USAID expenditure and $5,200,000 of GSDR expenditure was to take place. The objectives of these expenditures were twofold: (1) to create an infrastructure of district health centers, primary health care units, and health posts in four regions, a logistics center in Mogadishu and two national training centers; and (2) to train health personnel for the training centers, the DHCs, PHCUs and health posts. The training centers, logistics center and the infrastructure and training for Bay and Togdheer regions were to take place in Phase One and two additional regions were to be added in Phase Two. Just over 40% of the USAID contribution was to be in the form of technical assistance and a US public health management company (MSCI) was awarded the contract. One third of the USAID budget was for construction. About one half of the GSDR contribution was for salaries and allowances, the remainder for vehicle and equipment depreciation, drugs and fuel. As there are three main spending units (USAID, MSCI and GSDR), and there has been a good deal of confusion regarding their responsibilities, it is worth looking at the record in terms of these units.

Table 1 looks at the overall financial picture of the project in terms of the Pro Ag. budget, earmarkings (through 3/31/84) and what was in the pipeline at that date. It can be seen that only 44% of the total project budget was spent by the end of March, 1984, in spite of the fact that the project began in October of 1980 and is due to be completed by the end of September, 1985. Furthermore, it was expected that both Phase One and Phase Two of the project would be completed by that time. This is significant, since Phase One involved, among other things, the building of 32 PHCUs (16 in each of two regions) and improvements in the DHCs in those same regions. Phase Two was to see the same construction program in two new regions.

The $6,695,000 of Accrued Expenditures represents mainly costs incurred for the construction of the two training centers, project vehicles and Technical Assistance salaries and related costs. None of the 64 planned PHCU buildings have been completed and only 13 have been placed under contract. Advance payment for some of this work is reflected in the construction expenditure figure in Table 1. None of the improvements in the DHCs have been undertaken as yet, including their renovation and the

Table 1

Somalia Primary Health Care Project

Comparison of Pro Ag Budget to Implementation Status

('000 $)

Item	Pro Ag Budget	Earmarkings through 3/31/84	Accrued Expenditures 3/31/84	Pipeline 3/31/84
Technical Assistance	6,300	4,234	3,855	379
Training	2,300	192	148	44
Salaries & Allowances	100	0	0	0
Commodities	1,500	940	870	70
Construction	5,000	2,033	1,808	225
Other Costs	0	14	14	0
Unearmarked		4,265	0	4,625
TOTAL	15,200	12,038	6,695	5,343

1. The figures in this table were obtained from the controller, USAID/Mogadishu and include items under Technical Assistance, Commodities and Construction for which bills have been received but not yet paid.

2. This only includes commodities purchased directly by USAID, while it was responsible for procurement and includes $20,000 of consultancies.

planned provision of equipment. (The six DHCs we saw in the two project regions are in great need of the improvements promised.) Recent orders for vehicles and non-drug medical supplies somewhat increase the total expenditures on commodities but are not reflected in the Table.

At the same time, it is important to underscore that considerable funds remain in the project ($8.5 million). Many of the recommendations made in this report can be implemented by modifying the existing budget.

B. USAID, MSCI AND MOH BUDGETED AND ACTUAL EXPENDITURES

Tables 2, 3 and 4 show the budgeted and actual expenditures of USAID, MSCI and the MOH. We thought it useful to make this breakdown because, in doing our research, we continually had questions that related to these spending units. However, we were initially unable to find the information we required, partly because none of the units have data organized in terms of budgeted and actual expenditures (with the exceptions of the USAID controller's summaries). Thus, it was necessary to separate Phase One from the project paper budget and piece together expenditure data from the three units.

The budgeted column in all three cases was extracted from the project paper budget, and includes only Phase One expenditures. The USAID budget includes all the project commodities, which, in the project paper, were expected to be procurred by the agency. It can be seen that in a number of categories, little was done in the way of purchasing, probably one of the reasons the job was turned over to MSCI in 1982. The MSCI commodity budgeted column was deduced from the residuals unspent by USAID, for the most part.

Again, it is notable that not much commodity procurement took place from the time MSCI took over the job at the end of 1982 until the present moment. As will be explained in the next chapter the purchasing done in recent months for drugs and non-medical commodities does not appear to have been scheduled by the various project contracts. The total spent on technical assistance exceeds the budgeted amount for Phase One, probably because of inflation and the fact that MSCI had to bring two teams of trainers to Somalia as a result of long delays in building the training centers and staff housing.

The MOH data contained in Table 4 is the most enlightening of all, in our opinion. Again, we are looking at only Phase One budgeted totals. Over the five years of the project, the MOH was expected to spend some $1.8 million on salaries and allowances. Over the three years the MOH has been spending on the project, it has only spent $432 thousand on this category, although the MOH salaries that do not go through the CIFL budget are not reflected in the table. Yet, there is a widespread belief that there has been considerable overspending on the salary and allowance account by the MOH on the PHCP. Moreover, as far as we were able to tell, the MOH has produced the Somalis it was expected to supply for the counterpart positions, the training programs and the various ministerial posts required to implement its part of the program. In fact, there are a number of posts not included in the ministry at the time the project paper was drawn up that have been created, such as the post of the PHCC. These might have

Table 2

Somalia Primary Health Care Project
Budgeted and Actual Expenditures USAID
1980 - 1985 ('000 current US$)

Item	Budget	Accumulated Total
1. Consultants	0	88
2. Training Out of Somalia	2,300	148
3. Commodities	909	850
a. Vehicles & Spares	572	567
b. Equipment & Supplies		
(1) Health Posts	9	0
(2) 32 PHCUs	25	0
(3) 16 DHCs	10	0
(4) 2 Training Centers	166	283
(5) Other	23	0
c. Drugs	104	0
4. Construction	3,121	1,808
a. Training Centers	542	928
b. Advisor Housing	740	510
c. 32 PHCUs	1,767	370
d. Rennovation of 8 DHCs	72	0
5. Other Costs	—	14
6. TOTAL	6,330	2,908

a Budgeted figures include only Phase One of the project and inflation and contingency are excluded from all but the construction budget as that was inlcuded in construction estimates in the Project Paper budget. Actual expenditures cover the period from the project inception through March 31, 1984. The data come from the controller, USAID/Mogadishu. They are compatible with the data in Table 1 except that: (1) Technical Assistance has been excluded; (2) $20,000 worth of consultancies included in Commodities in Table 1 has been moved to Consultants; and (3) $68,000 worth of consultancies included under Technical Assistance in Table 1 has been included under Consultants because they were hired by AID and not by MSCI.

b Project Paper budget: still the operative budget as of 3/84.

c This is a rearrangement of accrued expenditures in Table 1.

d Nine Somalis have gone for training.

e 32 passenger vehicles (16 initial & 16 replacement) and 4 trucks (2 initial & 2 replacement) were budgeted. To date there are 26 passenger vehicles and 3 trucks. One truck and five passenger vehicles are not operable.

f Includes refrigerators for training center, DHCs, drugs, air conditioners, fans and shelving for the logistics center & media equipment for the MOH.

g Includes inflation and contingencies.

h Includes cost of furnishings and appliances and about $45,000 household furniture and appliances for the MSCI COP and LO houses in Mogadishu.

Table 3

Somalia Primary Health Care Project
Budgeted and Actual Expenditures MSCI

1980 - 1985 ('000 current US$)

Item	Budget	Accumulated Total
1. Technical Assistance	3,218	2,842
2. Consultants	936	101
3. Commodities	665	120
a. Vehicles & Spares	323	13
b. Equipment & Supplies	171	
(1) Health Posts	9	24
(2) 32 PHCUs	25	
(3) 16 DHCs	10	0
(4) Other	23	41
c. Drugs	104	42
4. TOTAL	4,819	3,063

a Phase One only. Budgeted figures do not include inflation or contingency.

b These figures are from: (1) MSCI Public Voucher for Purchases and Services for December 31, 1983; and (2) MSCI Supplies Received Nos. 001-035, covering a period from the inception of MSCI procurement through October 1983. Commodities purchased under the imprest account in Mogadishu are included in the commodity total.

c Includes: salaries and wages allowances, transportation, MSCI overhead and fee and new business and other direct costs.

d This figure was arrived at by assuming that when MSCI was given commodity procurement in October 1982, all 14 Suburbans were expected to be replaced at a cost of $27,000/vehicle, and one truck replaced at $29,000; prices include a full set of spares.

e Spare parts only

f The budgeted figures for this category are those for Phase One in the Project Paper because USAID did no purchasing under these headings.

g Items in the Project Paper budget include: refrigerators for training center drugs and DHCs, air conditioners, fans and shelving for the logistics center and media equipment for the MOH.

h Items include: Logistics Center refrigerator ($11,000), medical and automotive repair books ($24,000), educational equipment ($2,300) and general supplies ($3,751).

i An order for $227,000 worth of drugs was placed by MSCI in early 1984, according to Mr. Lennox at MSCI headquarters, but is not included in this figure.

Table 4

Somalia Primary Health Care Project
Budgeted and Actual Expenditures - GSDR

1980 - 1985 ('000 of current So. Sh. and US $)

	Budgeted So.Sh.	Budgeted US $	Accumulated Total So.Sh.	Accumulated Total US $
1. Salaries & Allowances	11,252	1,786	5,816	432
2. Commodities				
a. Fuel	964	153	3,201	304
b. Maintenance		42	68	6
c. Vehicle Depreciation	1,058	168	0	0
d. Drugs	296	47		
e. Equipment Supplies Depreciation	1,518	241	0	0
f. Supplies	0	0	296	18
g. Equipment	0	0	739	41
3. Fees	0	0	460	55
4. Rents	0	0	116	16
5. Construction	82	13	1,543	98
6. Other	0	0	245	22
7. TOTAL	15,435	2,450	12,484	992

a Budget figures include Phase One only and exclude inflation and contingency. Actual expenditures are for 1981-1983.
b These figures come from the MOH PHCP financial reports. GSDR expenditures all financed from CIP and PL 480 funds.
c Converted from budgeted dollar values at 6.3 So.Sh./$
d Converted from Shilling values at 6.3/$ for 1981, 15.2/$ for 1982 and 17.3/$ for 1983. Thus, the 1982 and 83 figures are slightly undervalued.
e Supplies include stationary and miscellaneous items.
f Includes items scheduled to come from project funds, such as stoves, teaching manuals, typewriters, pillows, refrigerators, etc.
g Vehicle insurance, port clearance, etc.
h For housing tutors and students before houses completed at training centers.
i Construction in the Project Paper was for health posts. These have been dropped from the plan. Actual construction expenses are for training center and logistics center items.
j In-country travel, training expenses for tutors, equipment repair and utilities.

been expected to increase total salary and allowance expenditures by the MOH over the budgeted amount but this was not the case. It is not difficult to discover the reasons for this. The salary scales within the ministry and even the somewhat higher scales on the project (when salaries are charged to the project) are extremely low, by any standards.

It can also be seen that the MOH expenditures on fuel were much greater than expected (more than three times budget). Another important piece of information in this table is in the commodities category. Nothing was budgeted for supplies for the various units in the project, e.g. the training centers, the DHCs and the PHCUs. Yet, as can be seen, the MOH has spent $18 thousand on these items. $41 thousand was spent by the MOH on equipment which, as will be explained in the next chapter was scheduled to be purchased by project funds and was not budgeted as a local cost. The drug budget is, again, a big question mark. It might have been expected, from the low ($158 thousand for the life of the project) budgeted amount for USAID drug purchases, that the GSDR drug budget for the project would have been quite high. But it was only $47 thousand for Phase One, when half of the PHCUs and more than half of the health posts in the entire project were expected to have been completed. Who was to buy the drugs for these PHC delivery units? Finally, construction by the MOH was budgeted to cover the construction of health posts. Sometime after the project began, it was decided that CHWs and TBAs would operate either out of the in houses or in a small unit constructed by the village in which they lived. The MOH actual expenditure of $98 thousand on construction is surprising, as it demonstrates a flaw in the project planning which was never corrected. That is, it might have been expected that additional construction would have been added to the project as an amendment, rather than being put into the CIPL budget, as was the case. The funds were spent mainly for the improvement of the logistics center and some items at the training centers.

Overall, comparing the three tables, it can be seen that USAID spent $2.9 million, MSCI spent $3.1 million. (Some $400 thousand of MSCI commodity purchases have not yet entered into the controller's report); and the MOH has spent $992 thousand. In addition, one can conclude that; (1) MSCI lags behind on the commodity procurement part of its expenditure responsibilities (as did USAID before it); (2) USAID is far behind on its construction expenditures (for reasons we still do not fully understand); and (3) the MOH is fairly close to project target. There is one exception to this last statement, however. The MOH has not met any of its obligation with respect to depreciation spending (or, as far as we know, with funds set aside). This is of major importance, especially in terms of vehicle depreciation, as will be seen in the next portion of this chapter.

C. THE RECURRENT COSTS OF THE PHCP EXISTING SYSTEM

Since one of the main tasks of this consultancy was to examine the recurrent cost implications of the PHCP, it was necessary to try to construct the system as it would look once the construction and training phases were complete. That is, after the development phase of the project, when the GSDR was entirely responsible for the continued operation of the system. This was an extremely complicated task, especially since virtually no data were available in usable form, to enlighten us on the existing costs of what has been put in place. Thus, it was not only necessary to create a reasonable data base from which to make calculations but to find

out what the system was expected to look like once completed. The details of this process and the assumptions of the model are in Appendix A.1.

Table 5 summarizes the operating budgets drawn up for the various units. (See Appendix A.2.) Several points need to be kept in mind when reading this table. First, the entries for the PHCMO are not comparable to the 1984 PHCMO CIPL budget, although much of the information came from that budget. The salaries and allowances for PHCMO are the civil service values for each post included under the PHCMO, whereas the CIPL budget figures include salaries or allowances for the various people listed and often these are higher than the civil service equivalents. Also, the personnel under the Logistics Center, PHCC offices, training centers, DMCs and PHCUs are all listed as MOH employees in the CIPL budget. Second, salaries for CHWs and TBAs are imputed, although they are not currently being paid in the two regions in the projects and are included in the recurrent cost estimates, although they will not be paid by the GSDR, even when they take full charge of the project. Third, many items, such as drugs and medical supplies, generator fuel and fuel for vehicles, were deduced rather than taken from historical records. Fourth, the estimates are for two regions only and do not include Mudug or Lower Juba, although they are expected to be added to the project. (It will be seen how they can be added to the estimates in the next section of this chapter.)

The entire system is modeled to cost between Sh. 34 and 40 million per year. These costs are roughly divided into three dominant categories. Drugs and other medical supplies represent between 30 and 40 per cent. Salaries/allowances take up 25-30 per cent. Transport costs are 20-25 per cent of the total. From a budgetary point of view, the picture is somewhat altered if health post salaries are removed (they are to be paid by villages), reducing the salary and allowance share to 14-17 per cent and increasing the other two categories.

The transport costs are particularly important. First, it is surprising that fuel is such a small part of the total costs - about 9 per cent. We had been told that fuel was a main item and expected this to be true, especially for the training programs. However, for those programs, per diems are by far the most important cost component. Again, this is important because, as will be proposed later in this chapter, they lend themselves to being supported by communities and/or local government.

Second, the overwhelming importance of vehicular costs, needs to be brought to the forefront. Although it is true that drug costs dominate in a monetary sense, in a relative sense, this is not the case. That is, the drug budget is somewhat modest. The vehicle costs are anything but modest. It is not simply that there are a large number of vehicles in the project (in fact we budgeted for 26 CJ 10s and three trucks) but that they are expected to last only three years each, and be maintained while they are being used up over these three years. This is an extraordinarily high rate of vehicle destruction and, while we know it is the norm for Somalia, we do not accept the sometimes heard claim that it is due to the bad roads. We have seen far worse roads in other parts of Africa and Central America than in rural Somalia and we have seen African and other Third World drivers who are far more careful with the vehicles entrusted to them. Thus, we conclude that Somali drivers are neither taught to be good drivers nor do those responsible for the projects insist that driving standards be

Table 5

SOMALIA PRIMARY HEALTH CARE PROJECT
Existing System Annual Recurrent Cost Estimates

(Cost Per Year 1984 prices) ('000 Shillings)

Item	PHCMO	Logistics Center	PHCCs (2)	Training Centers (2)	DHCs (8)	PHCUs (32)	Health Posts (400)	120-day Training Course(4)[b]	CHW Training 200/yr[c]	TBA Training 200/yr[d]	CHW/TBA Upgrading 200/yr[c]	TOTAL
Salaries & Allowances	1,425	321	159	789	672	1,824	5,280					10,450
Other Items	154	31	12	25	80			1,243	1,000	721	756	4,000
Transport:												
Fuel	847	352	135	312	560			39	63	160	81	2,479
Vehicle Maint. & Depreci.	858	1,446	340	1,360	1,360							5,356
Other *	183											165
Generator fuel				1,162								1,162
Wage					925-1,377	3,699-5,508	4,012-6,018					8,636-12,903
Other Medical Supplies					177 - 707	354 - 849	530-1,326					1,061- 2,882
Uniforms					5	16	136					157
Office & Cleaning supp.	358		58	52	54	178		48				698
Teaching Materials								17	25	25		87
TOTAL	3,779	2,080	704	3,700	3,834-4,815	6,021-8,325	9,958-12,760	1,367	1,088	886	835	34,251-40,339

a. Air tickets and vehicle insurance for 29 vehicles.
b. Assumes two courses each year at each center, with 30 students/course in Burao and 44/course in Baidoa.
c. Assumes 12.5 courses/year in each region of 50 days each.
d. Assumes 12.5 courses/year in Toghdeer of 16 sessions each and 12.5 courses/yr. in Bay of 50 days each; plus delivery observation of 3 days in Burgeiso for each TBA class in Toghdeer, and 2 weeks at Baidoa hospital for each TBA class in Bay.
e. Assumes each CHW spends 14 days every six months at DHC; Each TBA spends 3 hours for 3 consecutive days every two months at PHCU.

maintained. This is a problem that must be addressed. The GSDR cannot afford to replace and maintain vehicles on the scale required by this project. The foreign exchange drain would be far too great. And, unless the United States sees its possible continued support of this project with CIFL unit funds as an outright gift to Somalia, the uses of which are of no interest, it behooves both governments to rectify this situation.

In addition to being a transport dominated system, it is also a centralized system, at least in terms of costs. PHCMO, the Logistics Center and the training centers, together make up between 22 and 30 per cent of the entire costs of the system. If we take out the training courses and CHW/TBA salaries, these central costs rise to 36% of total recurrent costs. Overall, considering that the main objective of the entire project is to promote health among the rural population of Somalia, it is questionable whether this goal is served by the high concentration of costs on transport and salary-dominated institutions. An example of the way the centralization increases costs is the relatively large number of trips to Mogadishu taken by the PHCC and the training center tutors and principal, coupled with the bringing of project vehicles to the Logistics Center for servicing and repair.

We have separated the recurrent costs of the centers from the costs of the courses they teach. This is not a usual practice, although it is not unique. What we wanted to stress was that the running of the institutions should be looked at separately from the costs of the courses themselves. The training centers are expected to perform a number of educational tasks beyond simply giving courses to midwives, sanitarians, nurses and lab technicians. Teaching materials for the CHW and TBA training will, undoubtedly be produced there. Conferences and workshops will be held and the tutors will be writing papers eventually. Together, the training centers and the courses they teach should be looked at as development expenditures, as mentioned earlier. Table 6 follows this line of reasoning.

The largest single institution, in terms of spending, in the system is the PHCMO. The dominance of drug costs inflates the costs of DHCs, PHCUs and health posts, as groups. The training centers, the LC and the DHCs spend about the same amount of vehicle maintenance and repair and account for most of that segment of the budget.

Rather large numbers of CHWs and TBAs can be trained for relatively small costs (over 200 of each for less than Sh. 2 million ($120 thousand). The costs of CHW training are just Sh. 109 per day and TBA daily training costs are about the same. Surprisingly, the cost per day of the 120 training center course is only Sh. 77 per student.

The final question to be looked at in this section is the per capita costs of delivering PHC to the target population. We are only considering the costs of the PHCMO, the LC, the DHCs, the PHCCs, the PHCUs and the health posts. We include the MCH costs because they now claim that these are exclusively for the delivery of PHC under this project. While we do not agree with that argument and will return to it in the next section, we accept it for now as a reflection of an aspect of the recurrent costs of the system as planned. Still, we have not included all the parts of the 1984 MCH budget that were not covered in the other budgets because they simply

Table 6

Somalia Primary Health Care Project

Existing System
Summary

Annual Recurrent Costs Estimates[a]
('000 Shillings)

Item	Cost per year (1984 prices)	
	Institutions[b]	Training programs[c]
1. Salaries & allowances	10,450	-
2. Per diems	282	3,718
3. Transport		
a. Fuel	2,156	323
b. Vehicle maintenance & depreciation	5,356	-
c. Other[d]	165	-
4. Generator fuel	1,162	-
5. Drugs	8,636-12,903	-
6. Other medical supplies	1,061-2,882	-
7. Uniforms	157	-
8. Office & cleaning supplies	650	48
9. Teaching materials		87
Total	30,075-36,163	4,176

a. The figures are the summations of the item totals in Table 5 and, as in that table, represent estimates of the annual recurrent costs of the project as planned at the time this study was initiated after being turned over to Somalia.
b. Includes: PHCNO, the logistics center, PHCC offices for two regions, two national training centers, eight DHCs, 32 PHCUs and 400 health posts.
c. Includes two 120-day programs per year at each training center, 25 CHW 50-day training programs, 25 TBA training programs with 3-day hospital delivery observations for Toghdeer TBAs and 2 week observations for Bay TBAs, and upgrading courses for all CHWs and TBAs.
d. Air tickets and vehicle insurance.

could not withstand any accepted definition of recurrent costs. These excluded items include such things as regional workshops and seminars, furniture and other equipment, construction and port clearance fees. We calculated the total costs of these institutions and divided by 560,000 people. The result is what may be termed the recurrent costs of delivering primary health care (as planned) to the people of the two regions within the project, or Sh. 51 per year, per person, or $3 per capita.

In concluding this section a number of points can be made.

(1) The recurrent costs of the delivery of PHC to the populations of the two regions is not particularly high (WHO and some international organizations target $10 per head for expenditures on PHC in poor countries.)

(2) The high costs in the system are mainly vehicular and drugs/other medical supplies and salaries/allowances.

(3) The training costs, at all levels are relatively low.

(4) Ways of reducing the costs need to be found, especially in terms of the financial burden to be placed on the GSDR when the development phase of the project is complete.

D. THE RECURRENT COSTS OF AN IMPROVED PHCP

Having secured a clear picture of how the PHCP was expected to operate after being turned over to the Somalia Government, we analyzed it from three perspectives: health, logistics and economics. In all three areas we found many problems with the design and operation of the project. The health and logistics and management aspects of that analysis will be treated in subsequent chapters. In this section we are concerned with the costs of the project. We found a number of high cost areas that appear to lend themselves to changes that will save money. We also found a number of inefficiencies with respect to logistics and health training/delivery that produce higher costs than necessary. The details of the recommendations for logistics and health will be covered later in the report but those that have an impact on recurrent costs are included, although not elaborated upon, in this section.

As a result of our analysis, we remodeled the system including the improvements we suggest. In order to keep the existing system comparable to the improved system (at least in terms of cost analysis) we used identical assumptions for all basic elements in both systems. Thus, for example, PHCMO salaries and allowances are those paid by the civil service rather than those paid by the project in both models. The same model vehicles with the same petrol consumption rates are used. The number of CHWs and TBAs trained per year are the same and the TBA/CHW upgrading, although not yet introduced into the existing system, is included in both models.

Two points must be stressed. First we have not included Lower Juba or Mudug in either model, although we add them later in this chapter. The reason is, primarily, that we think the approach used in those regions

should be significantly different than the one introduced in Bay and Togdheer. The arguments are presented in later chapters.

Secondly, our model of an improved PHC system for the project as it now stands is not to be taken as an endorsement of the approach underlying the project. Were we at the project paper stage, there are many fundamental changes we would recommend. However, we believe that the important objective - to deliver primary health care to the people of Bay and Togdheer regions - is best met at this stage by improving the system already put in place.

Thus, many of the changes we recommend are by way of strengthening the existing system so that it will be better able to accomplish its tasks. Some of the recommendations, especially in the personnel field, require additional expenditures. Some of these might have been avoided had the project been properly designed to begin with. For example, we find it necessary to add an administrative officer in both PHCCs offices. This office was not included at all in the original project design, underlining the fact that supervision of the DHCs and PHCUs was not thought through. Another example is the Logistics Center. The project paper recommends a fairly lengthly set of steps to be taken to improve the vehicle maintenance, commodity procurement, stocking, drug delivery (decentralized) aspects of the GSDM's central warehouse and regional systems. However, only a supply management specialist is included in the technical assistance team for the project. In the event, there was no capacity in Somalia and insufficient technical assistance, construction and equipment to implement the recommendations. The result was the development of a Logistics Center to meet the needs of the PHCP. The importance of vehicle maintenance and drug, non-drug medical supplies and sanitarian supplies to the delivery of PHC in the two regions catapulted the Logistics Center to the forefront of the institutions upon which the system is based. Thus, while we might approach the problems very differently - perhaps even to some extent along the lines of the original project paper - the current needs are to improve the operation of the Logistics Center, even if additional costs are required to do so.

A word of caution about the data that follow: for budgeting purposes we used a precision that neither reflects the realities in Somalia nor the spirit of our recommendations. For example, we budget 400 health posts per region, we confine the TBA training to 16 three hour sessions over two months, and we standardize the CHW training at the DHCs. In fact, we recommend that <u>flexibility</u> be the guide to future decisions on the project and that the mechanical approaches of the past be abandoned. Thus, conditions in a particular region may dictate significantly more or less than 400 health posts; some TBA courses may be shorter or longer than modeled; and in some districts it may be far superior to train CHWs at PHCUs with their staff as trainers. Our purposes here are: (1) to provide a fairly accurate picture of the PHCP recurrent costs under generally improved conditions; (2) to show specific ways in which costs can be reduced; and (3) to supply unit costs for planning purposes so that the financial implications of various proposed decisions may be easily seen. The resulting precision should not be taken as hard recommendations that all specific costs saving measures should be introduced. Any financial decision will have to be integrated with the quality changes that are discussed in the health section of this report.

Cost Increases in Improved System (per year)

1.	General Administrator LC	33,000
2.	Increase Chief Mechanic's Salary	2,200
3.	2 truckdrivers LC	40,800
4.	Administrator for each FHCC office	41,280
5.	Chief mechanic, each training center	69,600
6.	Storekeeper, training centers	24,000
7.	Increase FHCU staff salaries	446,848
8.	Pocket money for CHW course	100,000
9.	Increase in CHW/TBA salaries (sh.1200each)	480,000
10	Total	Sh. 1,147,728

The increases in CHW/TBA salaries bring them in line with those paid in the North West FHCP. FHCU staff salaries have been increased significantly in the model to levels equivalent to the training center tutors (exclusive of the hardship allowance the latter receive.) We believe these wages must be raised as an incentive to FHCU staff to make a long term commitment to their posts. The cost will be less than that of training a replacement. We assume in the model that only two FHCU staff members will, in fact, be present at each FHCU. If all three worked full-time at the higher salary levels, this would add Sh. 1,427,200 to the system, rather than the Sh. 446,848 shown. We are stressing the need for the GSDR to raise salaries rather than artificially inflating allowances through donor funds.

These additions represent a 3% increase over the low estimate of the recurrent costs of the existing system. Only Sh. 150,000 of the total is added to the GSDR annual budget requirement for the project.

On the other hand, we found numerous areas for reducing costs. As noted in the previous section, we did not agree with the practice of the FHCHO of charging salaries and/or allowances to the project for the large number of FHCHO and MOH regional and district office employees not engaged in working on FHC full time. It is not simply a question of whether USAID should pay these amounts during the life of the project. The more basic question is whether they should be charged to the project, and thus included in its recurrent costs, once the project is taken over by the GSDR. We believe they should not. At the same time, we accept the notion that some of the activities of these personnel are in support of the FHCP. In order to avoid the impossibility of calculating which percent of each worker's labor goes to support the FHCP, we simply included the civil service allowances of these employees as chargeable to the project. This results in a savings of Sh. 743,000 per year.

Per diem costs were lowered in a number of ways. First, we reduced the number of trips taken to Mogadishu by FHCC, SHC and training center staff by having vehicles serviced in regional workshops, rather than at the LC. Second, the rationalization of drug and other deliveries by the LC (see below) reduces its per diems. Third, we standardized the 120 day training programs at 30 students (44 were trained in the existing model at Baidoa). Fourth, we standardized the system of TBA training to take place

in three hour sessions at the FNCU sites, thus eliminating the need for lodging. (In practice these sessions may be longer and more frequent than budgeted. See health section.)

We found significant reductions in fuel costs were possible. For the FNCMO we reduced the number of national office vehicles to three (from 5 in the existing project).

Three vehicles should be sufficient to support the legitimate needs of the project, both for the remainder of its life and as a vehicle base for the MCH after taking over the project. There are currently considerably more than three, although we were unable to get a precise number.

We also lowered the daily fuel allowance to 40kms./day for each FNCMO vehicle, and took all the XMO and DMO fuel out of the FNCP budget on the grounds that their supervisory duties in FNC can be performed as part of their travel for other MCH duties. These changes saved Sh. 751,000 per year in fuel. LC fuel consumption was reduced by lowering the daily allowance to a more rational level and correctly calculating the fuel costs of trips to Burao and Baidoa. We standardized the drug/medical supply deliveries with single trips every three months from the LC to each FNCU and LNC directly. The existing system delivered to RMOs, who in turn delivered to LNC and FNCUs. FNCCs, LNCs and training center fuel was reduced by having vehicles serviced at Burao and Baidoa instead of Mogadishu. Training center fuel was further reduced by eliminating the 14 weeks of supervision of LNCs and FNCUs and shifting it solely to FNCCs and LNCs. Some fuel savings were also found by shifting CHW training to LNC sites, thereby eliminating LNC supervisory travel during the courses and shortening the FNCC supervisory travel.

For vehicle maintenance and depreciation, the only saving was achieved by reducing the number of FNCMO vehicles to 3 from five.

By reducing the number of hours the generators operate at the training centers from 18 to 5 per day, we saved more than half the generator fuel costs.

Two to three million shillings was saved by alterations in the drug list.

Excluding CHW/TBA wages, the net savings of the changes introduced in the improved system are about Sh. 6 million per year, or nearly 20 per cent of the existing project costs.

It must be underscored that the proposed changes were not merely introduced for the purposes of reducing costs. We believe they make sense in terms of the management of the project, the training and the health delivery. Some of them, such as the reduction of FNCMO vehicles and the 5 hour/day operation of the training centers' generators, simply bring the expenses more into line with Somalia realities, although they create some austerities.

Table 7 summarizes the improved system costs in the same way as Table 5 summarized the existing system's costs. There are no major changes in the relative importance of the categories within the system, except that

the importance of the MOH is significantly reduced. Drugs/supplies, transport and salaries/allowances still dominate and the training courses remain low. The per capita costs of the delivery system are Sh. 43 per year, or $2.58 per person. This is a 16% reduction in per capita costs from the existing system. The last column of Table 7 lists the net savings achieved in the improved system. Table 8 summarizes the improved system in terms of the division between institutions and training programs.

We recommend that all training programs be regarded as development, and not recurrent, costs. This should include the costs of TBA and CHW upgrading. There is long and old literature about the capital nature of investment in education. Furthermore, since these training programs are for the staffing of DHCs, PHCUs and health posts in the two (later two more) project regions, we believe their costs legimately come under the umbrella of project costs.

We also recommend that the operating costs of the delivery part of the PHC system in the two regions be regarded as true recurrent costs. These are not only the costs on which the per capita costs of the system should be evaluated but that should form the basis for USAID's calculations for continued recurrent cost support for primary health delivery after the project is turned over.

Tables 9 and 10 seperate the health delivery portion of the system from the health training portion. This division is important from both an analytical and a financial perspective. Analytically, if the GSDR were to close down the health training programs after the basic core of practitioners had been trained and upgraded for the two (or four) regions, the delivery of health care would continue. Conversely, if the delivery system were closed for the two regions but the training programs continued for other regions, those other regions would, eventually, have personnel to operate their PHC systems. Financially, the delivery system constitutes a recurrent cost which must be built into the recurrent expenditures of the GSDR. The training courses are development expenditures and should be integrated into the development budget. Furthermore, the courses lend themselves to foreign assistance financing, either as direct support of health training or in conjunction with the development of a PHC project for a particular region. And both budgets, of course, are planning tools.

In Table 9 we have assigned the entire budget for the PHCMO (improved system) to the delivery system. Although the ministry has certainly devoted considerable energy to the training centers and course development, our model is for the system as it will operate after 1987 when the project is fully in the hands of the GSDR. At this time it is expected that the training courses will be fully operating on standardized curricula and the ongoing role of the MOH will be minimal. The Logistics Center devotes about 85% of its resources to the support of the delivery system as that system possesses most of the vehicles and receives all of the drugs and other medical supplies.

Thus, the cost of the delivery system for Bay and Togdheer is about Sh. 24,000,000 per year. The cost of adding an additional region, using the same model as Bay and Togdheer, would be an additional Sh. 12,000,000 and the total cost for four regions would be just over Sh. 48,000,000 per year.

Table 7

SOMALIA PRIMARY HEALTH CARE PROJECT
Improved System: Annual Recurrent Cost Estimates
(Cost Per Year 1984 Prices) ('000 Shillings)

Item	PHCNO	Logistics Center	PHCCs (2)	Training Centers (2)	DHCs (8)	PHCUs (32)	Health Posts (400)	120-day Training Course(4)[c]	CHW Training (200/yr)[d]	TBA Training (200/yr)[e]	CHW/TBA Upgrading 200/yr.[f]	Total	Savings[g]
Salaries & Allowances	682	360	234	780	660	2,271	6,240					11,227	183[h]
Per diems	134	14	37	12	19			1,008	1,100	268	754	3,346	654
Transport:													
Fuel[a]	96	126	138	175	373			26	10	160	75	1,179	1,300
Vehicle Mtce & deprec.	510	1,446	340	1,360	1,360							5,016	340
Other[b]	159											159	6
Generator Fuel				516								516	646
Drugs					802-1,304	1,851-3,009	3,536-5,717					6,189-10,030	2,447-2,873
Other Medical Supplies					177 - 707	354 - 849	530-1,326					1,061-2,882	0
Uniforms					5	16	136					157	0
Office & Cleaning Sups.	358		58	52	54	128		48				698	0
Teach. Mat.								30	25	25		80	7
TOTAL	1,939	1,946	807	2,895	3,450-4,482	4,620-6,273	10,442-13,419	1,112	1,135	453	829	29,628-35,490	5,583-6,009

a. Assumes regional vehicles serviced at training centers.
b. Air tickets and vehicle insurance for 27 vehicles.
c. Assumes two courses each year at each center, with 30 students/course.
d. Assumes 5 courses/year/region with 20 CHWs in each, for 50 days.
e. Assumes 12.5 courses/year/region of 16 sessions each; and 3 days delivery observation in Hargeisa for Toghdeer TBAs and 2 weeks delivery observation in Baidoa for Bay TBAs.
f. Assumes each CHW spends 14 days every 6 months at DHC; each TBA spends 3 hours for 3 consecutive days every 2 months at PHCU
g. Difference between existing system (Table 5) and improved system
h. Exclusive of CHW/TBA wages.

Table 8

SOMALIA PRIMARY HEALTH CARE PROJECT
Improved System

SUMMARY
Annual Recurrent Costs Estimates[a]
('000 Shillings)
Cost Per Year (1984 Prices)

Item	Institutions[b]	Training Programs[c]
1. Salaries and Allowances	11,227	-
2. Per diems	216	3130
3. Transport:		
a. fuel	908	271
b. vehicle maintenance and depreciation	5016	-
c. other d	159	-
4. Generator fuel	516	-
5. Drugs	6189-10030	-
6. Other Medical Supplies	1061-2882	-
7. Uniforms	157	-
8. Office and cleaning supplies	650	48
9. Teaching materials	-	80
TOTAL	26,099-31,761	3529

a. Summary of Table 7
b. Includes: MOHNO, logistics center, two PHCC offices, two national training centers, eight DHCs, 32 PHCOs, and 400 health posts.
c. Includes: two 120day programs per year at each training center, 10 CHW 30day training courses, 25 TBA training courses with hospital delivery observations, and two upgraded courses per year per CHW and six per year, per TBA.
d. Air tickets and vehicle insurance.

TABLE 9

SOMALIA PRIMARY HEALTH CARE PROJECT

Improved System: Annual Recurrent Costs of PHC Delivery

(Cost Per Year 1984 Prices) ('000 Shillings)

ITEM	PHCMO[a]	Logistics Center[b]	PHCCs (2)	DHCs (8)	PHCUs (32)	Health Posts (400)	TOTAL (2 Regions)	TOTAL (1 Region)	TOTAL (4 Regions)
Salaries & Alw.	273	306	234	660	2221	6240	9984	4992	19968
Per diem	54	12	37	19			122	61	244
Transport:									
Fuel	95	107	138	373			714	357	1429
Mtc. & Deprctn.	510	1239	340	1360			3439	1719	6878
Other	159						159	80	319
Drugs[c]				1053	1505	4527	7185	3593	14370
Uniforms				5	14	136	157	79	314
Other Med. Supplies[c]				442	602	928	1972	986	3944
Other med. spls.[c]				442	602	928	1972	986	3944
Total	1235	1654	807	3956	4522	11931	24115	12058	48230

a. Entries are modifications of values in Table 7: (1) salaries, allowances, per diems and office supplies at 40%; (2) transport at 100%.

b. Entries are 85% of values in Table 7 and (1) all IE expenses devoted to training centers, PHCCs, DHCs, PHCUs and HPs; (2) training centers represent 15% of total costs of those 5 institutions PHCP costs.

c. A simple average of entries in Table 7.

Table 10 allows calculations of the unit costs for individual or groups of training programs. Thus, for example, staffing the DHCs and PHCUs of a new region with nurses, midwives, sanitarians and lab technicians (DHCs only) could be accomplished for just over Sh. 1 million in one year. That is, 120 trainees can be trained at the training centers per year for that amount. Since the total needs for one region are 64 health professionals trained in PHC, there is ample room for attrition and retraining in the Sh. 1 million program. For Sh. 3 million, four hundred health posts could be staffed with CHWs and TBAs, with a two year training period and they could have three years of upgrading for Sh. 2.4 million. In budgeting for such training, the GSDR should add overhead charges for the Logistics Center and the training centers. Strategically, it seems advisable for the MOH to think of approaching foreign donors to finance individual courses for particular regions. The costs are considerably lower than for entire PHC systems for even an individual region and, therefore, may be attractive to smaller donor agencies.

Before turning to the question of who should pay for the PHC system, we want to point to possible further areas for cost-reduction. What we have recommended for the improvement of the present system in the way of cost-reduction can be introduced through fairly simple administrative and planning measures: Sh.6 million per year can be saved. There are two major and several minor areas which should be explored for further reductions in recurrent costs.

1. Local manufacture of pharmaceuticals. ASPIMA has capabilities in its Pharmaceutical Production Unit and a new plant has recently been completed with assistance from the EEC for pharmaceutical production. (See Appendix C.2) Sufficient data on production possibilities and national drug needs were unavailable as a basis for calculating potential savings from local production. The experience of other Third World countries, however, suggests that substantial savings are possible.

2. Vehicles. Two important measures are possible. First, an intense training of PHCP drivers (with substantial bonuses for low repair records and extended vehicle life) should be introduced immediately. If each vehicle in the project had one year added to its life, Sh. 119,000 would be saved per year per vehicle. With 24 project passenger vehicles, this would reduce annual recurrent costs by Sh. 2.9 million each year.

   Second, for Lower Juba and Muadug different approaches should be investigated which would substantially reduce the need for project vehicles.

   Third, air travel to and from the north should be investigated as an alternative to vehicle use.

3. Other.

   a. Remove the appliances from expatriate houses at the training centers when the MSCI contract is complete. The

Table 10
Somalia Primary Health Care Project

Improved System: Annual Recurrent Cost Estimates of Training Courses
(cost per year 1984 prices) ('000 Shillings)

ITEM	Logistics Center[a]	Training Centers (2)	120 day Training Course (4)	CHW Training (200/yr)	TBA Training (200/yr)	CHW/TBA Upgrading (200/yr)	TOTAL (2 region:
Salaries/Allws.	54	780					834
Per diems	2	12	1008	1100	268	754	3144
Transport							
fuel	19	175	26	10	160	75	465
Mtc./deprectn.	217	1360					1577
Generator fuel		516					516
Office supplies		52	48				100
Teaching materials			30	25	25		80
TOTAL	292	2895	1112	1135	453	829	6716

a. Entries are 15% of values in Table 7

significantly lower use of electricity that will result may make it possible to install smaller generators.

b. Investigate the economics of supplying bulk quantities of basic foods for the training center courses and CHW/TBA courses.

E. WHO WILL PAY?

The USAID Audit Report (No. 3-649-84-02) of October 1983, recommended:

> USAID/Somalia assess the GSDR institutional capacity to sustain the project and finance its recurring costs. If the assessment is unfavorable either (a) identify alternative methods of funding the project or (b) terminate it. (Appendix, p. 1.)

Let us state at the outset that our conclusion is that the Somalia Government will be able to meet the recurrent costs of the PHCP, providing: (1) the cost-saving changes recommended in this report are instituted; and (2) USAID is willing to give some recurrent cost support for five years after the project is turned over to the GSDR, i.e. through the end of 1992.

A numer of steps were taken which led to this conclusion. First, we did a cash-flow analysis, the results of which are contained in Table 11. The entries are projections of the improved system in the previous section. Again, we caution that: (1) there are some unknown costs left out; and (2) the precision of the numbers is, in some cases, illustrative and does not imply a recommendation. On the expenditure side we have added Lower Juba and Muadug, assuming that their costs will be the same as those incurred for Bay and Togdheer. Thus, the expenditure totals are overstated. Not only do these two new regions have somewhat lower populations - suggesting that the drug and other medical supplies will cost less than for Bay and Togdherr, - but, if our suggestions with respect to vehicle use are followed, the recurrent costs could be significantly lower. We also overstated costs by valuing fuel at commercial prices for all years, although duty-free fuel for 1985-87 would reduce the costs for the 3 years together by Sh. 2.2. million. Nevertheless, we thought it best to err o the side of an overstatement, rather than an understatement, of thu recurrent costs. We assumed that Lower Juba would begin CHWs and TBAs in 1985 and that they would be operating in 1986. Because of our recommendations that the new regions begin with the villages and work their way up to DHC and PHCU staffing/operations, the full costs of operation do not occur until 1987 for Lower Juba. We assumed the same pattern, one year later, for Muadug. In any case, by 1988 the four regions are fully operating at a projected cost of just over Sh. 47 million for the delivery systems.

The training portions of the system are also shown in Table 11. We assumed that the costs of operating the training centers would be fully borne by the project, indefinitely, although, as recommended earlier, we think other donors should bear these costs when using the centers for training health workers in regions in which they are introducing PHC. To the extent that this is the case, the costs of the training centers will

TABLE 11

SOMALIA PRIMARY HEALTH CARE PROJECT

Improved System: Cash Flow

(1984 Prices) ('000 Shillings)

ITEM	1985	1986	1987	1988	1989	1990	1991	1992	1993
I. EXPENDITURES									
A. Delivery System									
PHCNOs	1235	1235	1853	2470	2470	2470	2470	2470	2470
Logs. Center a	1946	1946	2009	2072	2072	2072	2072	2072	2072
Bay/Toghdeer b	15295	21295	21295	21295	21295	21295	21295	21295	21295
L. Juba c	0	3000	10648	10648	10648	10648	10648	10648	10648
Mudug d	0	0	3000	10648	10648	10648	10648	10648	10648
Subtotal	18476	27476	38805	47133	47133	47133	47133	47133	47133
B. Training Crs.									
Training Centre.	2895	2895	2895	2895	2895	2895	2895	2895	2895
120Day Course e	1112	1112	0	0	0	0	0	0	0
CHW course f	1[illegible]1	1135	768	0	0	0	0	0	0
TBA course f	680	453	727	0	0	0	0	0	0
Upgrading g	829	2487	3316	2487	829	0	0	0	0
Subtotal	7019	8082	7206	5382	3724	2895	2895	2895	2895
C. Total Expenses	25495	35558	46011	52515	50857	50028	50028	50028	50028
II. REVENUE									
A. USAID/PHCP funds									
Vehicles h	5016	5016	5866	0	0	0	0	0	0
Drugs/Spls. i	6380	9157	12347	0	0	0	0	0	0
B. Villages j	3120	7800	10920	12480	12480	12480	12480	12480	12480
C. Subtotal	14516	22023	29133	12480	12480	12480	12480	12480	12480
D. CIFL k	10979	13535	16878	30026	28783	18774	18774	9387	0
E. Total Revenues	25495	35558	46011	42506	41263	31254	31254	21867	12480
III. GSDR Recnt. Exps:									
Rem-Revs. (E. -II.)	0	0	0	10009	9594	18774	18774	28161	37548
IV. Foreign exch. in I.C	12641	15483	19860	25501	26740	26665	26665	26665	26665
V. C + D/K m	14516	22023	29133	29406	30785	30785	30785	30785	30785
VI. Revised CIFL = I.C-V+C(IV)	10979	13535	16878	17332	15046	9617	9617	4808	0
VII. Revised GSDR contribution	0	0	0	5777	15016	9616	9616	14425	19233

a. PHCNO increased by 50% 1984 base with the adding of each new region. Logistics Center fuel increased by 50% 1984 base with each new region.

b. Region's PHCC, DHC and PHCU expenses remain the same with 100 health posts for each region coming into the budget in 1985 and 1986, respectively.

c. 100 Health posts in 1986 and 100 in 1987 with full operation of PHCC, DHCs and PHCUs in 1987 at the same rates as Bay/Togdheer.

d. 100 health posts in 1987 and 100 in 1988 with full operation of PHCC, DHCs and PHCUs at the same rates as Bay/Togdheer.

e. Assumes that 4 course of 30 students each in 1984, 1985 and 1986 will be sufficient to meet the Nurse, Midwife Sanitarian and Lab technician needs of Lower Juba and Mudug with allowance for attrition in these two regions and Bay and Togdheer. Courses after 1986 are assumed to be paid for by other projects.

f. 100 trained in 1985 in Bay, Toghdeer and Lower Juba, 100 in 1986 trained in Lower Juba and Mudug and 100 trained in 1987 in Mudug.

g. Assumes each CHW and TBA are upgraded twice per year and six times per year, repectively for three years in each region, beginning in 1985 for Bay and Toghdeer, for the 200 trained in 1984, and in 1986 for 1985 trainees in Lower Juba and Mudug.

h. Twenty-four passenger vehicles and three trucks in improved system assumed to be supported out of project funds until the end of the project in 1987; one year of replacement for 5 vehicles in Lower Juba.

i. Full operation for Bay and Togdheer beginning 1985 and Lower Juba in 1987; 100 Lower Juba health posts begin operating in 1986 and 100 more in 1987; 100 Mudug health posts begin operating in 1987.

j. Salaries for 200 TBAs and 200 CHWs start in 1985 for Bay and Togdheer and 200 more in 1986; salaries for 100 TBAs and CHWs begin in 1986 for Lower Juba and 100 more in 1987; salaries for 100 TBAs and CHWs begin in 1987 for Mudug and 100 more in 1988.

k. Assumes: (1) entire difference between total expenses (I.C.) and the sum of USAID PHCP financed items and will contributions (II. A+B) is financed out of the CIFL fund through the life of the project at the end of 1987; (CIFL contribution falls to 75% in 1988, 50% in 1990, 25% in 1992 and zero in 1993.

not fall on the PHCP. Since the 120 courses are for the four regions in the project, we only carried them through 1986, when the four regions will be fully staffed with course graduates. CHW and TBA courses will also have produced required workers by the end of 1987 and, assuming each receives three years of upgrading, after 1989 these regular costs will cease. Upgrading will, of course, be a continual process, but the costs beyond the three years of regular classes cannot be projected.

Total expenses are Sh. 26 million in 1985, peak at Sh. 53 million in 1988 and become constant at Sh. 50 million from 1990 onward.

The revenue side of the analysis was a little more difficult. We assumed that drugs and other medical supplies would be financed out of project funds (at UNICEF prices) through the end of the project in 1987. (Even if they are purchased at US prices, they constitute a revenue equal to the cost of these items.) Villages are assumed to fully-finance the salaries of CHWs and TBA. Looked at in this way, total revenues peak at just over Sh. 29 million in 1987 and then level off to a constant Sh. 12 million thereafter.

We assumed that the GSDR would be allowed to continue to finance the recurrent costs of the project through the CIPL budget through the end of the project in 1987. Thus, for 1985-87, the difference between total revenues (II.C) and total expenses (I.C) is financed through the CIPL budget and the contribution from the GSDR recurrent budget is zero. (This only refers to those PHCMO expenses covered in the improved system. Those expenses considered development in the PHCMO budget - discussed in the next chapter - will also be financed by the CIPL fund. Other recurrent PHCMO expenses are expected to be met by the GSDR immediately.)

After the end of the project, we assumed, and recommend, that USAID give some recurrent cost support to the GSDR for this project for a period of five years: 75% for 1988-89; 50% for 1990-91; and 25% for 1992. Thereafter, the GSDR will be expected to meet the entire recurrent costs of the project. The results of these calculations may be seen in II.F and III of Table 11.

F. FOREIGN EXCHANGE

During our analysis of the recurrent costs of the PHCP it became clear that about 50% of the annual costs of the project after it is taken over by the GSDR will be in the form of foreign exchange. Moreover, these are direct outlays by the Government for vehicle replacement, fuel and drugs and other medical supplies. To be wholly accurate, we would have to assume that office supplies and uniforms will be imported (by the private sector) and, thus, cost the country additional foreign exchange.

In table 12 we indicate the various foreign exchange expenditures in the cash flow expenditures in Table 11. Although the vehicular and medical categories each account for about one half the foreign exchange spent during the first two years, the latter category takes up two-thirds of the expenses thereafter. The PHCMO and Logistics Center use over 28% of the fuel and vehicle foreign exchange. The delivery system for the four regions uses 79% of all vehicular foreign exchange, once the training

Table 12

SOMALIA PRIMARY HEALTH CARE PROJECT
Foreign Exchange in Cash Flow
(1984 prices) ('000 Shillings)

ITEM	1985	1986	1987	1988	1989	1990	1991	1992	1993
Fuel:									
PHCMO	96	96	144	192	192	192			
Logistics Center	107	107	161	214	214	214			
Bay/Toghd. delivery	511	511	511	511	511	511			
L. Juba	0	0	256	256	256	256			
Mudug	0	0	0	256	256	256			
Tr. Centers	175	175	175	175	175	175			
120 day courses	26	26	0	0	0	0			
CHW Courses	15	10	5	0	0	0			
TBA Courses	240	160	80	0	0	0			
Upgrading	75	225	300	225	75	0			
Sub Total	1245	1310	1632	1829	1679	1606	1606	1606	1606
Veh. Mtnc. & deprec.									
PHCMO	510	510	510	510	510	510			
Logistic Center	1446	1446	1446	1446	1446	1446			
B/Toghdeer	1700	1700	1700	1700	1700	1700			
L.Juba	0	0	850	850	850	850			
Mudug	0	0	0	850	850	850			
Tr. Centers	1360	1360	1360	1360	1360	1360			
Sub Total	5016	5016	5866	6716	6716	6716	6716	6716	6716
Drugs									
B/Toghdeer	4872	7185	7185	7185	7185	7185			
L. Juba	0	0	2436	3593	3593	3593			
Mudug	0	0	0	2436	3593	3593			
Subtotal	4872	7185	9621	13214	14371	14371	14371	14371	14371
Other Medical Supplies									
B/Toghdeer	1508	1972	1972	1972	1972	1972			
L.Juba	0	0	754	986	986	986			
Mudug	0	0		754	986	986			
Subtotal	1508	1972	2726	3712	3944	3944	3944	3944	3944
Grand Total	12641	15483	19845	25471	26710	26635	26635	26635	26635
Drugs & Other Med.	6380	9157	12347	16926	18315	18315	18315	18315	18315
Grand Total-D/OM.	6261	6326	7498	8545	8365	8320	8320	8320	8320
US $ value ('000)	376	380	450	513	504	499	499	499	499

programs are completed (1988ff). It costs nearly Sh. 6 million per year to add one new region to the system, 80% of which is for drugs and other medical supplies. The grand total foreign exchange costs for the entire system for four regions will be about Sh. 27 million annually.

C. DRUG AND MEDICAL SUPPLY COSTS

Under the terms of the Project Agreement, the drugs and other medical supplies purchased with project funds must be purchased from US suppliers. These prices are, on the average, 2.6 times higher than UNICEF prices for the same items. Since it is clear that, at the very minimum, the GSDR will shift its procurement of these commodities to cheaper sources after the project is taken over by it, we priced these items at UNICEF prices throughout the analysis. In 1987, the last year of the project, this results in a savings of Sh. 32 million! (We will return to this saving in the discussion of capital costs.)

We believe that a strong case exists for donors to supply the drug and other medical supplies for the PHCP on a long-term basis. Because of the high cost of US supplies, we recommend that this support come from other donors, such as UNICEF, WHO, etc. Donor cooperation in PHC in Somalia is essential (this issue is elaborated upon in the health section of this report).

The team had informal discussions with UNICEF officials about our idea that drugs and other medical supplies be taken out of the project and supplied to the PHCP in the project regions by other donors. The official said that UNICEF would certainly be willing to discuss the possibilities but that it would be necessary for USAID to make some form of offsetting contribution.

Among the possible USAID contributions are the following:

1. shipping, insurance and handling costs;
2. internal warehousing, packaging, labeling and distribution expenses;
3. the establishment of a national logistic center;
4. contributing to the expenses for repairing some of UNICEF's vehicles.

The impact on the foreign exchange requirements of the PHCP for the GSDR of full donor support for medical supplies can be seen in the last three lines of Table 12. GSDR exchange obligations would fall to just over Sh. 8 million per year, even if the high dependence of the project on vehicles were not reduced. At current official exchange rates this is about $500,000 per year.

Returning to Table 11 we can see the impact of such donor support on the overall budgetary requirements imposed on the GSDR by the project. Adding drug and other medical supply costs to the revenue side considerably increases the total revenues accruing to the project, as shown in line 30. The residual to be financed through CIFL and GSDR recurrent expenditures are also significantly altered as a result, as shown in the last two lines of the table. GSDR recurrent expenditures peak in the first year of full

responsibility (1993) at Sh. 19 million.

H. GSDR ABILITY TO MEET RECURRENT COSTS

In Appendix A.5 we explain in some detail the difficulties associated with GSDR budget and expenditure records. There are so many variations in procedures and such diversity in the coverage and quality of data that accurate statements are simply not possible. No amount of statistical manipulation can convert bad data into good data. Therefore, the discussion that follows is merely intended to facilitate one or two gross generalizations about the relative impact of the PHCP on the GSDR recurrent budget. Only the conclusion is important: that, apparently, the PHCP (with four regions) will not be beyond the abilities of the GSDR to maintain the current costs, providing that the recommendations we put forth are implemented and recurrent cost support is given by USAID through 1993.

Table 13 summarizes the relative importance of the PHCP for the recurrent expenditures of the GSDR. According to the current development plan of the GSDR:

> Current (Budget) Expenditures: A growth of 2.8% annually has been assumed with 1% increase for general services, 10% for social services and 8.2% for economic services.1

Consequently, we have calculated social services expenditures on the basis of an annual 10% growth from 1982/83 onward. Since there is no policy guideline for growth in recurrent expenditures for health, we simply took the five year (1978-83) historical average of health as a percentage of social services (26%) and projected forward. The PHCP entries are total expenditures minus payments by villages of CHW/TBA salaries.

The project takes up 17% of the health budget at its peak and falls to 9% in 1994. This decline is important to note because, to the extent that real outlays are constant for the project, they will continue to be a declining share of health sector expenditures over time. Looking at the government's share (its contribution out of recurrent expenditures), we see that a rather modest Sh. 10 million is required in 1988 (the first year of GSDR payments) and peaks at Sh. 38 million from 1993 onward; this more than halves the burden on the health budget for the first 4-5 years after the project is turned over to the GSDR. If we assume that donors meet the drug and other medical supplies costs, the Government's outlays are cut by 50% and the burden on the health budget falls to 5% in the later years of the projection.

Apart from the conclusion that the PHCP will place a relatively low burden on GSDR expenditures, what does this analysis mean in the broader economic and fiscal realities of Somalia? We simply do not know. At the time this report was written, the foreign exchange and fiscal positions of the GSDR appeared to be at a low point. The Government is having extreme difficulty in meeting its foreign debt obligations and its arrangements with Saudi Arabia for the importation of fuel were problematic. If one were to project these conditions forward, it would have to be concluded that the GSDR would not be able to assume the recurrent cost burdens of this, or

Table 13

SOMALIA PRIMARY HEALTH CARE PROJECT
Burden of PHCP Recurrent Costs on GSDR Recurrent Expenditures
(1984 Prices) (Millions Shillings)

YEAR	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Recurrent Expenditures:										
Social Services[a]	662	728	801	881	969	1066	1173	1290	1419	1561
Health[b]	172	189	208	229	252	277	305	335	369	408
PHCP[c]	22	28	35	40	38	38	38	38	38	38
PHCP as % Health	13	15	17	17	15	14	12	11	10	9
GSDR Share PHCP	0	0	0	10	10	19	19	28	38	38
GSDR Share as % Health				4	4	5	6	8	10	9
GSDR Share of PHCP with donors supplying drugs/medical supplies	0	0	0	6	5	10	10	14	19	19
as % of Health				3	2	4	3	4	5	5

a. Assumed to grow at the rate of 10% per year.
b. Assumed will remain 26% of Social Services expenditure.
c. Total expenses above village payment of CHW/TBA salaries. (Table11: I.C.-II.B)

any other, project. The foreign exchange requirements of the PHCP underscore the precariousness of the project when examined against the current economic conditions of the country. However, we believe that it is necessary to assume that conditions will improve for Somalia. It has had several bad years of weather and a cessation of exportation of live animals to Saudi Arabia in recent times. These factors will alter for the better. Furthermore, there are many indications that the GSDR is introducing policy measures that should have a positive impact on the state of the economy. And one of the purposes of foreign aid in general and of the PHCP in particular is to improve the conditions in the country so that independent development is possible. PHC is one of the most important economic investments that can be made in Somalia. Millions of hours of labor are lost each year to bad health; untold millions of shillings are spent by people on attempts to cure their ills; Government outlays for curative medicine will continue to drain national resources until preventive measures are affected for TB, gastro-intestinal diseases, etc; and populations will continue to shift in search of water at least until permanent and pure sources can be secured. Closing the PHCP because of a gloomy outlook on the GSDR's fiscal situation would be like foreclosing on a man's house because a temporary illness had interrupted his mortgage payments.

I. CONTRIBUTIONS BY THE SOMALI PEOPLE

The Scope of Work asked us to examine the monetary and in kind contributions of the recipients of the PHCP as a way of offsetting some of the recurrent costs. For reasons spelled out below, a detailed examination was neither possible nor do we believe would have been productive. Nevertheless, we were attentive to the contributions of the recipients; they are extensive. In monetary terms, the payment of CHW/THA salaries by villages will account for over 26% annually of the costs of the delivery system for the four regions (see Table 9). If drugs and medical supplies are provided by a donor, the village payments rise to over 39% of annual national outlays.

There are a number of non-monetary contributions by PHC. Health posts were to be built by the GSDR as part of the project. These will now be provided by villages, either with new structures or improvements in an existing structure through self-help labor and materials. Considerable labor will be required to implement the programs of preventive medicine that are expected to be part of the CHW work in the villages. Sanitation projects will require that wells be dug and maintained, that wells be protected against animals, that troughs for animals be built, that latrines be dug, etc. Nutrition projects are likely to require the planting of gardens and improvements in food storage facilities. And an important proportion of the total project transport will be by foot - CHWs/THAs and villagers going to and from PHCUs.

During the course of our research, we met with the mayors of five district towns, several district commissioners and a number of village health committees. We discussed the possibilities of contributions by local government and communities to the needs of the PHCP. The response was encouraging. Local officials said they would assist in community mobilization and supervision and would help get the villagers to pay for the salaries of CHW's and THAs. They and villagers said that self-help was

possible on the construction of PHCUs and the improvement of a house for a health post. They too thought that the use of local materials and local craftsmen was superior (when possible) to the importation of expensive materials and the employment of expensive construction firms.

These contributions are extremely important in evaluating the contribution of Somalia to the recurrent costs of the PHCP. It would be a mistake to only look at monetary outlays as a measure of national contributions. The efforts discussed are critical to making the PHCP work and should be counted as contributions to the necessary costs of the project.

J. DRUG PRICING AND PAYMENTS

The scope of work asked us to look into the possibilities of having people using the PHC system paying for some or all of the drugs and other medical supplies.

In order to put this question into perspective, it is necessary to look at drug/supply costs in terms of foreign exchange and local value added. Assuming that Somalia is responsible for purchasing drugs (as opposed to receiving them from donors), selling these to the users, even at the imported prices, does not recover any foreign exchange, unless we assume that purchasers of drugs fail to buy other items purchased with foreign exchange. This latter assumption seems wholly unrealistic in a country so short of foreign exchange and imported goods. Thus, in terms of national resources, the only value to the Government of selling drugs is the generation of revenue and not a reduction in foreign exchange spending. We have already commented on the obvious inability of the GSDM to meet the foreign exchange expenses involved in buying drugs for the PHC system (for the whole country or the four project regions).

Revenues are always welcome, especially for a government in such a poor financial position. The question then reduces to the capacity of the users of the primary health care system to pay for drugs. It must be stressed that the users are already expected to pay Sh. 6.7 million per year in the two project regions for CHW and TBA salaries. This is about Sh. 11 per person. Assuming 6 people per nuclear family (a rule-of-thumb average for Africa), each family will have to pay Sh. 66 per year. However, we were assured by all people we talked to in the regions that those who could pay would assume the burden for those who could not pay. It will be remembered from Table that the PHC delivery system is calculated to cost around Sh. 10 per person (excluding CHW/TBA salaries). Thus, the people are already expected to pay more than twice per capita what the government will have to pay for PHC delivery.

Still, the question remains: can the users pay? The simple truth is that, <u>not only are there no data available on which to formulate even an educated guess, but that securing adequate data may not be possible in Somalia.</u> The usual ways of gathering such information are through household budget surveys, either gathered through random samples or through the national census. Discussions with the USAID/TDY team here in March, 1984 to look into ways of assisting Somalia in its next census, convince us that, even with considerable effort, the quality of the data in the next

census is likely to be on the poor side and that it certainly will not be possible to include household budget questionnaires. As for sampling household budget surveys, while it is true that, over the past 20 years there have been numerous attempts to undertake these as a means of understanding income and expenditure patterns, we are unaware of any that are considered reliable by even a majority of experts in the field. (The economist on our team has a fairly extensive knowledge of these efforts.) The reasons are simple. Africans have no history of revealing income and spending information to anyone, let alone strangers and government officials. They were taxed heavily during the colonial periods as a result of merely being counted and of having their livestock counted. The vast majority of African income is in non-monetary form. Survey questions must put quantities, such as fields planted, crop outputs, produce purchased, services bought, etc. in standardized quantities. Yet, Africans, especially rural residents, do not use such measurements and are more likely to answer in a vast variety of terms which the enumerator must then translate into standard measures. (How do you convert a "handfull" into weights and measures?) Prices in local markets vary from dawn to dusk and asking vendors what particular items sell for will not only produce many prices from many vendors but the asking prices are usually different from the final sale price. How does one get an average out of this? And so it goes.

But what of the fact that Somalis buy drugs from local pharmacies in the regional towns? We were unable to secure from Aspima figures on the total volume (or value) of sales to the pharmacies in the two project regions (data more useful in determining use than ability to pay), although they did tell us that they mark up imported prices by an average of 30% to regional pharmacies, who further mark up 25% to buyers. It is clear, then, that people buy drugs. But we do not know who these people are. Are they the relatively rich? Do people give money to poor relations and other needy people when they need drugs? Is the money now spent a reflection of the maximum available for such purchases (thus, probably a small proportion of the amount to be supplied through the PHC system), or much less than is available?

Interviews with medical staff in both regions revealed many instances which illustrate the hazards of drug charges in a poor country. Inadequate treatment with potentially serious effects results when a cheaper but inappropriate drug is substituted or when only 3 or 4 antibiotic tablets are purchased and used once or twice a day instead of an adequate course requiring 20 to 28 tablets. Inability to afford the long course of drugs was cited as a common reason for untreated tuberculosis.

Beneath these questions lies a more basic question: if people spend their income on drugs, what will they give up? It is not clear that they will give up other consumption goods or even if they did that this would have a desirable effect on their well-being, local/national producers and sellers and, thus, on the economy in general, in spite of the fact that it might produce revenue for the PHC system. Thus, the more relevant question, one that is appropriate for the Government of Somalia to ask if it ever considers having users pay for drugs, is what are the consumption, savings and investment consequences of such a policy?

While it is to be expected that donors will be myopic about such

issues - seeking to find ways of generating revenues to cover the recurrent costs on their projects - there is another issue here on which we wish to comment. As noted earlier, it is part of the constitution of Somalia that medical services (including drugs) will be delivered free of charge, by the Government, to the people. Obviously, the existing exceptions - the sale of drugs in pharmacies and the coming permission of physicians to open private (with restrictions) practices - reflect the poverty of the country and the consequent inability of the Government to deliver these services to all the people at this time, rather than a change in law or policy.

We think there are more important issues with respect to drugs in the PHCP.

The overuse and misuse of drugs both through the existing health system and private pharmacies wastes an unknown amount of Somalia's investment in drugs. Although there is a law on the books that prescriptions are required, this is frequently ignored according to multiple informants. Often a child has been given several different antibiotics for diarrhea before being seen in a clinic. Interventions to reduce drug overuse within the PHCP can result in substantial longterm drug savings for Somalia (see appendix A.2)

K. CONCLUSION AND RECOMMENDATIONS

It is clear from the foregoing analysis that:

1. The recurrent costs on the PHCP are relatively low, both in terms of GSDR expenditures on health and the per capita costs of the population served.

2. The foreign exchange component in the recurrent costs of the PHCP are proportionately very high.

3. The salary/allowance share in the recurrent costs is significantly lower than generally believed.

4. The costs reflect the fairly high degree of centralization in Mogadishu of the PHCP.

5. The project - both at the delivery and training levels - is vehicle-intensive, creating fixed foreign exchange costs that will be a burden on the GSDR.

6. Relative to expenditures for both the social services in general and health in particular, the GSDR should be able to take over the recurrent costs of the project when it is complete.

7. There are possibilities for significant reductions in overall recurrent costs and foreign exchange costs associated with the project.

Therefore, we recommend that:

1. The Project be extended by two years, through September 1987.

2. The cost-saving steps involved in our improved PHCP model be introduced as soon as possible. These are:

   a. decentralize the repair and maintenance of vehicles to the training centers;
   b. deliver supplies directly to DHCs and PHCUs from the Logistics Center on a three month basis;
   c. charge only the salaries/allowances of personnel working directly and full time on the PHCP plus the allowances of other MOH personnel supporting the project to the project;
   d. rationalize the personnel in each unit according to the staff lists in the improved system budgets;
   e. standardize the CHW training at 30 days at the DHCs to the extent possible and consistent with good training;
   f. introduce driver-training and a bonus system for low repair costs on vehicles;
   g. reduce the daily fuel allowances to appropriate levels;
   h. confine the use of PHC vehicles at the PHCC and DHC levels to PHC functions;
   i. confine training center supervision (after the project is turned over) of DHCs and PHCUs to visits during training course field trips;
   j. standardize supervision by PHCC and DHC staff according to the

improved system model;

k. reduce the number of PHCMO vehicles to three after the project is turned over;

l. reduce the generator hours of operation to 8/day/training center;

m. eliminate expatriate appliances after project is turned over;

o. establish a national drug formulary;

3. MOH/USAID seek to have drugs and other medical supplies supplied by other donor agencies, immediately;

4. The MOH seek donor sponsorship for training programs at the training centers which will cover the recurrent costs of operating the centers;

5. USAID and the GSDR work out an agreement now for recurrent cost support of the PHCP for five years after the end of the project on a schedule of USAID support of: 75% for two years; 50% for two years and 25% for the last year; and that this agreement be contingent upon the introduction of the cost-saving measures listed in 2.a-o, above.

6. USAID abandon the search for user-purchases of drugs and medical supplies in Somalia.

7. In the interests of efficiency and long-run lower costs, we recommend that:

a. a general raise in MOH salaries to meet inflationary pressures;

b. a differential for PHCU workers & the LC chief mechanic are suggested;

c. suggested staff additions to the LC, PHCC offices and training centers;

d. CHW/TBA salaries be targeted at suggested rates.

CHAPTER 2

MANAGEMENT

This chapter deals with management issues related to the PHCP in both the development stage and after the project is turned over to the GSDR. Current problems are identified and solutions proposed. Since some of the recommendations have implications for how the project funds are spent during the remainder of the project, a section on the capital costs of the project is presented at the end. The first three sections deal with USAID, MSCI and the MOH, respectively.

1. GENERAL

The Scope of Work for this study requires an assessment of the management efforts made to date in terms of their effectiveness in achieving the aims of the project. The various studies and evaluations, and the September 1983 Audit on this project have all pointed out the many errors and difficulties from its inception. There is no need to repeat them. Although it is true that there has been more mismanagement, at all levels but especially on the part of USAID and MSCI, than any of the team has witnessed in any of its previous work, no useful purpose would be served by assigning blame for particular errors. It must also be stated that we found that many changes have taken place over the past several months which give rise to an optimistic view about the future prospects of the project, and that we believe, with the implementation of the changes we recommend, the project has a chance of achieving the original goals of making a significant contribution to the delivery of primary health care to the rural people of Somalia.

Nevertheless, we were struck by the extent of the problems and investigated to what extent these stemmed from difficiencies in the management systems and their application by USAID, MSCI and the PHCMO. We found many such difficiencies. Since our recommendations are put forth in an attempt to correct many of these, it is necessary to underscore the more critical ones. It is in this spirit that the material in this chapter is put forth.

We found a number of strengths which should be noted and built upon. The USAID/Mogadishu mission is considerably stronger than when the project was designed and during the first three and one half years of its implementation. Nearly everyone related to the project is relatively well-informed and was extremely cooperative. Moreover, there were good relations between the project officer, his superiors in USAID, the MSCI team and the PHC Director. Communications are relatively efficient between the project officer and these others. The MSCI COP, seems to be very capable, committed to his work and on good working terms with the other people in the project, especially in USAID and the MOH. A new management capacity has been injected by the COP which should make an enormous difference in the outcome of the project. The changes in the PHCMO have been extremely positive. Both the Director of PHC and the Accountant are very capable people. They are well-informed about nearly every aspect of the work and have a high level of commitment to the project. The Somali tutors at the two training centers are great assets and their successful training is one of the main accomplishments to date. We were favorably impressed with the expatriate staff at the training centers and quite surprised at the extent of their accomplishments, especially in light of the extremely difficult conditions under which they have had to work for the past years. They are creative, have found many solutions to problems with which they should not have had to deal, and on the whole have a good grasp on the tasks they must perform in order to make the project a success.

2. USAID: MANAGEMENT

a. General PHCP Management

(1) Problems:

While the present staff handle PIO/Ts and PIO/Cs fairly efficiently, there are numerous management problems. We believe the following deficiencies can be corrected and have concluded that, for the most part, they are a result of the history of the mission and the uncertainty under which the project has existed since the 1983 audit report. That is, they were inherited by the present staff - but they need to be corrected.

It was not possible for us to find management data that was in any useful form for any of the USAID divisions. No one has an overview of the financial aspects of the project, other than the accounting categories used by the controller's office. These are apparently adequate for USAID accountants but they are lacking for good project management. For example, within fairly general subcategories of the expenditure headings, there was no information readily available, nor was what we found being utilized by any members of the mission. Thus, there was no awareness, within the category of commodities, of what had been budgeted to be purchased, what had been purchased and what remained to be purchased, on the subdivisions of: equipment, vehicles/spares, drugs, medical supplies, and furniture and appliances for the training center. It was only through deduction that we discovered that the detailed budget in the original project paper is still the operative budget. Everyone thought that subsequent budgets had been drawn up but no one had a copy. Management without basic budgets and financial overviews is of questionable value.

Many of the basic documents related to the project were either not available or could only be found with considerable delays. No one has a detailed view of the construction that has been completed, what was originally planned, what remains to be completed and the costs associated with each item. The buildings were costed to include furniture, equipment and appliances. No list exists of what these items should be for each unit and the recent inventory (covering only what was purchased by USAID on this project and not what was bought by MSCI after it took over procurement in 1982 - we do not understand this decision) has not been integrated as a management tool. Systematic records of meetings and decisions do not exist within the Mission on this project. Actual costs are not compared to budgeted costs by category, let alone by item. The project monitoring system contained in the USAID Handbook 4 is not being implemented in any fashion. In general, there is not effective management of the project within USAID/Mogadishu that would allow the Mission to plan its inputs, manage its outputs and maintain an effective liaison with MSCI and the MOH.

(2) Recommendations

In order to correct this problem, the project officer should:

a. secure an authorized project budget, with details for each sub-category, such as commodities, technical assistance, etc.

b. compile a complete list of all expenditures to date and the

budget categories from which they were made;

c. list the expenditures yet to be made and organize them in a cash-flow budget;

d. keep the cash-flow budget current, entering expenditures as they actually take plae and adjusting future expenditures accordingly;

e. make up a complete set of project documents - contracts, reports, minutes of meetings, etc.

f. draw up a management-decision flow chart, indicating all the major decisions to be made during the remainder of the project, who is to make them and the date by which they should be made;

g. oversee and participate in the implementation of the recommendations contained in the rest of this report.

b. Specific PHCP Management Problems and Recommendations

There are a number of management problems which need to be corrected.

(1) The compounds at the training centers.

(a) Problem:

Requests have been made by USAID that MOH formally take over the buildings. As will be pointed out in the chapter on logistics, the conditions in these compounds is so bad that the health and safety of its residents is continually at stake. These poor conditions stem from design and construction errors, for which USAID is, ultimately, responsible for having corrected. Furthermore, many of the appliances are missing, especially from the Somali tutor's houses. There has never been a suggestion that these tutors were responsible for the missing items.

(b) Recommendation:

The compound should be not be turned over to the GSDR until the problems are all corrected and sufficient time has ellapsed to ensure that further problems do not develop; that is, until the end of the project. We see this as an economic and political management question in the sense that it is certainly not in the interests of the image of the United States to turn over these compounds until they are solid, efficient and lasting.

(2) Missing Items

(a) Problem

The 1983 Audit Report required that responsibility be fixed for the items found to be missing in the

inventory. While we have no legal opinion on this matter, it seems clear to us that the responsibility techniques were employed from the time the items arrived in Mogadishu until they were discovered missing. Documentation was missing, secure transport was not ensured, receiving procedures were not established and no systems existed for ensuring that items arriving at the training center remained there.

(b) Recommendation

These items should be replaced, either at the expense of USAID (neither through project funds nor with CIPL funds) and/or MSCI (not out of project funds).

(3) Project Commodities and CIPL

(a) Problem

In 1983 and 1984 a number of items were included in the CIPL budget that were project commodities and should, therefore, have been purchased with project funds. The reasons given for funding them through the CIPL budget were that they were required for the project sooner than they could be procured from the United States. This is true. It is also true, however, that the items were not here when they were needed because of management errors by MSCI in ordering them and a failure on the part of USAID to oversee MSCI's activities. It is mentioned here because it was USAID's decision to have them funded through CIPL. We think this was a wrong decision. The CIPL funds were never intended for such purchases.

(b) Recommendation

Project funds should be transferred to the CIPL fund to replace those monies used for project commodities. The following is a list of those items and the actual or budgeted amounts.

1983		Shillings
February	- Training center items: pillows, sheets, etc.	50,700
April	- House rent because tutor houses not complete	22,000
May	- Manuals	77,800
July	- Refrigerators	120,000
	Stoves	33,820
	Typewriters	36,060
	Cooking equipment	35,820
August	- Manuals	54,900
September	- Beds, etc. (for training centers)	270,000

October - Manuals		2,625
November - Manuals		2,625
	Total 1983:	723,470

1984 MHO Budget for CIPL

Translation, illustration and printing of TBA and CHW manuals		308,000
Training center furniture, mattresses, pillows, etc.		615,400
Training center duplicating machine and typewriter		350,000
		1,273,400
Grand Total:	So.Shs	1,996,870
	US$	119,812

(4.) CIPL BUDGETING

(a) Problems:

(1) The PHCMO has difficulties preparing its budget for submission to CIPL.

(2) The PHCMO is not clear on the CIPL regulations and procedures. PHCMO uses confusing reporting systems. There are unnecessary delays stemming from the use of language on monthly account summaries which befuddle the reader and, thus, require specific explanations; delays in the transfer of funds result at the end of the year.

(b) Recommendations

(1) The CIPL Unit should help the PHCMO draw up its PHCP budget.

(a) Draw up a set of budgeting parameters. For instance, bases for calculating vehicle kilometer use and fuel consumption; rule-of-thumb methods of estimating stationary needs; reasonable depreciation/replacement percentages for various equipment; and simple cost-estimating techniques for major budget categories for such activities as seminars and conferences, would all be helpful.

(2) The CIPL Unit should assist the PHMO in understanding the CIPL rules and practices by giving the PHCMO all relevant CIPL documents and interpreting their meaning to all

relevant parties.

(3) The CIPL Unit should work with the MOH accountant so that he can keep his expenditure records in a form suitable for CIPL reporting. The words used to describe various expenditures need to be made uniform and understood by all.

(5.) THE BASIS FOR CIPL CONTRIBUTIONS TO THE PMCP

(a) Problems:

The PMCMO spends CIPL funds on items and categories that are not wholly related to the PMCP and, as a consequence, USAID requires excessive detail in budget submissions - numbers of pens, paper clips and their unit prices.

As pointed out in Chapter 1 only a portion of the personnel listed by the PMCMO as working on the PMCP in fact spend full time on project activities. We also noted earlier in this chapter that project commodities are sometimes placed in the PMCP CIPL budget. Other items in the budget which seem inappropriate are construction, office furniture and equipment and PMCMO, RMO and PMO office supplies and training seminars and workshops. As a result, there is continual discussion over what should and should not be in this budget and over the cost of particular items, especially salaries and allowances.

The fact remains that some level of support is required from the PMCMO in order to make the PMCP work, both in the development and recurrent phases. The question is: how can legitimate support costs be included in the budget (CIPL now and MOH later) and be met without continually scrutinizing PMCMO budgets and disagreeing over line items? What is important is not that each pencil be costed and put into the budget but that reasonable funds be available to finance agreed-upon activities.

(b) Recommendations:

(1) The use of funds should be dealt with by audits, not budgets.

(2) Only a share of the PMCMO present budget for the PMCP should be considered as recurrent costs for the PMCP. As shown in the modified system model in Chapter 1, these should include: allowances for supporting staff; legitimate fuel allowances; legitimate per diems; PMCMO PMCP vehicle maintenance and depreciation; vehicle insurance for all PMCP vehicles; legitimate internal air travel in support of the projects; some office supplies. USAID should unify the salaries and allowances it pays on various projects and avoid competing with other donors for scarce manpower resources.

(3) An overhead percentage should be used as the basis for making an annual contribution to the PMCMO for expenses in support of the PMCP.

We think this is far superior to the present system. It would allow

proper support to be given for proper support received. It would also remove AID and the CIPL unit from monitoring expenditures, except insofar as audits are desired for CIPL expenditures. The MOH, for its part would be free to spend the overhead as it saw fit in the support of its FMCP activities. In fact, we think this recommendation has so much merit that USAID should consider it for all the projects for which it provides costs support.

The next question we asked was what basis should be used to calculate the overhead? One that is simple, reliable and puts the proper amount of funds into the MOH for FMCP support.

We recommend using the sum of the salaries/allowances of the professional staff working in the FMCCs, the IMCs, and the training centers as the basis for overhead calculations. The salaries and allowances to be used should be those on the MOH official salary and allowance scale (a copy of which has been given by the team to the project officer), and not the salaries and/or allowances paid to these employees under the CIPL budget. Furthermore, we recommend only the salaries of those people presently known to be employed be included in the base. As new professionals are added, verification of their employment will be communicated to USAID for inclusion in the base calculation for the following year. Only an official, documented, increase in civil service salaries/allowances would change the value attached to each employee.

The total salaries of the professionals working in the above institutions in the two regions of the project is currently around Sh. 1,152,000. The FMCHO expenses in the improved system model (Table 7 in Chapter 1) were Sh. 1,939 - 168% of these salaries. Thus, 168% of the specified professional salaries would be given annually to the FMCHO for its share of the FMCP expenses. These would be shown separately in the budget as a single item called Overhead. The remainder of the budget would be laid out along the lines of the budgetary divisions contained in the tables in Appendix A.3. An inflationary factor should be added to this overhead percentage to reflect the fact that a good proportion of the support expected from the FMCHO in this overhead payment will come from imported items. Consequently, an international index of import prices for the poorest Third World countries might be a suitable base for an addition (adding the percentage change in the index over the previous year to the current year's overhead percentage figure.)

(4) Other FMCHO legitimate expenses related to the FMCP should be separated from the recurrent cost segment of the budget and a separate decision made on whether to support these. Such expenses include: office furniture and equipment for the FMCHO, construction and seminars and workshops.

(5) Drugs and other Medical Supplies

(a) Problem

There is confusion over whether or not project funds are to be used to meet the drug/supplies needs of the FMCP delivery system. The project paper states that $133,000 will be spent by USAID over the life of the project on the purchase of drugs. The paper clearly states that the

intention is to give a small dose to health posts and PHCUs and DHCs. Yet, everyone we talked with (except the Deputy Mission Director as we were writing this report) was under the impression that the project funds were to be used to meet the drug and non-drug medical supplies of the four regions under the project. In fact, as of early January 1984, approximately $375,000 worth of drugs reportedly had been ordered by MSCI and an order of non-drug medical supplies was said to have been placed in February 1984 with the approximate value of $32,000. Nothing in the contracts with MSCI or the Project Agreement indicate that these commodities are part of the project. If they become a project obligation, $5 million will have to be added to the commodity budget.

We fully appreciate the need of the PHC system being put into place to be supplied with drugs and other medical supplies. However, we do not think that their procurement from the United States is in the best financial interests of Somalia.

(b) Recommendation:

Other donors should be sought (with the assistance of the good offices of USAID) to supply these needed items. We discuss this recommendation in detail in chapter 1.

(7) USAID/MSCI PHCP Commodity Budgets

(a) Problem

There are large inconsistencies in the ProAg and MSCI Contract Commodity Budgets. When MSCI was given the task of procuring commodities in its contract amendment of 1982, reference was merely made to the items contained in Appendix H of the project paper, pp. 3-9. There was no mention of increasing the total value of commodity procurement, over the value in the project paper. Yet, in that contract amendment, a confusion appeared regarding both the total amount to be spent on commodities and the commodities in that total. Table 14 shows the problem in terms of the major budgets. Both the project paper and ProAg budgets show the same total expenditures and the same commodity budgets. The ProAg budget contains commodities within the category of technical assistance with no explanation of how the commodity total, therefore, must have been increased. The matter is further complicated when the MSCI 1982 contract amendment budget (the same budget that is contained in every document following that amendment) is looked at. Here we find that MSCI breaks out commodities from its technical assistance budget at $1.34 million. From this we may deduce that USAID either spent $160,000 during its two years of responsibility for procurement, or that the commodity budget was increased. However, as can be seen in the lower section of Table 1, USAID, in fact, made purchases of $870,000, through the end of March, 1984. Subtracting this from the commodity total in the ProAg budget would leave us to believe that MSCI was expected to purchase $470,000 worth of commodities over the life of the project. Conversely, adding the USAID purchases of $870,000 to the MSCI commodity budget seems to mean that $2,210,000 worth of commodities are expected to be purchased. The explanation does not lie in the items required for training center housing, as these were included in the purchase of these units from Panel Pak, as indicated in several

Table 14

Somalia Primary Health Care Project

Budgets ('000$)

Category	Project Paper[1]	Pro Ag	MSCI Contract
Technical Assistance	5,923	6,300[2]	4,829[3]
Training	2,520	2,300	--
Salaries & Allowance	266	100	--
Commodities	1,589	1,500	1,340
Construction	4,960	5,000	--
TOTAL	15,258	15,200	6,169
Technical Assistance and Commodities	7,512	7,800	6,169

Commodities Purchased by USAID[4]	870
MSCI Commodity Responsibility	1,340
TOTAL Commodities Implied	2,210
TOTAL Commodities and MSCI Technical Assistance	7,039
TOTAL Other Pro Ag Categories	7,400
TOTAL Project Implied	14,439

1/ Includes inflation and contingency applied by % of total costs & total inflation and contingency.

2/ Includes commodities to be purchased by MSCI for project.

3/ Excludes commodities in MSCI contract budget.

4/ Through 3/31/84.

documents. Nor is any light shed by looking at the breakdown of the project paper, as is done in Table 15. Neither the commodities in Phase One or Phase Two, especially when compared with actual purchases, lead to the conclusion that MSCI had much purchasing left to do when it took over procurement. Column 6 shows the amount over (+) and under (-) spent by USAID and MSCI together with respect to Phase One purchases by category. Column 7 makes the same calculations for Phase One and Phase Two together.

(b) Recommendation

The issue of commodities should be settled immediately, both in terms of the total budget and the items contained therein. MSCI's responsibility should be clearly spelled out and put in the form of a contract amendment. We also urge that, in the future, all responsible units within the USAID Mission have a clear picture of these budgets and expenditures, in detail and not simply in the category totals used by the controller's office.

(7) Controller's Accounts

(a) Problem Missing Documentation

The controller's accounts show an expenditure under the category of construction for $227,000; payment was made in Washington to AAPC. No one we spoke with has an explanation of what this expenditure was for, including the controller and the project manager. We were told that there are no backup papers on this expenditure.

(b) Recommendation

The documentation for these purchases should be secured or the payment should be disallowed.

(8) Communications

(a) Problem

The PMC Director and training centers staff do not have basic project documents. It is important that USAID see that the various people in this project are in possession of the documents, contracts and papers important to their work and that they understand their contents and meaning. We were incredulous to discover that none of the expatriate staff or tutors at the training centers have received a copy of a single study, evaluation or report undertaken on this project, and there have been many. It is particularly disturbing that the reports of the anthropolligist, who spent 6 months studying the Toghdeer region, has not been given to the field staff in Toghdeer despite multiple requests to the Project Manager and former COP. The same is true of most of the documents in terms of the PMC Director.

(b) Recommendations

All past and future relevant project documents and reports should be given to the training centers staff and the PMC Director.

Table 15

Somalia Primary Health Care Project

Commodities: Project Paper Budget and Accumulated Expenditures[1]

('000 $)

Item	(1) Project Paper Budget Phase I	(2) Project Paper Budget Phase II	(3) 1 + 2	(4) USAID Purchases[2]	(5) MSCI Purchases[3]	(4+5) - (1)	(4+5) - (3)
Vehicles and Spares	572	112	684	567	13	+8	-104
Equipment and Supplies							
Health Posts	9	3	12	0			
PHCUs	25	26	51	0	28	-6	-35
CHCs	10	10	20	0	0	-10	-20
Training Centers	166	0	166	283	0	+117	+117
Other	23	0	23	0	41	-18	-18
Drugs	104	49	153	0	269	+165	+116
TOTAL	909	200	1109	850	351	+251	+92

1. Excluding inflation and contingency.
2. All purchases through March 31, 1983.
3. All purchases through December 31, 1983 plus $227,000 drug order placed in early 1984.

(9) Audits

(a) Problems

Several of the problems detailed in the next two sections of this chapter raise financial and management questions.

(b) Recommendations

(1) MSCI should have a full financial and management audit on the PHCP.

(2) The PHCMO PHCP accounts should be audited.

One final problem within the Mission needs to be noted because we found that it is contributing to poor management at several levels. There is a good deal of misinformation about the project and the actions of the various parties presently associated with it. Rumors are accepted as fact and too often become the basis for decisions.

3. MSCI: MANAGEMENT

a. General

It is worth repeating again that we are interested in focussing on present problems rather than on past errors and that the current MSCI COP is moving in commendable directions. There are, however, a number of important management gaps which make the work of the COP difficult. Many of these are linked directly with the role of the head office in management contracts and we believe that they must be corrected forthwith.

It is a fair statement that the ability of the MSCI team in Somalia to manage this project is dependent almost entirely upon the field staff employed by MSCI. Put another way, they are almost entirely on their own with little management support from the head office. While it is always true that a project will succeed or fail depending largely on the staff that run it, it is equally true that the capabilities of that staff are, to a significant degree, linked to the management support from headquarters. Apart from an MSCI personnel manual, there are no manuals or papers dealing with project management - either in general or for this project - in the COP's office. MSCI Headquarters was requested by the team to supply copies but they had none.

b. Lack of Management Tools

We found the following deficiencies in the COP's office:

1. There is no list of the commodities to be procured under the contract;

2. There is no record of commodities already procurred (either by USAID or MSCI);

3. The Logistics Center lists of "Supplies Received" are not in the COP's office, nor are they anywhere regrouped into general categories, such as training center household items, spare parts, etc.; recommendations for improvement of logistics management tools, have been made to the Logistics Management Officer and are noted in another chapter.

4. There are no financial planning data, such as budget categories, amounts spent, amounts remaining to be spent, etc.;

In short, there are no basic management tools or guides, as might be expected to have been supplied by the head office.

c. Missing Files

At a meeting between one of the team members and the COP and MSCI head office project director, Robert Lennox on March 10, 1984 in the COP's office, the following items were identified as missing from the MSCI/ Mogadishu files:

1. Minutes (of any meeting from the inception of the project):

2. Monthly, quarterly and annual reports by the former COP;

3. Monthly reports from the MSCI field staff at the training centers (these were produced regularly, in both Burao and Baidoa and some are on file at those locations);

4. Papers and proposals from the field staff on various aspects of their work - some of these contain drawings and cost estimates that have significant implications for savings by USAID and the MOH:

5. A video tape of some of her work produced by the MSCI midwife trainer at Burao;

6. A budget Mr. Lennox says was drawn up in 1982 as the basis for the MSCI contract amendment.

While we were assured that these items would be secured before the completion of this consultancy, to date only an incomplete set of the COP's monthly, quarterly and annual reports have been sent from the head office. No field reports or proposals have been sent. These files are a critical part of the project - especially the field staff's reports and papers - and must be replaced immediately.

d. Management Deficiencies

There are management deficiencies at the training centers as well. Although the principal is titularly in charge, there is clearly a need for management support. No one is in charge at the centers and a de facto leadership has emerged from two expatriates, neither of whom have any authority, either from the MOH or MSCI, and both of whom are greatly overburdened by the numerous tasks they have taken on in addition to their training duties. There is no planning or management with respect to the

delivery of commodities to the DHCs or PHCUs or the training centers and the maintenance of vehicles is left to the abilities of expatriates to get them to Mogadishu when they are in need of repair. A plan is only now being developed for how the primary health care system will be delivered to the villages. In sum, decisions by all the project team are made on an ad hoc basis. We attribute this directly to the lack of sufficient management and planning support from the head office. These problems can all be corrected but it would be a mistake to think that the COP is capable of filling all the gaps and providing the leadership required at this time. The head office must correct these deficiencies.

In an effort to gain some understanding of the financial aspects of the project, especially for MSCI's areas of responsibility, we sought basic information from the COP and headquarters project manager. None of these data were available in Mogadishu and only the most general response was received from headquarters. It is difficult to understand how proper project management, either in Virginia or Mogadishu, can be undertaken without such information readily at hand.

e. Recruitment for Field Staff

With respect to the search for replacements for the two MSCI field staff leaving momentarily, we are deeply concerned. There is a somewhat less urgent, but still highly important, recruiting need for two other field staff leaving in October, 1984. The collective experience of the team with respect to recruiting for technical assistance positions in the Third World is that serious efforts must be started at least one year before the person is expected to be at their post. The recent efforts of MSCI in this area make us fear that, either unsuitable people will be secured, or that the posts will remain vacant long after the present staff leaves them. We, therefore, recommend that USAID/Washington take an active hand in securing candidates and monitoring MSCI's efforts.

f. Accounts, Procurement and Information

There is a category in the MSCI budget titled "Allowances". In discussions with MSCI field staff, we learned that their salary checks are constant, with a 5% raise at the end of each year; they receive no cost of living allowance. The amount reported by MSCI as having been spent in this category in their December 31, 1983 Purchase Voucher is $310,344 - 34% of field and home office wages (budgeted allowances are 42% of salaries and wages). Clearly, this contains more than the 75% hardship allowance for field staff. We asked headquarters for a clarification but received none.

In October 1982 commodity procurement was turned over to MSCI. By the end of December, 1983, $120,000 had been spent on commodities by MSCI, $24,000 was for books (of which neither the COP nor the Director of PHC, nor the training center staff we asked has any knowledge or know the whereabouts), and $11,000 was for a Logistics Center refrigerator. Only $42,000 worth of drugs had arrived (September - October 1983), and no non-drug medical supplies, in spite of the fact that everyone connected with the project, especially the villagers and PHCU/DHC staff, listed these commodities as the most critical of the missing items in the project. From the time the team was briefed by MSCI in Virginia, through the visit of the project manager to Mogadishu in early March, 1984, we were assured that a

large drug order had been placed and was on its way - air freight - to Mogadishu. On March 10, 1984 we were told that one half of the order would arrive within one week. By the time we departed Somalia on April 23, 1984 no drugs had arrived. This is but one example of questionable information from the MSCI head office concerning important aspects of the PHCP.

We were told the missing files were in the COP's house but they were not. And the Lamson report could not verify the claims made in the MSCI quarterly reports on the number of people trained. Because it is responsible for such fundamental aspects of the project - commodity procurement, field staff for the training centers, consultancies - the evidence we saw on how MSCI headquarters conducts the affairs of this project deeply concerns us.

At no time since it took over procurement has the officer responsible for purchasing at MSCI headquarters been to Somalia. As indicated in the chapters and appendicies on logistics, the realities in Somalia that affect procurement are significantly difficult, and the MSCI/Mogadishu officer in charge of logistics sufficiently inexperienced in this field that a visit by the MSCI procurement officer was essential.

Only a small number of sanitarian tools had arrived by the time we left Somalia, in spite of over one and a half years of requests by the training center sanitarians. This has resulted in a continual frustration of their attempts to initiate sanitarian projects, led by the graduates of the training centers.

In the villages and the DMCs and in the district mayors' offices we were asked why the commodities had not arrived, why the Americans had failed the local people. We simply replied that the Americans responsible had not done their jobs.

We have been so pointed about MSCI's problems for two reasons. First, these problems continue to create the most difficult barriers to the success of the PHCP. Second, the deficiencies are so basic that we cannot find explanations for them. We have no recommendations concerning these problems (other than shifting drug and other medical supply procurement to another donor agency as soon as possible) except that they should be corrected.

Since we were unable to assess the financial or the commodity side of MSCI's activities in this project, and because of the deficiencies noted, we recommend full financial and management audits of the head office PHCP accounts and activities.

4. MOH: MANAGEMENT

a. General

While we are aware that it is normal practice for foreign consultants to withold, or at least only hint at, problems linked with the host government or local society, we believe that to do so in this case would neither be in the interests of the PHCP nor the people of Somalia. We have been told as much by a number of high-ranking officials in the Somalia Government, who have urged us to be open and frank in our report, as they

were with us during our research. In this spirit, the following problems need attention.

b. Specific

(1) PHCMO

At the macro level, the PHCP and the entire PHC program in Somalia suffers from the lack of clear direction, firm policies and concrete planning.

(a) Decentralize

The Director of PHC is overburdened with work and spends too much time dealing with minute details of this and all PHC projects. He would be well-advised to delegate much of the detailed work to his subordinates, even if they make mistakes; they will learn from them.

Part of the backbone of the management changes needed to improve the PHCP, and PHC in general, is a need to simplify and decentralize. The country is too large and the difficulties of fully managing from the center too great to have a centralized system. Although it is true that there are many problems at the regional and district levels, as well as in the training centers, they cannot be solved by the PHCMO. The capacity to solve most of them must be created in the regions, districts and training centers. The PHCMO should concentrate on creating that capacity, developing management, planning and financial guides for decentralized management and, above all, on giving clear policy guidance. We cannot overstress the need for bringing the various components of the PHC system under the authority and guidance of the PHCMO and the need for that division to address the questions of national strategies, specific policies and strategies, (e.g. on drugs) and their meaning for the implementation activities of the regional and district components of the system. The proper functions of the PHCMO include:

1. Developing a national PHC formulary;
2. Establishing treatment guidelines;
3. Targeting population groups to be served and methods of delivery;
4. Defining the lines of responsibility and authority;
5. Designing and implementing national programs;
6. Designing and implementing a health information system;
7. Establishing budgeting and spending procedures.

In the interests of decentralization, we urge the PHCMO to integrate local government (mayors and the LPA), as well as regional commissioners, into the PHC system. They should be continually informed of the programs, their progress and coming plans. Their advice should be sought on the best way to approach problems in the districts. And their assistance is important on issues of involving villagers in various aspects of the program.

(b) The DMO should not be considered as purely a PHC physician. He should continue to support the PHC efforts at the district level and have some supervisory authority over the PHC staff but they should be given some considerable degree of authority to develop their own

schedules and approaches. Their main responsibility should be to the regional PHCC.

(b) The vehicle, fuel, drugs and medical supplies in the DHCs should be for the use of the PHC staff only and not for the non-PHC functions of the DMO. When he travels to PHCUs for supervisory purposes, the use of the PHC vehicle and fuel is permissable.

(c) The DHC PHC staff should coordinate their efforts in terms of planning, scheduling and management. A division of labor would be worth working on, as well as a sharing of responsibility, across discipline lines.

c. Simplify Budgeting and Accounting

The MOH should improve its budgeting and accounting systems for the PHC project. Simplification and clarity should be the goal. The MSCI COP might help with budgeting practices for the project.

> We recommend that major donors in the health field combine their efforts toward unifying and simplifying the MOH budgetary and accounting practices. Both assistance and agreement will be required. The many layers of accountants, with the expensive practices of travel for supervision, for example, should be eliminated and replaced with direct transfers from the MOF/Central Bank to accountants at spending levels. For the PHCP, this would mean bypassing the regional accountant for expenditures made at the district level; DHC and PHCU salaries, allowances and fuel and petty cash funds would be transferred to DMO accounts in the local bank/post office, replacing the present system in which personnel must travel to regional headquarters for allowances.

The suspicions of various donor agencies that MOH staff are on several project salary and/or allowance schedules, needs to be cleared up immediately. The simplest way to put these rumors to rest would be for the MOH to draw up a clear list of all project employees, by name, salary and allowance and the project they are assigned to, and circulate it to donor agencies. Employees should be required to be at work where they are employed and expatriate counterparts can simply sign attendance sheets and record the salaries/allowances implied by the staff actually working.

(1) STAFFING

We recommend that an expatriate counterpart to the PHC Deputy Director be supplied for 3 years by USAID to systematize and strengthen the administrative capacities of the PHCMO.

In addition, we recommend the following expatriate advisers to the PHCMO: (1) a medical officer; (2) a training officer; and (3) an

epidemiologist. (see health section for reasoning and duties.)

Job descriptions need to be made up by the PHCMO Director for his staff and the MOH should ensure that people are recruited with the required qualifications. It is a blow to the PHC system of Somalia to place people in that office who do not have the background for the work required. Recently, the PHC Director has been directd by the Director General to hire unqualified people.

One immediate measure for strengthening PHC would be to give more formal and substantive autonomy to the PHCMO. In our view, the proper role of the DG's office is to provide policy guidance and management support, rather than to be involved in day-to-day decisions. Under the present practices, much time is lost as a result of the DG's participation in details and inevitable conflicts arise between PHC and other MOH divisions that could easily be avoided. Likewise, the Donor Coordinating Committies should be advisory to, and under the authority of, the Director of PHCMO.

(2) GSDR

(a) Resources

The Government needs to make a stronger substantive commitment to PHC. It is not enough to issue statements about the importance of preventive over curative medicine. More national resources need to be put into the system - at the cost of the curative system, if necessary -and the Government should not leave the sector to foreign donors.

(b) Planning

There is a distinct need for a health planning capacity. This should be in the first instance, in the Ministry of Planning; later, upgrading the planning capacities of the MOH might be desireable. The health planner in the MOP should coordinate all the development projects in the health sector. He/she should raise the many issues in the sector to the policy level and ensure that the projects presented by donors and the MOH are consistent with those decisions and strategies. There is also an essential need for coordination among projects in terms of manpower, logistics and vehicles. Health manpower planning must be initiated as a matter of urgency, within the MOP. The MOH appears to tell every donor that counterparts and trainees are available to meet all the needs of their projects, yet each project is beset with shortages of appropriate people. Training plans (within the country and overseas) need to be part of the health manpower plan, as much inappropriate training appears to be taking place. And of course, manpower planning within the health sector needs to be made part of national manpower planning, if secondary school graduates are to be directed into appropriate channels and scarce educational resources used in a rational manner.

The present practice of requiring that a person who comes to work at the MOH cannot leave the ministry until the MOH agrees, should be halted forthwith; it acts as a clear deterrent to qualified people joining the ministry.

(c) Wage and Salary Policies

There is a need for a common wage and allowance policy. We recommend that the Government review its incomes policy in the public sector, with an eye toward several objectives:

(1) unifying salary grades;
(2) eliminating the practice of allowances, simply adding them (uniformly, according to grade0 to salaries
(3) insisting that donors pay salaries within projects according to Government rates; and
(4) increasing civil service salaries, in order to make them more realistic as a source of real income.

We realize that this last recommendation flies in the face of recent IMF positions. However, it is clear, at least with respect to the PHC sector, that low salaries contribute to an inability to secure suitable personnel and produce high attrition rates, especially at the PHCU/DHC levels.

(3) Primary Health Care Coordinator

From a management standpoint, we believe that the PHCC should be the key to the delivery of primary health care in the two regions. The main burden of supervision and ensuring supervision by DHC staff, falls on this office. There is a need to strengthen this office in several ways.

(a) Improve the quality control in the selection of the PHCC, establish firm guidelines and controls over the activities of those already in place.

(b) Clearly separate the PHCC office from that of the RMO, in terms of authority and resources.

(c) Add a deputy administrator and a regional midwife coordinator to the PHCC office.

(d) Provide an expatriate counterpart for the PHCC in Bay and Toghdeer to assist in management, supervision and medical direction of the regional PHC system.

Much care needs to be given to the selection of PHCCs and we recommend that they be chosen by the PHCMO. In the same vein, there needs to be a clear distinction between the authority of the PHCC and the RMO. We found these lines are so blurred at present that the work of the former often suffers from interference from the latter. The resources of the PHC system should be clearly separated from those of the regional and district hospitals. This is especially true with respect to drugs, fuel and vehicles. PHC commodities are extremely scarce and are likely to remain so for the indefinate future; the country can ill-afford to have them diverted away from PHC. The health of the people, the supervision of the PHCUs and health posts and the confidence of all parties in the system depend on stopping these diversions. We were told stories of drug and money thefts that went unpunished, of vehicle and petrol use for private purposes by RMOs and DMOs, of inteference in the selection process for students and staff, of people away from their posts for long periods of time (days and months, with project vehicles), and that PHC drugs would be drawn into the

regional and district hospitals, if they were stored there.

Secure drugs held in health posts and PHCUs against theft. We spoke with villagers, mayors and PHCU and DHC staff about the following idea, which they all supported. We recommend that villagers be involved in monitoring and controlling the receipt and the dispensing of drugs. Village health committees should be taught how to read the packing orders on the shipments to both the PHCUs and the health posts. They should then be present when these orders arrive to ensure receipt of what is on the packing list. They should also be taught to read the drug dispensing ledgers to ensure that what is recorded has actually been given to those claiming to have received drugs.

The other problems can only be solved with the help of the highest national authorities, clear lines of authority within the MHC system and closer supervision and enforced accountability.

Therefore, in suppport of these efforts, we recommend that an audit be undertaken by an independent auditor, of the expenditures made under the CIPL budget, the allocation and use of fuel in the regions, and for the training center generators.

(4) Training Centers

(a) Strengthen Administration

We think that the PHCMO should make the principal fully responsible for the management of the training centers. There is a need for enhancing the management and general services capacities of the centers. Because of the fact that we were unable to get a clear picture of the capacities of the present two principals, we suggest that a determination be made as to whether an expatriate adviser should be assigned to each center, probably for no more than one year (see logistics chapter).

(b) Remove Authority of PHCC over Training Centers

We have questions about the advisability of housing the PHCC at the training center. His authority over the center does not fit into the system as we envision it. That is, the training centers are national institutions, not regional ones. Furthermore, they are training centers, not PHC centers. Thus, we think that unnecessary problems will arise by housing him there and stress that his authority over the center should be removed. The financial burden of building the PHCC a house seems wasteful and inconsistent with other practices. The model used for Bay and Toghdeer regions should not set patterns that cannot be replicated in other regions, at least in policy and administrative and logistic terms. In the same light, we think the finances of the training centers should be separated from the PHCCs office. They should maintain their own supplies and have their own petty cash fund, for which they are responsible to the MCH. A small drug supply is required for teaching purposes at each center. The centers should neither be the supply depot for regional drug supplies nor a filtering point for drug-use records or orders although some advice to the PHCC, DHCs and PHCUs on these matters could well come from the centers, especially before the arrival of the PHCC counterpart.

5. DEVELOPMENT COSTS

Although the central task of this consultancy was to evaluate the recurrent costs of the PMCP, many of the recommendations found throughout the report have implications for the development costs of the project; that is, they would have to be financed out of remaining project funds. In order to put these in perspective, we will list what we see as the remaining needs (both those implied in the original project paper and recommended additions), provide rough estimates of their costs, compare them with what remains in the project budget and suggest cost-saving measures.

a. REMAINING EXPENSES UNDER THE PROJECT AGREEMENT

Section I of Table 16 lists the remaining expenses under the terms of the Project Agreement. Vehicle replacements are higher than expected because of the ill-fated purchase of Suburbans and their subsequent demise. Stocks were not anticipated but are certainly implied, if vehicles and the training centers are to be maintained. The $3,000 figure per DMC for renovation is $6,000 less per unit than budgeted in the project paper but is probably an adequate figure. In all, $6.9 million of expenses remain. It should be noted that this figure assumes that the project will end on schedule in September, 1985.

b. PROPOSED AND IMPLIED ADDITIONAL EXPENSES

As discussed in Chapter I drugs and other medical supplies have become a de facto addition to the development costs of the project. Assuming that our recommendation that the project be extended through September 1987 is accepted, these commodities, purchased at US prices, would require $3.3 million in project funds (including three months stock). An additional

$484,000 has been proposed by the FHCHO to USAID for building at the training centers, including dormitories, classrooms and houses for the FHCC, Principals and lab technicians.

(1) Recommendations

In the previous section of this chapter we made a number of recommendations that new technical assistance personnel be added to the various institutions running the FHCP for varying lengths of time. The Scope of Work requested that we identify the needs of such strengthening. We suggest 9 new positions, four for the FHCHO, an aide to the MSCI COP, two for the FHCC offices and two for the training centers. This is the appropriate place to put the recommendations that:

(a) MSCI's contract not be extended beyond September 1985;

(b) An agency, specializing in primary health care in Africa should be contracted to supply the FHCHO and FHCC's additional technical assistance;

(c) The aide to the MSCI COP and the two training center general administrative officers should be supplied by MSCI as soon as possible.

As pointed out several times later in this report, we see the FHC system being put into place in the Bay and Toghdeer, and soon in Lower Juba and Mudug, separate from both the FHC operations of the FHCHO and of the training centers. By the completion of its current contract, MSCI will have accomplished what it was contracted to do: set up two national training centers and train people capable of running them. We are of the opinion - formed from detailed discussions with the tutors and expatriate trainers, that the tutors and principal should be capable of running the training centers by September 1985. In the next classes at the centers, the Somali tutors will undertake the entire training, with only supervision from the expatriates, who will spend most of their time in the field, assisting the training of CHVs and TBAs and in supervision of specific projects, such as sanitation activities.

The additional expatriate staff that we recommend are, we believe important to the long-term success of the development of FHC in Somalia. We think these people should be recruited as soon as agreement can be reached. We further believe that agencies, with proven records of work in the primary health care field in Africa, should be approached and invited to submit proposals within several months after USAID and GSDR reach agreement on these additions, with the aim of having the new personnel in place within six months from now. These new personnel would add some $1.5 million to the development costs.

Finally, the training centers require immediate and extensive rehabilitation. (See logistics chapters and appendices.) Our rough estimate is that this should cost about $100,000.

Total additional expenses are, thus $7.4 million.

Table 16

Somalia Primary Health Care Project
Remaining Development Costs and Their Finance
($'000)

ITEM	AMOUNT
I. PRO. AG. EXPENSES REMAINING	
A. Technical Assistance[a]	1533
B. Training	2152
C. Salaries and allowances	100
D. Commodities	
1. PHCU equipment	128
2. DHC equiptment	19
3. Health post equipment[b]	110
4. Vehicles	
a. 14 replacement[c]	294
b. 10 new[d]	210
5. Stocks	
a. LC spares[e]	20
b. Traing center spares[f]	60
6. Subtotal	841
E. Construction	
1. PCHUs	
a. completion of 1/	293
b. 47 additional @ $39,000 each	1833
2. DHC rennovation @ $3,000 eachg	48
3. Subtotal	2174
F. Total	6909
II. PROPOSED OR IMPLIED ADDITIONAL EXPENSES	
A. Drugs and supplies (4 regions) (1984-87)[h]	5313
B. Proposed new contruction for training center[i]	484
C. Rehabilitation of training centers[g]	100
D. New personnel recommended by recurrent cost study[j]	1512
E. Total	7409
III. PRO. AG. GRAND TOTAL LOP	15200
IV. ACCRUED EXPENDITURES (3.31/84)	6695
V. III-IV	8505
VI. I.F + II.E	14209
VII. V.-VI	-5709
VIII. Proposed Savings[k]	6282
IX. VII + VIII	578

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TABLE 16

Footnotes

a. MSCI monthly rate 10.80-12.83 x 21 months = through 9.85.
b. At $137/h.p. = our costing of h.p. equipment list.
c. Replacement of Suburbans in Phase One of project.
d. For PHCCs and DHCs in Lower Juba and Mudug.
e. For LC/PHCNO PHC vehicles maintenance.
f. For Training center, PHCC and DHC vehicle maintenance and other training center repairs.
g. Estimate. and other medical supplies
h. 1985-1987 drug/estimates (Table 12) plus 3 months supply of 1987 drug/med. supplies for 64 PHCUs, 16 DHCs and 800 Health Posts and 3 months supply of 1987 drug/med. supplies for the LC, all revalued at US prices = 2.6 x UNICEF prices.
i. Includes: 6 houses, 2 classrooms and 2 dormitories.
j. PHCNO: General Administrator counterpart to PHC Director. 3 years.
Medical Advisor. 3 years.
Epidemiologist. 3 years.
Training Officer. 3 years.
Aide to MSCI COP 1 year.
PHCC Office: Administrative counterpart. 2 for 1 year .
Training center General administrator counterpart to Principal. 2 for 1

All these personnel are costed at $30,000 per year x 2.4 for additional costs.

k. Removal of drugs and medical supplies: $5,313,000; removal of houses from new construction at training centers: $266,000; reduction of PHCU construction costs (for 47) to $15,000 each: $703,000.

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c. FINANCING THE REMAINDER OF THE DEVELOPMENT EXPENSES

Table 14 shows that there are not nearly enough funds in the project to finance all these expenditures; a deficit of over $5.7 million would result from an attempt to do so. There are three key ways of reducing these development costs: (1) removing drugs and other medical supplies from the project as soon as another donor can be secured to supply them (we assume within six months); (2) removing the houses for the proposed additions to the training centers; (3) and altering the designs of the PHCUs.

With respect to the training center houses, we have already indicated that we do not believe that the PHCC should live at the centers. There is no more reason to supply them with houses out of project funds than to supply them for DHC staff, etc. The Principals and lab technicians need houses. However, each center has a guest house that could be used by the Principal until the MSCI team leaves in September 1985. At that time three houses at each center will become available. It, therefore, appears wasteful to build a house for the lab technician, especially since at least six months would be required to build it, at which time less than one year would elapse before the MSCI team left. Even without building new houses, there will be two vacant houses per training center when the MSCI team leaves, both of which could be used as guest houses.

We think the remaining construction in this project - both the buildings USAID is obligated to have built under the project agreement (including the renovation of the DHCs) and the new buildings at the training centers now being proposed by the MOH, should be designed for construction with stone masonry and as much local material as is consistent with sound construction. For the PHCUs in particular, including those for which contracts have not yet been let, we think the designs could be simpler and result in less costly construction. Some thought should be put into a design for a PHCU that is somewhat temporary, to meet the realities of shifting populations in some of the catchment areas. Somali architects who have a thorough knowledge of the countryside and the traditional practices of the people might be engaged to develop such designs.

We were told by the Director of PHC that the MOH had submitted such low-cost designs for PHCUs, based on local materials and labor, but that the USAID/Mogadishu engineer had rejected them in favor of the exceedingly more costly designs now estimated to cost $39,000 per PHCU.

We think that the DHCs could be vastly improved by some structural improvements, repairs, paint and some basic equipment. The use of local funds and self-help labor would be a way of involving local government and reducing costs. These could then be used for funding other parts of the improved system that will require more funds.

Together, these savings would amount to $6.3 million, leaving about $500,000 in the development funds for contingencies. Further savings are possible and should be explored. We are not convinced of the value of sending PHC staff to the United States for PHC training. Their needs would be better served by training in other Third World, and especially African, countries. This would also reduce the total costs. Some thought should be

given to reducing the PHCNO vehicles. Presently, five vehicles are used jointly by MSCI and the PHC office at the PHCNO, presumably for work on the PHCP. This is an excessive number. Three vehicles should be enough. We also suggest that all the PHCP vehicles be used for PHCP activities only and not as the private vehicles of the project staff, as is currrently the case. Expatriate staff should be permitted to bring in their own vehicles for private use. This is certainly the practice in the case of many donor agencies. The current practice significantly reduces the life of the vehicles and results in an egalitarian practice whereby expatriates, Somali counterparts and drivers use the vehicles for their private needs. Ending this practice would also reduce the recurrent costs of the project.

6. CONCLUSIONS AND RECOMMENDATIONS

There are severe deficiences in the management aspects of the PHCP in USAID/Mogadishu, MSCI/Headquarters and the PHCNO. The vast majority of these stem from practice rather than structure. Until now, it has been the general opinion of those involved in the project and those who have reviewed and evaluated it that problems have almost entirely resulted from the errors of specific individuals. We agree that such errors were made but conclude that the problems lie primarily at the policy and institutional levels. In many cases that caused difficulties, we found a lack or absence of policies. And we were continually struck by the facts that all three institutions have clearly-defined chains of command and that the superiors of the individuals who made errors did nothing to correct them. We have no explanations for these failures. Since many of them continue (as evident from the list of current problems), we conclude that, unless there is substantive and extensive change in the management practices of all institutions involved in the PHCP, there are serious doubts whether the project can succeed. We believe that the required changes are neither complex nor beyond the capacities of the personnel involved. Thus, we have recommended the following in this chapter.

a. Extend the life of the project by two years.

b. MSCI's contract should not be renewed beyond September, 1985.

c. An agency should be secured to supply strengthening personnel, except those for the MSCI COP office and the training centers.

d. Nine new expatriates should be recruited to the project.

e. USAID/Mogadishu should introduce financial and management planning and monitoring techniques on the PHCP.

f. USAID should not turn over the training centers' compounds to the GSDR until the end of the project in 1987.

g. The practices of CIPL should be changed, viz.:

(1) funds spent on project commodities should be returned and not further spent on such items;
(2) the CIPL unit should give technical assistance to the PHCNO

along the lines suggested;
(3) the budgeting procedures should be simplified as suggested;
(4) support to the PHCMO for the PHCP should be shifted to an overhead percentage as suggested.

h. Take drugs and other medical supplies out of the project budget.

i. Clear up the confusion over MSCI's commodity budget.

j. Undertake a full financial audit of PHCMO's CIPL expenditures and a full financial and management audit of MSCI's headquarters accounts and practices on the PHCP.

k. Secure the missing files from MSCI.

l. MSCI should correct the listed management deficiences immediately.

m. MSCI must urgently improve its recruiting practices for the PHCP, with assistance from USAID/Washington.

n. The PHCP should be decentralized as suggested.

o. Eliminate donor control over PHC policies and practices.

p. Introduce short and longer-term planning for PHC.

q. Formulate policy changes for PHC as suggested.

r. Introduce health manpower planning in the MOP as soon as possible.

s. Separate PHC from the office and authority of the RMO.

t. Remove the authority of the PHCC from the training centers.

u. Restrict vehicle use to PHC activities, and eliminate the private use of these vehicles.

v. Simplify the PHCMO budgeting and accounting procedures and practices as suggested.

w. Reduce the PHCP development costs as suggested.

SECTION II: HEALTH DELIVERY

I. OVERVIEW

The potential and need for primary health care in Somalia is immense. Although the PHCP has serious problems i its present form and needs an infusion of new energy and expertise, we feel the PHCP can continue to develop a village based primary health care system which will reduce the extremely high infant and child mortality rates and prevent a significant amount of illness that impairs the populations in Bay and Toghdeer regions. The analysis of recurrent costs demonstrates that a modified project could deliver comprehensive primary health care at a very low per capita cost of approximately $2.58.

Somalia has already achieved an international reputation for primary health care through the work of the Refugee Health Unit (RHU). It is instructive to look at the preliminary results of a recent retrospective under five mortality survey performed in the refugee camps (see Table [illegible]). Given the dire health circumstances of the refugees several years ago, the fact that infant and child mortality rates have been lowered significantly below the national levels demonstrates the efficacy of primary health care delivered by the Somali National Staff and the refugee community health workers and traditional birth attendants. This should serve as some indication of what can be achieved in the USAID primary health care project.

This section will first look at the real and potential effectiveness of the PHCP in delivering low-cost primary health care. Recommendations for improving the health delivery system follow. Although we must describe the problems in the approach to the delivery of primary health care system in this project, we do this as the basis for positive recommendations for improvement.

We were impressed by the large influence the USAID project has had on primary health care in Somalia and feel this gives USAID special responsibilities to try to improve its PHCP and to provide positive input into the developing PHC network in Somalia. The PHC model in the 1979 project paper was incorporated into the Five-Year National Health Plan (1980-1985). USAID's project agreement in 1979 was the first program to extend primary health care to the rural population outside the refugee camps. The two National Training Centers are training district and PHCU personnel for all regions with PHC projects, not just Bay and Toghdeer.

Most importantly, the population in Bay and Toghdeer regions have been introduced to the concepts of primary health care and many are waiting for the promised immunizations, the tools to

implement sanitation projects, and access to village health workers and PHCU staff with adequate medical supplies and expertise. Our discussions with village health committees, local and district government representatives, CHW and TBA trainees and the PHCU staff who are working in their assigned locations indicate sustained interest by the communities and health personnel in the primary health care system that has been promised for so long. The logistical nightmares and multiple sagas of frustrated and immensely delayed building and commodity shipments are fortunately not the subject of this report. The effects of these logistical problems on the delivery of health care to date has been substantial yet the Somali and MSCI field staff in both Bay and Toghdeer regions have persisted and remained productive despite this. Although we feel strongly that substantial modifications and staff augmentation are needed on an urgent basis, we feel this can be accomplished if USAID commits to a strategy for recovery in this stymied project.

II. MAJOR HEALTH PROBLEMS IN SOMALIA AND THEIR POTENTIAL FOR AMELIORATION BY PRIMARY HEALTH CARE

The health status of the Somali people is generally poor. Reliable data are not available. The 1975 census and various surveys have been used to estimate the following demographic data (6,19):

TABLE 17 HEALTH INDICATORS: SOMALIA

	SOMALIA	RHU-1983
Infant mortality rate per 1000 live births	170	80
Preschool (1-4) child mortality rate per 1000 children	30	15
Proportionate mortality below 5 % all deaths	40-45%	
Crude birth rate per 1000 people	46	
Crude death rate per 1000 people	21	
Rate of natural increase	2.6	

Total fertility rate children per woman	6.1
Life expectancy at birth years	43

Infant mortality and the child death rate are both extremely high, significantly exceeding low-income country averages and the average for Africa. A regional census study in 1981 in southern Somalia and a 1977 study by Bile showed even higher rates of infant mortality for rural areas (181 and 193 respectively) (15).

Diarrhea, respiratory infections and probably measles are the three top killers of children in Somalia. It is estimated that only 20% of the rural population in Somalia has access to clean drinking water (14). Many cases of diarrhea could be prevented by adequate water supplies and sanitation. In addition to poor water quality, the difficulty in obtaining sufficient quantities of water limits the family supply for basic hygiene, contributing to higher rates of skin diseases and fecal-oral transmission of multiple diseases. The distribution of causes of diarrhea by pathogens has not been determined in rural Somalia. Bottle feeding, increasing in the urban areas and rural towns, is likely becoming a significant contributor to diarrheal disease.

WHO estimates that proper oral rehydration therapy can reduce diarrheal deaths in children by two-thirds. WHO's plan of operation for a diarrheal disease control program estimates infant mortality would decline from 165 to 125 per 1000 live births and that preschool child mortality (ages 1 to 4) would decline from 29 to 16 per 1000 preschool children with interventions in diarrheal disease alone (6).

There are no effective preventive measures for most lower respiratory tract infections except good nutrition. Breastfeeding may prevent some respiratory infections. However, most mortality is prevented by antimicrobial therapy and simple supportive measures which will be available through village health workers and PHCU staff. Deaths from pertussis, diptheria and measles are preventable by immunization. Pertussis is frequently underreported, especially in infants, and is likely an important killer of children under 1 year of age in Somalia and has important long-term pulmonary and nutritional sequelae.

Immunization coverage in the rural areas is very poor. Measles can be expected to attack virtually all children by age

10 in the absence of an effective immunization program. One study in Somalia showed 65% of children had antibodies by age 5. The highest measles attack rates are in the 2 to 24 month age group. Case fatality rates of 2 to 4% are usually cited in Africa although in situations of malnutrition and other concurrent disease rates as high as 25% have been reported. It is estimated that measles kills 4% of all children less than 5 years of age in Africa (1,). Post-measles deaths are often underestimated since many occur 3 to 9 months later via pneumonia, diarrhea or malnutrition. Measles is also responsible for decreasing vitamin A levels and precipitating blinding xeropthalmia.

Measles, pertussis, polio, diptheria and tetanus are all preventable through immunizations that an effective primary health care program could provide with good coverage in the rural areas.

Tuberculosis is an extremely serious problem. In fact, Somalia has one of the most severe tuberculosis problems in the world. Miliary tuberculosis and tuberculous meningitis are likely an important (and usually unrecognized) cause of death in infants and children. A tuberculin survey in northern Somalia reported by A. Dean in 1967 showed an extremely high annual risk of infections of approximately 5% This is higher than the Netherlands a century ago and exceeds rates of 1 to 3% found in most countries considered to have a serious tuberculosis problem. (The U.S. rate is less than 0.1%). Recent data from the refugee camps shows case rates of 300 to 2000 per 100,000 persons compared to 150 to 300 for most of Af[illegible] (and 11 for the United States). The Somali central tuberculosis program has been limited to the urban areas. The primary health care system is the only source of antituberculosis care available to most of the population.

Malaria is hypoendemic in most of Somalia. It causes substantial morbidity and mortality especially in children. (Most cases are due to P. falciparum with A. gambiae as the principal vector.) Clinical symptoms are more severe and frequent in young children among whom the case fatality rate can be as high as 10%. Repeated infections contribute to the widespread anemia in children and women and likely to the incidence of low birth weight infants (due to placental infection). Presumptive therapy of malaria symptoms with chloroquine can reduce morbidity and mortality substantially and can be administered through a PHC system without a lab (tactical variant 1)(2).

Maternal mortality is unmeasured but appears to be very high. Most births occur at home without adequate antenatal care. Post-partum sepsis and birth complications are significant

problems. The prevalence of maternal anemia is high.

In addition to excess premature death, all these ailments cause enormous ill health, disability, growth retardation, and contribute to malnutrition.

Protein-energy-malnutrition (but not kwashiorkor) is a major problem among infants and children under 5 according to several studies and surveys. Poor infant feeding practices, especially failure to supplement breast milk until the second year, are a significant contributor(15). Reports of voluntary reduction in food intake by women in the last trimester of pregnancy to avoid difficulty in delivery need further investigation as a contributor to low birth weight infants.

A substantial reduction in the morbidity and mortality from these health problems could be achieved by the primary health care project if modified and fully implemented.

There is economic importance to reducing these high morbidity and mortality rates in the project regions. Discussions with the Bay Region Agricultural Development Project indicated that their preliminary data suggests insufficient labor as a limitation to increased agricultural production. They have found a much smaller family size than expected and are impressed by the population effects of excess mortality in all age groups. In their interviews in the Bay region, they have encountered women who have lost 6 children. The economic importance of lost work days from ill health and premature death have not been calculated in Somalia but must be substantial.

III.HEALTH SERVICES IN SOMALIA: A GROWING ORIENTATION TO PRIMARY HEALTH CARE

The Five-Year National Health Plan (1980-1985) emphasized the development of primary health care. It represents a major step in the reorientation of health services from a curative approach concentrated in hospitals in urban areas to a primary health care approach with greater allocation to rural health services. The plan recognized that fact that 85-90% of the rural and nomadic people (about 70% of the total Somali population) were not being reached by the health system. Most health facilities before the development of primary health care in several regions did not extend services beyond the main district towns. Most hospitals and clinics are inadequately and irregularly supplied with drugs and other materials.

The Somali Government has approved WHO resolution 30.43 (Health for All by the Year 2000), resolution 30.53 (Expanded

Programme for Immunization- targeting full immunization coverage by 1990) and is participating in the International Water and Sanitation Decade 1980-1990 activities to provide safe drinking water and sanitation for the majority of the population. Within Somalia, primary health care has recently been supported by a Presidential statements. The Party Committee on Projects has listed primary health care as a priority alongside the Arabic language, livestock, agriculture and water. The Ministry of Health has declared that the vertical disease programs should be integrated into primary health care but this has not yet been accomplished. The priority and commitment to primary health care within the Ministry of Health appears to be growing despite a large part of their budget still being committed to hospital based care.

Primary health care is implemented through the Primary Health Care National Office (PHCNO), under the able and dedicated direction of Dr. Kassim Aden Egal. Primary health care projects are currently ongoing in 7 of 16 regions in Somalia and projects are being considered in other regions.

REGIONS-PROJECTS IN PROGRESS	ASSISTING AGENCY
Northwest	WHO/UNICEF
Lower Shibelle	"
Middle Shibelle	"
Sanaag	CAA/Australia
Middle Juba	SwedishChurch Relief
Bay	USAID/MSCI
Toghdeer	"
REGIONS-PROJECTS BEING NEGOTIATED	
Hiran	Italian Govt.
Gedo	Belgian Govt.
Lower Juba	USAID
Mudug	USAID

The private practice of medicine by physicians who have been employed by the MOH for 5 years was approved in May 1983. They must retain their government jobs and only engage in private practice after 2 PM at regulated fees.

Through the Ministry of Health, the GSDR remains committed

to the provision of free medical care and drugs. Article 55 of the constitution stipulates free preventive and curative care to be provided for all. Article 56 formulates the family as the core of the society and obligates the government to provide essential health services for the mother and the child.

The primary health care system presented in the National Health Plan was structured after the model proposed in USAID's Rural Health Delivery project (referred to as the Primary Health Care Project or PHCP) with the 3 tiered referral/supervisory system: village health post (staffed by a CHW and TBA), primary health care unit (PHCU, staffed by a nurse, midwife and sanitarian) and district health center (DHC, staffed by a district medical officer or DMO and a primary health care or PHC team consisting of a nurse, midwife, sanitarian, and lab technician). Details of the organizational structure and job descriptions of PHC personnel in the PHCP can be found in Nancy Lamson's recent report and will not be repeated here(8).

This emerging primary health care system complements a well-developed system of traditional medicine which has been estimated to cover at least 70% of the population. Abby Thomas reported one or two traditional practitioners in every village or nomadic group in her study in northern Somalia(13). Traditional health practitioners include Koranic readers or religious consultants (wadaado), herbalists, cauterizers, bone-healers, skull-openers (trephination), snakebite healers, and traditional birth attendants (ummuliso or TBA). For example, excising the uvula for cough is a frequent practice by TBAs or other practitioners. Many practice only part-time. Traditional health practices and modern health services are often used in sequence or concurrently with the Somalis pragmatically choosing what seems to work best.

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IV. REAL EFFECTIVENESS SO FAR IN IMPLEMENTING PRIMARY HEALTH CARE IN BAY AND TOGHDEER REGIONS AND TRAINING PRIMARY HEALTH CARE MANPOWER FOR OTHER REGIONS

(A). THE BASIC APPROACH OF THE PHCP: DIRECTED AT TRAINING PHCU AND DISTRICT LEVEL PERSONNEL

The USAID project paper in 1979 dictated an approach to primary health care that emphasizes and begins with the training of PHCU and district level public health nurses, midwives and sanitarians who are then expected to train and supervise CHWs and TBAs at the village level. The end system visualized by the USAID project and other primary health care projects in Somalia such as the Northwest PHC project (supported by UNICEF) and the Sanaag project (supported by CAA) do not differ. The direction of implementation (starting with the PHCU then establishing village health workers rather then beginning with the village base before adding the PHCU layer) is the significant difference. There has been some resistance by other agencies to the PHCU emphasis and training of personnel for their projects by the 2 National Training Centers. However, the Northwest PHC project, for example, is planning to staff and upgrade dispensaries which will fulfill a PHCU role within their system. They stress building a demand structure for health at the village level through district training teams before putting energy into the PHCU level. This is based on a philosophy of community participation and a calculation that by creating village level awareness and desire for health and a village-level system which the villagers support, they will have made a permanent contribution to the health of the population no matter what level of support is later given to health by the government.

The USAID project chose instead to first build the supervisory system and first level of referral- the PHCU with its staff of nurse, midwife and sanitarian. The implementation of the system has been significantly delayed by logistical and construction problems. This has delayed the establishment of functioning PHCUs. Lack of supplies and buildings had caused some program graduates to leave their posts. The recent arrival of some drug supplies in the Bay region, progress in PHCU construction, and the reassignment of the MSCI technical advisers to field supervision have all had positive effects on the developing primary health care system in Bay and Toghdeer regions.

(B). MIDWIFERY AND NURSING

Temporary PHCUs have provided some improved access to care in certain locations. Makeshift PHCU's have now been donated by

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villages in 14 locations in Bay and 6 in Toghdeer and partially staffed by graduates from the National Training Centers. Health education, home visits and clinical care have been delivered for the last few months in the temporary PHCUs; prior to this, inadequate or absent supplies were the rule. For these villages and their surrounding satellite villages, medical care is more accessible than in the past when a trip to the district center was necessary. Villagers comment on this and express gratitude for this convenience and increased availability.

Two auxiliary midwives trained for the 16 PHCUs (with nursing backgrounds only) have been lost to the PHC program in the Bay region. There are currently 5 auxiliary midwives assigned to 5 PHCU sites: Audinle, Burdale, Ufurow, Burhabe, and Goofgadood. Visits to 3 of these locations showed the midwives in place , an improvement over the situation encountered 3 months ago on Nancy Lansom's visits(8). Four full midwives have been retrained by the NTC in Baidoa and assigned to the district towns where they had previous MCH experience.

Nurses are currently at 8 PHCU sites in the Bay region and have some drug supplies. Posted schedules show a good deal of time spent on community education and home visits. On our short visits, it was difficult to assess how much staff time is being spent in appropriate preventive activities (e.g. the promotion of proper breastfeeding and weaning practices, personal hygiene, safe water, good nutrition, etc. By staff report, these preventive activities are ongoing. Community education and health promotional activities are identified by staff as factors which distinguish a PHCU from a dispensary. In Burdale, the auxiliary from the local dispensary has been integrated into the functioning of the PHCU. Only 3 nurses appear to have remained at their PHCU posts in Toghdeer.

Although much of the care observed at the PHCUs or reviewed in the clinic registers appears to be basically competent, serious errors are occurring. There is considerable overuse of antibiotics for diarrhea and bronchitis, errors in the treatment of anemia and serious errors in the diagnosis and treatment of tuberculosis. This reflects a poorly developed system of supervision, inadequacies in the curriculum on empiric approaches to diarrheal disease and respiratory infections, and the lack of an adequate plan for a system of antituberculous therapy. Some of the errors in antibiotic use observed (e.g. streptomycin for bronchitis) reflect poor drug list planning since no other injectable antibiotic was available in clinic (see appendix B2).

Immunizations have been provided to a number of villages through the National Training Center class exercises with

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cooperation and vaccines from the EPI program. Many villages have received education on their value and are waiting for the program. The PHCU staff will be able to coordinate their activities with the regional EPI team in community preparation for immunizations and the administration of vaccines.

CHW training is beginning; some TBAs have already been trained. Some CHW training is ongoing at PHCU sites in the Bay region and CHW candidates are awaiting training in 2 of 4 districts in Toghdeer and in all districts in the Bay region. Village health committees have been formed and more formal contracts on support of the CHWs after training are being negotiated. There are deficiencies in the preparation of some PHCU staff for their roles as trainers of village health workers (described below) and the MSCI technical advisers will need to spend much of their time in the field supervising and assisting with the training. No CHWs are now functioning with supplies in either region. Planned CHW training activities in Toghdeer have been delayed since November because of lack of funds for their food and lodging during training.

Some TBAs have been trained in both regions. This is the first TBA training accomplished among current primary health care projects outside the refugee camps in Somalia. The district midwife in Sheikh district in the Toghdeer region has trained 9 TBAs from surrounding villages (within walking distance) and is currently training 6 more. In the Bay region, approximately 30 TBAs have received some training and are working in the villages. They have been provided with TBA kits obtained through UNICEF.

An important problem currently being dealt with is difficulty training the older, experienced TBAs. Difficulties in recruiting these older women for classes has been encountered at several PHCU sites, resulting in young women (often unmarried) without birthing experience being trained as a TBA. It is understandably difficult for a married woman with children to leave her village for any period of time. In addition, an attempt to find literate TBAs contributed to several classes consisting predominantly of young, inexperienced women. Fortunately, this has been supplemented by village level training of some older TBAs.

The Bay region nurse midwife technical advisor, Zandi Ndule, and her Somali counterpart, Habiiba, have been effective in delivering village level training to TBAs and have begun supervising the midwives at the PHCUs with the help of the district midwife. At one PHCU site (Ufurow), the average age of the TBAs was 41 and 55% had significant birthing experience. One TBA candidate in Welmurri reported 100 years of obstetrical

experience (but looked only 80). When asked what she could possibly learn from TBA training, she admitted there was nothing anyone could teach her about delivering a baby but she hoped to learn something about using drugs to treat the sick!

(C). SANITATION AND WATER

Sanitation work is basically preventive and health promotive and should have a significant effect on reducing disease morbidity and mortality. Although population based data are not available, diarrheal disease appears to be the leading cause of infant and child mortality in Somalia. Improved water supply, waste disposal and personal hygiene can reduce episodes of diarrhea and other illnesses.

The curriculum for the sanitarians covers assessing and improving water supply, personal hygiene, waste disposal, health education and basic epidemiological principles and techniques of village assessment.

There is evidence in both the Bay and Topghdeer regions of effective ongoing community health education and mobilization in santitation and water improvement in some villages, despite the fact that very few supplies have as yet arrived.

Bay Region Many villages in all 4 districts have had their sanitation and water needs assessed, have begun latrine construction, and have improved waste disposal. Several hand dug well maintenance projects, war (pond) improvements and tree planting projects have been carried out. In Burdale, a well improvement project organized by Hussein, the PHCU sanitarian, with the cooperation of the village chief and health committee, has committed voluntary labor, drawn plans, received cement and are about to begin gathering sand and rocks- all this despite the current drought. This sanitarian also uses follow-up of cases of diarrhea to teach the community on the causes and prevention of diarrhea. NTC trained sanitarians are on the job in each district town and at 9 PHCU sites.

A rapid rate sand filter using local materials which is capable of reducing bacterial contamination and turbidity in war water has been devised and tested at the Baidoa NTC. It is suitable for both large drums and locally made clay pots. A model demonstration area for training PHCU sanitarians and eventually CHWs has been constructed from local materials with a latrine, a mase fence to keep cattle out of home compounds, a well and a water filter.

Health facilities have been surveyed in all district

hospitals and clinics by the sanitarians; the restaurants and markets in all district towns and several villages have been inspected for possible health hazards, and censuses performed in district towns and several villages which include an assessment of the percentage of houses with latrines. Several outbreaks of dysentery have been investigated.

Lectures on sanitation in the schools have been given by district sanitarians.

The PHCP is trying now to coordinate USAID/Louis Berger International groundwater drilling efforts to assure adequate PHCU water supplies (after hydrologist recommendations). For those PHCU sites where groundwater is not available, they are investigating alternatives for surface water catchment and storage. Many improvements in village water supplies are planned but are still waiting for tools. The LBI project is directed at agriculture but should also be directed to help improve health, especially when drilling equipment is available during the rainy seasone.

Although these sanitation activities have not reached all the villages in the region and many planned activities are waiting promised supplies and transport, there is an impressive amount of enthusiasm for sanitation. The sanitation part of a CHW manual has been written and illustrated. Interest in revising the written curriculum to incorporate the experience gained so far in this region exists. Requests from the faculty for permission to follow up on sanitarian graduates assigned to other regions have been denied in the past but hopefully will be incorporated into the program soon.

Although there are no firm data, the direction of sanitation and water efforts are good and should contribute to improved health. One area which usually has a dysentery outbreak during the dry season has not yet had one. The program is currently trying to grapple with whether sanitation and nursing should be handled by separate CHWs, a plan adopted within Somalia by the NHU and in a modified form by the Northwest PHC project (an unpaid liason on the village health committee- not called a CHW- is trained briefly then used to coordinate projects with the district sanitarian). CHWs holding both nursing and sanitation responsibilities have neglected sanitation for the "doctor-like" activities in many programs including the refugee camps in Somalia.

<u>Toghdeer Region</u> Sanitarians trained at the Burao NTC have been posted at 2 district towns and a third will soon be posted in Buuhoodle. The regional and district sanitarians before their

Burao course had no training in community education and involvement with sanitation projects. At the temporary PHCU sites, the sanitarians have the best record of the 3 disciplines in staying at their post, being present a 5 PHCU sites in 2 districts (little activity has been supported in the 2 border districts due to fighting and travel restrictions). They often perform the work of the public health nurse in addition to their sanitation work (the sanitarian, Dr.K.Thomas, has also trained them in history taking, physical assessment, diagnosis and treatment of common diseases so they are competent to take over when the PH nurse and midwife are not available). The practical and field training of the sanitarians has, however, been limited due to transportation and supply difficulties, the lack of teaching aids and the lack of existing field projects. Burao trained sanitarians assigned to the Northwest project have been found good in theory but lacking in practical field experience. Some preferred involvement in immunization campaigns to sanitation projects.

Village assessments have been done in 2 district towns and approximately 15% of the villages in these 2 districts. Latrine building has started in several locations. A well has been dug by the community in Saaksade under the direction of the PHCU sanitarian and Dr. K. Thomas.

(D).SUPERVISORY SYSTEM

In this young system only recently supplied with drugs, there is little evidence yet of an organized approach to the supervision of the PHCU staff by the PHCCs, the DMOs or the District primary health care teams. All three need basic education on supervisory and management techniques and a functional vehicle at each district. The technical advisers have been providing supervision as time permits. There is no written manual on supervision or forms to keep track of rates of drug use other than the clinic registry. The basic confusion within the project structure as to the role of the NTC staff and the regional and district primary health care staff in health care delivery and its supervision in these regions is reflected in confusion as to who the PHCU staff look to for supervision.

(E). THE CURRENT HEALTH INFORMATION SYSTEM

There is almost no adequate and valid epidemiolgical information available to the Ministry of Health or the project staff. The health information system needs substantial improvement. The surveillance system, using morbidity reporting from the PHCUs, CHWs and TBAs, should be simplified and supplemented by simple surveys to provide adequate information

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for health planning and monitoring the achievements of the PHCP. (See discussion in appendix B1.)

(F). RECENT CHANGES IN THE ORIENTATION OF THE PROJECT

The project is clearly in a transition phase and has corrected some serious deficits that crippled the project. A Chief of Party who became progressively unable to communicate with the Ministry of Health and other agencies has been replaced after an interim COP who reestablished working relationships; the new Chief of Party has shown excellent diplomatic and managerial skills during his first month. A new and energetic USAID health officer represents a definite improvement over his predecessor. The strict, inflexible adherence to the project paper with USAID insistence that the expatriate staff be in the classroom every day has been changed in the last few months to allow the technical advisers to spend most of their time in the field supervising graduates at the PHCU's and teaching them to instruct and supervise CHWs and TBAs. The project remains seriously understaffed and stymied by inadeqaute management and logistics support. These problems and the deficiencies in the preparation of PHCU staff and in medical direction of the project described below must be corrected to allow the project to succeed.

X. LIMITATIONS TO THE POTENTIAL EFFECTIVENESS OF THE EXISTING PHCP FOR DELIVERING PRIMARY HEALTH CARE

(A). CREATING A SUSTAINABLE PRIMARY HEALTH CARE SYSTEM

Section A of this report estimates the recurrent costs of the existing and a modified PHCP in Bay and Toghdeer regions and illustrates ways the GSDR will be able to assume these costs over time. The ability of the government to provide the foreign exchange and in-country revenues for services and supplies is only one aspect of the sustainability of a primary health care system. A firm base of community support and proper orientation, training and supervision of village health workers are as important. Through community education and mobilization, demand for primary health care can sustain some of the benefits of primary health care even in economically difficult times. If the Ministry of Health were unable temporarily to supply free drugs or non-medical supplies, village health workers can still provide most preventive and health promotional care and can still diagnose illness and assist villagers in finding the appropriate treatments. Workers paid by and responsible to the community create a durable, residual system which can be sustained even in hard times. If the PHCP were to end now, with only the PHCU level paritally established, it is unlikely that anything of benefit would be sustained unless the village health workers are also

trained.

(B). SOCIOECONOMIC INCOMPATIBILITIES OF SOME PHCU STAFF WITH THEIR POSTS

Once the constraints of deficient supplies and PHCU buildings are corrected, what staff remain will obviously be more effective and certain graduates may be more easily persuaded to stay in the PHCU village. Serious problems remain, however, on the compatibility of many graduates with their health assignments. Many, especially the young unmarried women, are resistant to living in a village after their years in Mogadishu or Hargeisa; isolation, economic difficulties and jealousy by villagers are all listed as reasons for post abandonment although an adequate study during the project design or subsequently when post abandonment has become a problem has not been done. These incompatibilities will remain even when the PHCU construction is completed and a regular supply of drugs and equipment are available. Threats of, or actual, imprisonment have been used to keep PHCU staff at their post.

(C). DEFICIENCIES IN PREPARATION OF PHCU STAFF FOR TEACHING AND SUPERVISION

Will those who remain at their posts be able to fulfill the clinical, preventive, promotional and training responsibilities planned for their position? Some are clearly talented and committed and began community education and health projects even before regular supplies were available. As mentioned above, some district level and PHCU staff have trained TBAs and CHWs.

It is important to realize that the graduates of the National Training Center must be qualified in 3 ways which are interrelated but have some independence:

(1) the PH nurse and midwife must be able to see patients in referral from the CHW's and TBA's, provide an augmented level of care for more diseases and sicker people (using a larger pharmacopia) and correctly refer patients beyond their expertise after sta bilization to the district outpatient clinic or hospital.

(2) the sanitarian, PH nurse and midwife must be able to supervise CHW's and TBA's in the surrounding villages

(3) the 3 should be able to train CHW's and TBA's. (This can be further subdivided into inital training, retraining or refresher courses and augmentation or expanded skills.)

This third task is part of the basic multiplicative approach of the project paper. Capital is invested to train trainers who will then, locally and at less expense, train the village health workers in their catchment area.

This plan was not based on an analysis of the availability and quality of health manpower in Somalia- a basic flaw in the project design and the primary health care plans of the Ministry of Health which has retarded the 'training of trainers' and the implementation of village-level PHC.

First, quantitatively the Ministry of Health has been unable to supply the required numbers of midwives, sanitarians and nurses for the PHC training. This has resulted in nurses being newly trained as sanitarians or auxiliary midwives and in the occasional assignment of nurses to the training course who have been found incompetent in other positions. In addition, many students have been chosen quickly and at the last moment or assigned late into the course.

Second, the general quality of the nursing and midwifery preparation is poor due to inadequacies in their basic nursing training in Mogadishu and Hargeisa. This is especially true since the change from a 3 to a 2 year nursing curriculum. The effectiveness of rural primary health care would be seriously compromised by assigning clinically incompetent personnel to the supervisory and referral position at PHCU's. Much of the nursing and midwifery courses has been redirected to retraining in the clinical basics. It is understandably difficult or impossible to retrain clinically, reorient from a curative to a primary health care approach, teach supervisory techniques, and teach educational methods for training CHW's and TBA's in 4 to 6 months. The poor didactic approaches already firmly fixed by students' own prior training make this task even more difficult. Only in the sanitarian/epidemiologist curriculum has a primarily preventive health care approach been maintained.

There has been a serious problem with guaranteeing standards of performance in all 3 areas- clinical medicine, supervision and training- and only a minority of the nurses and (auxiliary) midwives are likely competent in all 3. Yet most have been assigned to PHCU posts in the Bay or Toghdeer region or to the Sanaag or Northwest PHC projects. The evaluations by the faculty, both MSCI technical advisers and the Somali tutors, appear to be taken only as advisory by the MOH and the students not judged to be competent or to have finished mastering the essentials of the curriculum have been assigned to PHCU sites or other PHC projects despite these evaluation. Training center principals and regional PHCC's have at times intervened to prevent dismissal of

substandard students because they feel it inappropriate to fail a student at this stage after passing secondary and nursing school.High truancy and program dismissal has reduced the number currently working in PHC projects. Clinical competency and the more complex ability to effectively supervise care given by village health workers must be assured by the development of an effective supervisory system- a task that has been started in the last few months in this project.

(D)IMPLICATIONS FOR ACHIEVING PROJECT GOALS

Although the project plan requires it and some curriculum time was spent on teaching the students CHW and TBA training methods, the graduates have had no practical, supervised experience training village health workers. It is not reasonable to expect CHW and TBA training to proceed from these PHCU and district staff without further input to assure basic competency and proper training of the village level health workers. The experience of the Northwest PHC project with graduates from the Burao NTC is instructive. They find it necessary to apprentice graduates with experienced trainers before they are considered competent to teach. In Borama, Save the Children (UK) expatriates are still teaching most of the CHW course because their district level Burao graduates cannot yet give adequate presentations with consistently correct dosing information. The district PHC staff attend their lectures, take notes and are preparing to teach the next course. The exception are the lectures on sanitation.

In the end, the CHWs and TBAs will be providing basic primary health care to much of the rural population. If the delivered services are to be substantive and positive (rather than detrimental to health), their minimal training must be optimized and, at least, accurate and well-directed. In the best circumstances of training, supervision and supply, the CHW and TBA can only provide a limited but important variety of services. With poor training or supervision, the incorrect use of medications or injections can lead to chloroquine and other serious drug toxicities, under and over-treatment of disease, hepatitis from inappropriate injections, dangerous hypernatremia from improperly mixed oral rehydration solutions, etc. To be and remain effective, village health workers must work in the context of a health delivery system which includes effective support and supervision, repeated upgrading of skills and a referral system which can provide some feedback on their patients.

VI. RECOMMENDATIONS FOR COMPLETING PHASE 1: BAY AND TOGHDEER REGIONS

A. RECOMMENDATIONS FOR AN IMPROVED APPROACH

1. SCOPE

We feel the project has been limited in its productivity not only by its logistical and managerial difficulties but by serious understaffing and limited focus. The project paper is conceptually flawed by an exclusive focus on the activities of the National Training Centers and the assumption that, having retrained and oriented district and PHCU staff to primary health care, that these staff and the RPHCC would train and supervise village health workers. This multiplicative assumption provided for only limited USAID/MSCI input into the actual delivery of primary health care in the two regions and the bulk of the energy of the technical advisers has been consumed by the NTC activities.

In fact, there are three major areas which need support from USAID in order to adequately promote primary health care in these 2 regions and in Somalia in general, as envisioned in the project paper:

(1) To develop and supervise a system of primary health care delivery in Bay and Toghdeer regions in partnership with the Ministry of Health.

(2) To strengthen the Primary Health Care National Office (PHCNO) in the Ministry of Health.

(3) To train PHCU and district level nurses, midwives and sanitarians at the National Training Centers for their functions in the primary health care system.

We feel that USAID/MSCI should continue its input with modifications into the National Training Center with increasing emphasis on turning its function over to the Ministry of Health and coordination with other donors to make it a true national center.

Much more must be done to assure the development of an adequate primary health care system in Bay and Toghdeer regions- it has not be handled adequately as an offshoot of National Training Center activities. Although a primary health care system is beginning to develop at the PHCU level, to add a strong base

of village health workers with adequate training and an enduring system of supervision requires strengthening the PHCC's office, both by an expatriate counterpart, a Somali regional midwifery/TBA coordinator and an administrative assistant. To strengthen the PHCNO, we recommend several technical advisers. We feel that these advisers, who are not currently provided in the contract and who will address activities separate from the National Training Centers, should be provided within 6 months as a matter of urgency through a grant to a non-profit organization with project funds.

The fact that the approach to primary health care in the USAID project paper has been incorporated into the National Health Plan places an extra responsibility on USAID to reassess its project in all aspects and move rapdily to the required modifications. We are recommending a different direction of implementation of primary health care in Lower Juba and Mugdug- an approach that starts by developing a village base and training village health workers before adding the intermediate layer of the PHCU. As mentioned earlier, this is the direction of implementation being used in the Northwest and Sanaag projects with success. Effectively this admits that the direction of implementation of the current PHCP is not optimal although the end system (village health workers, PHCU, DHC) will be similar. We feel this modification of USAID's approach in the new regions is important and would be positively received.

2. CONTENT

(A). RECOMMENDATIONS TO IMPROVE HEALTH CARE DELIVERY IN BAY AND TOGHDEER

We feel that the project has proceeded to a stage that the promised PHCUs should be built where good water supplies can be assured. Supervised training of CHWs and TBAs should now be the focus of activities in the regions as well as the development of an adequate supervisory and logistics system. The cost per PHCU not yet under contract should be reduced by construction from local materials.

To default on the completion of the PHCUs would be another major dissappointment to communities already dismayed by the years of broken promises by the project. Although extending primary health care to the village level will require more energy and supervision than originally imagined during the project design, we feel USAID is obligated to finish implementation of village level primary health care in Bay and Toghdeer.

(1). CERTIFYING THE COMPETENCY OF EXISTING PHCU STAFF

The PHCU staff who were assigned to posts in Bay and Toghdeer despite inadequate evaluations are known to the technical advisers and tutors. They should be recalled for a competency examination by an external committee (see below for certification requirements for graduation from the NTC). If they are not competent for their posts, a decision should be made whether to dismiss them from the PHCP or whether to re-enroll them in the next NTC course in their discipline.

(2.) CHW AND TBA TRAINING

(a). Need for careful supervision to guarantee adequate training of CHWs and TBAs.

Desire to complete the project paper's plan should not allow CHW and TBA training to proceed without guarantees of the basic competency of that training. This means careful supervision of the primary health care practice of the PHCU staff now in place to assure that their own skills are still adequate then careful monitoring of the adequacy and accuracy of their teaching of village health workers. The project personnel should be cognizant of the experience of the Northwest PHC project with NTC graduates. Most required apprenticeship with experienced trainers and sometimes had to attend lectures for CHWs before they were themselves adequately competent to teach. Some PHCU staff may never be adequate teachers and this task may in some areas have

to be left to district or regional staff. Whether CHW training should occur at the district or the PHCU in Bay and Toghdeer will vary and should depend on the demonstrated competence of the PHCU staff and efficiency of supervision. Training at one district location allows less expensive and closer supervision, the ability to concentrate on improved training by a select team, and the ability to train more CHWs at one time.

Supervision during training is also necessary to promote the correct priorities of preventive and health promotional activities.

(b.)Learning from the experience of other primary health care projects in Somalia.

Too much of this projects' activities are being done in isolation from the experiences of other PHC projects in Somalia and without the benefit of the wealth of literature on the experience in PHC in other countries. The references available to the staff are limited to their personal libraries. Curricula are being written almost from scratch. No visits have been arranged for the staff to the Northwest and Sanaag projects which are much further along in the training of CHWs. The staged approach to CHW training in the Northwest PHC project, with two 3 week training periods separated by 4 to 6 months supervised village work, has brought CHWs back for their second training course full of questions and eager for more skills. The curriculum is also flexible in order to address the felt needs and common health problems of the villages. The experience of these programs as well as the RHU should be incorporated into planning for CHW training in Bay and Toghdeer.

(c).Exploring the possible uses of TBAs and defining the 'traditional' birth attendant

Many of the TBAs are called to see sick children and should be trained and equipped to treat pediatric illness. The possibility of training some TBAs to perform all the nursing functions of the CHW should be explored in order to conserve community resources by minimizing the number of village health workers.

The phrase 'traditional birth attendant' is currently being stretched to include unmarried women with no birthing experience who are interested in becoming birth attendants. Their acceptability to the community and the possibility of pairing them with experienced TBAs who have received some training should

be explored and their continued training as TBAs reassessed. The MOH lists prior birthing experience as a requirement for a TBA. There should be no requirement for literacy for TBA training. Lists of pregnant women and records of prophylaxis can be done by a scribe (a child or other literate villager).

(d). How TBAs are trained will affect who they are and the extent of coverage of mother and children with modern preventive health care.

More careful attention should be paid to the implications of the training periods and locations for TBAs. Three to six week courses in a village other than her home village will eliminate many of the TBAs with family responsibilities and thereby extend the system of improved antenatal, intrapartum, postpartum and pediatric care to fewer mothers and their infants. The proposed system in Toghdeer of sixteen 3 hour sessions with transportation to and from the village should allow TBAs with families to participate in training. The effects of different training arrangements on the TBAs chosen for training and the resulting coverage of mothers and infants in the villages should be actively assessed by survey. Training approaches can then be appropriately modified.

(e). Proper timing of supplies with the completion of training

With the project's history of delayed fulfillment of promised supplies, it is also essential that the communities not be further disappointed by failure to promptly and consistently provide supplies for the health posts. Repeated frustrations jeopardize continued community support for the CHW and TBA as well as their opinion of the United States. Training should not begin until the graduates can be supplied with health post equipment and drugs on graduation.

Although the tendency at this stage in a chronically stymied project is to order supplies quickly, more attention should be placed on the compatibility of the cost of the health post supplies with eventual number of CHWs needed to provide optimal village coverage. The provision of an expensive cache of equipment to initial groups that cannot be sustained for later CHW graduates will create discord or will inappropriately be used to limit the number of CHWs. The current health post equipment list, although intended to serve both a CHW and TBA, is expensive at $300 for permanent equipment. In contrast, the Northwest PHC project supplies their CHW with equipment which can be carried in a shoulder bag and totals approximately $137 by the same U.S.

prices.If CHWs are to be able to serve their village plus surrounding small subvillages, their equipment must be limited in order to be portable. The equipment list also implies a plan for TBAs to use lidocaine and sutures for episiotomies which is likely out of place for village level deliveries, may be diverted to circumcision operations, and raises the hazard of infection from inadequately sterilized needles and syringes.

(f). Assuring village support of CHWs and TBAs.

Great care should be taken in how the initial group of CHWs are referred to. Any connotation of "official" CHWs may lead to expectations of government compensation. In Baidoa, some villages had gotten the impression that the government will support these workers. The sources of this misperception appear to be diverse: the last major health project in the area, the smallpox eradication campaign, paid both village health committee members and community health workers; paid government CHWs exist within the malaria program; and all previous contact with the MOH has been with government salaried workers. There are strong Somali traditions of self- help projects sponsored by villages and towns with volunteer labor and materials but this does not usually extend to regular material or salary support of individuals (3).In addition, there appear to be sources of misinformation within the health system. One DMO and midwife stated that they had told CHWs and TBAs that they would have salaried positions in order to motivate them to continue in the face of no supplies; they were embarrassed to do otherwise and still expect effort. In addition, the emphasis on building within the project makes it appear as a gift from the outside rather then a community supported activity.

These misperceptions are not universal and the stated willingness of villagers to support CHWs and TBAs during training and afterwards was impressive in all locations visited. The arrival of medical supplies at the temporary PHCU locations within the last two months and the construction work on several PHCUs has had a positive effect on the morale of program graduates (PHCU staff) and the opinion of the project in the community.

(g).Keeping health delivery goals in mind when planning for numbers of CHWs and TBAs.

The numbers of CHWs and TBAs trained by the program should be determined by village need for these health workers, not by a fixed quota, by the expense of health post equipment or the cost of food during training. This is the most essential level of rural primary health care delivery and must not be shortchanged.

Initial training expenses should be regarded as capital costs. Too few village workers will limit access and coverage, will increase the amount of travel between villages and promote the image of a health system worker rather than a village health worker.

Whether a village needs its own CHW and trained TBA will depend as much on geography as population. A small remote village or group of nomads will not be served by primary health care if this care cannot reach them. This requires a flexible and gradual approach to training and the inability to predict now exactly how many trained CHWs and TBAs will be required by the system when complete.

(3.) IMPROVED SUPERVISION OF PRIMARY HEALTH CARE DELIVERY

A functioning system of supervision of the PHCU staff by the Primary Health Care Coordinator(PHCC), the District PHC team and the District Medical Officer (DMO) with the help of the MSCI technical advisors, is only now being established and should be actively assisted by devising written systems which are oriented toward maximization of health care delivery and preventive and health promotional activities. PHCU staff have learned too little supervision and management lessions in their brief NTC training. They need practical instruction in a functioning system. This system of supervision should be tied to the health information system and the monitoring of drug use as well as the restocking of drugs and surgical supplies.

To do this effectively at this stage, we feel the following are necessary:

(a) an expatriate counterpart for the RPHCC whose main focus will be on the development of an effective supervisory and management system and the assurance of quality primary health care in the regions.

(b) commitment by the MOH to assign longterm physicians to the PHCC role who have an interest in and capacity for supervising a PHC system.

(c) a female regional midwifery/TBA supervisor added to the PHC coordinators office who has enough freedom from district MCH responsibilities to participate fully in supervision and continuing development of village maternal and infant health based on traditional birth attendants and PHCU midwifery staff.

The PHCC would have responsibility for supervision of the nurses, sanitarians and lab technicians while the regional midwifery/TBA supervisor would address only one discipline.

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(d) the development of a written plan for supervision which can be used as teaching material in the NTC courses for district midwives, nurses and sanitarians as well as in workshops for the DMOs, none of whom have been properly oriented to primary health care and do not yet know how to do other than strictly medical supervision of health care. This manual and further teaching of management at the NTCs should make use of the excellent material on management which already exists and is applicable to primary health care (e.g. the WHO publications on teaching management in the EPI and CDD programs).

(e) strengthening the teaching of supervision in the NTC with emphasis on practical exercises and field experience. This will also serve to strengthen the health information system. It is likely necessary to teach separate workshops on supervision and management which many graduates of the NTC will need to attend.

(f) careful separation (by written job description and through their workshops) of the hospital responsibilities and PHC responsibilities of the DMO. A team leader for the district PHC team of 3 should be designated and vehicle responsiblity should rest with that team leader. The DMO should not use the PHC vehicle for non-PHC activities and should be provided with another vehicle for his hospital functions if this is deemed necessary (not from PHC funds). Support for this arrangement should be sought from the Mayors and District Commissioners.

(g) Supervision should be substantial in its educational content and will provide a continuing upgrading and review of key skills in primary health care. This will be particularly important for the TBAs, many of whom will have received shorter training.

(h) Costs of supervision were calculated on the following scheme: The Regional PHCC and regional midwifery coordinator makes a supervisory visit weekly to a district and, within this district (and usually with members of the district team) to 2 PHCU sites and several villages. This will provide every other month visits to each PHCU. During the other 3 weeks, the district team could visit the other 2 PHCUs and several villages in each PHCU catchment area (concentrating on more distant villages where PHCU supervision of CHWs and TBAs is more difficult). This will provide at least monthly supervisory visits to the PHCUs. During the quarterly drug resupply, the truck and central pharmacist will pick up the RPHCC and deliver supplies to each PHCU and district health center over several days when this is feasible logistically. This should be combined with supervision of end use of drugs and on-site collation of health information. The CHW and PHCU drug ledgers should indicate date of receipt, quantity

received, a cumulative total of each drug and non-medical commodity as well as the date the date on which they run out of any commodity as a means to adjusting allocations and monitoring the appropriateness of drug use. The village health committees should be present at supply deliveries and participate in supervision of proper receipt and dispensing of supplies.

It appears that much of the supervision of CHWs and TBAs will be by their visits to the PHCU for resupply as well as PHCU staff visits to the village (limited if there is no special transport other than during district team visits).

The system should be prepared to be flexible about the provision of some transport to PHCU staff. Although the women will probably not ride a bicycle or motorbike, these should be considered for the male staff in certain remote locations where cars or trucks are infrequent.

(4). MORE FLEXIBILITY IN RECRUITMENT OF STAFF FOR THE PHCUS

Probably the most difficult problem of the project is the difficulty finding appropriately trained personnel to staff the PHCUs and remain actively on the job. The health manpower problems of Somalia and the worldwide difficulty of convincing health professionals to work in rural locations cannot be solved by orders or imprisonment and Somalia cannot afford the recurrent cost of training replacements for truant PHCU staff.

The following are recommendations for alleviating the problem in Bay and Togndeer. They point to a different approach to PHCU development in Phase II of the project (in Lower Juba and Mugdug).

a). Insistence on matching staff to PHCU villages where they have family.

Matching staff to PHCUs on a regional or even district basis does not appear to be sufficient for enduring staffing in remote locations. Finding a trained person with PHCU village family may not be immediately possible. In some locations, this may require long term planning-- community identification of an intermediate school graduate from the village who is sent through nurseirg school with twice yearly rprovision for substantial visits to the village and involvement with the PHC system there. Or a CHW or auxiliary could be trained then upgraded to fill the PHCU role.

(b) Acceptance of upgraded, talented CHWs and retrained auxiliaries for some PHCU locations

(c) Acceptance of the use of upgraded TBAs rather than

midwives in some PHCU villages.

(b) and (c) will require considerable flexibility in training and may require an additional, modified course at the NTC for CHWs, auxiliaries and dressors. Using particularly talented CHWs in a clinic capacity has been done with success within the RHU and is being considered in the Northwest PHC project. In the long run, this method of staffing would be significantly cheaper for Somalia both by reducing expensive turnover and by eliminating the cost of nursing training in Mogadishu or Hargeisa.

(d) Acceptance of combination of duties in locations where it is hard to find 3 people with village family

With further training, the sanitarian and nurse position can sometimes be combined.

(e) Adapt to seasonal fluctuations

Some locations cannot support the energy of 3 health personnel for 12 months of the year. In remote Shidkuus, Dinsoor district, Bay region, there are only 300 or so people in the PHCU village except for a 3 month period when the population swells to about 12,000 with the influx of nomads. A CHW can handle the health problems most of the year and additional staff should man the PHCU for an intensive period of health education, immunization and curative activities when the population rises. The nurse posted there is dedicated but its hard to predict how long he can hold out.

(5) Incentives for service in the rural PHC system.

(a) Monetary

To show its commitment to rural primary health care delivery, the Ministry of Health should provide a basic salary raise for PHCU staff which will make these positions more attractive and economically feasible.

(b) Non-monetary

Enthusiasm for rural primary health care should be promoted by uniforms, pins, periodic ceremonies and celebrations. Training itself is an important incentive. Periodic workshops and seminars should be an ongoing part of the system. CHW and TBA radio programs and the provision of small transistor radios would strengthen the program. Noel Brown's experience with promoting health volunteers should be useful in this regard.

(6). IMPROVED MEDICAL DIRECTION OF THE PROJECT

(a). Definition of the scope of CHW, TBA and PHCU activities should be established before continuing with training.

A careful definition of health problems to be dealt with by the CHW and TBA, the PHCU and the district health center must be established in order to define a rational curricula and drug and equipment lists. We have not been able to find a list of what health problems the CHW or TBA should handle, what should be referred to the PHCU and what the PHCU should be capable of handling. For instance, if a child with malaria is unable to take the oral chloroquine offered by the CHW, should he be referred to the PHCU? If so, injectable chloroquine should be included on the project's PHCU drug list. If a child is seriously ill with a pneumonia and requires parenteral medication and close observation during initial therapy, can he be cared for overnight at the nearby PHCU or must he still be transported all the way to the district hospital? No provisions for overnight care appear to have been made in the PHCU plans. These decisions must be carefully reviewed now as the buildings are being completed.

(b). Providing for consistent medical direction of the project.

The PHCP is lacking in medical coordination of the two regions and National Training Centers and has provided inadequate consistent, cost-conscious expertise necessary for the creation of optimal drug and equipment lists and effective empiric approaches to common diseases taught in the NTC curricula. No delineated plan appears to exist for what problems the CHW, TBA and PHCU should be equipped to handle which is reflected throughout the nursing curricula and manuals. There is no adequate system for the treatment of certain highly endemic and serious illnesses such as tuberculosis. Adequate health information on which to base the empiric treatment of disease and health planning is lacking. The MOH CHW training manual (not yet in active use) contains serious mistakes and has not been adequately reviewed by project staff. The ORS formula is incorrect and the chloroquine dosing for children is incomplete.

The PHCP is alone among primary health care projects in Somalia in not having a consistent medical adviser.

We suggest immediately correcting these deficits by designating as medical coordinator one on the expatriate counterparts for the regional PHCCs (this person should have

medical expertise as well as management and supervisory skills). (If both PHCC counterparts are medical, one would be assistant medical coordinator.)

Specific expertise and assistance on the integration of vertical programs into primary health care and the development of adequate health information would be provided to the PHCP and other PHC projects by the central medical advisers suggested below for the PHCNO; assistance in training health workers by the training expert (suggested below) and Cabdi Guri (training specialist in the PHCNO).

The overall project is understaffed and lacking in adequate expertise. USAID's efforts in primary health care need an infusion of new energy and more expertise for 1 to 2 years to assure that a quality contribution is made.

(c). Specific suggestions to reduce drug overuse and misuse

See appendix B2.

(d). Recommendations for an appropriate formulary in keeping with national practice

Problems with some of the specific drug selections on the current PHCP drug purchase are dealt with in appendix B2.

The project should be using a drug list which is in line with national practice, anticipating turnover of the project and the need for uniformity in drug procurement (with limited regional variation due to varied medical conditions). A simplified national formulary limited to essential drugs would provide substantial savings for Somalia (9).

Although the Ministry of Health established a committee in 1982 which wrote drug lists for the district health center, the PHCU and the health post, no primary health care project currently uses that list (including this project) and there is no strong advocate insisting on the list in the PHCNO. In fact, Dr. Kassim has shown flexibility and interest in feedback on the list.

Currently the following regions with primary health care projects are using basically the same lists for the PHCU (dispensary) and the CHW: Northwest, Sanaag, Lower Shibelle and Middle Shibelle. The list is derived from the RHU formulary and incorporates the solid experience of the RHU in primary health care in Somalia. The RHU drug numbering system has also been adopted and their uniform drug labels have been ordered.

We feel that the PHCP should immediately correct the deficits in its drug supplies and model future orders after these drug lists, paving the way for national consensus on essential drugs at the PHCU and the health post (see appendix B3 comparing the MOH, MSCI and NW drug lists). In addition, the numbering system and RHU labels should be adopted. We also feel that as the logistics center is being developed to handle drugs, that a Somali pharmacist (or storekeeper or nurse with pharmacist potential) and assistant pharmacist be apprenticed to the RHU pharmacy to learn their system, including end-use monitoring, appropriate backordering and calculation (and revision) of allocation figures. There also appears to be a good possibility that assistance from the RHU expatriate pharmacist adviser could be negotiated with RHU during this coming year.

A WHO/UNICEF Essential Drugs Program will be implemented in Somalia from 1984 to 1989. The objectives include the formulation of a comprehensive national drug policy for the country; to develop and organize activities in drug management, local formulations, distributions, logistical support and quality assurance; and to assist in the provision of supplies of essential drugs until national manufaacturing capability is developed.

The PHCP should negotiate with UNICEF for a mutually acceptable arrangement that would allow this project to relinquish drug provision, perhaps in exchange for upgrading the project logistics center to a national center for drug warehousing and transport.

(7) <u>RECOMMENDATIONS FOR AN IMPROVED HEALTH INFORMATION SYSTEM</u> Recommendations for a simplified surveillance system supplemented by surveys; in-country training of Somali project staff (especially the PHCC) in epidemiology; and the provision of an epidemiologist for the PHCNO are discussed in APPENDIX B1.

(8) <u>RECOMMENDATIONS TO IMPROVE THE AVAILABILITY OF CLEAN WATER</u>

USAID should provide technical assistance or corrdinate with other agencies to provide assistance for water development in the villages, especially at the PHCU and health post sites. Any water development should make use of appropriate, sustainable technology. Water improvement activities have already been discussed with UNICEF in Toghdeer and with the USAID/LBI project in the Bay region. Given the pivotal importance of adequate supplies of clean water for health, this should receive serious attention.

(9) Reassessment of the value of participant training in the U.S. for PHCP staff.

The effects of sending Somali project staff to the U.S. for a year of further training should be carefully assessed. How relevant is their training? How many return and stay involved with primary health care in Somalia? The costs of this program should be compared with estimated costs of providing in-country training courses for project staff in epidemiology, communicable disease control, management, nutrition, etc. These would reach more staff and could be better tailored to the needs of primary health care in Somalia.

(B) RECOMMENDATIONS TO STRENGTHEN THE PRIMARY HEALTH CARE NATIONAL OFFICE

(1) TECHNICAL ADVISERS

Although the Chief of Party provides somewhat of an administrative counterpart for Dr. Kassim, the project has promised but made little contribution to the strengthening of the central PHC office. Central PHC needs assistance in management, the difficult task of integrating vertical programs into primary health care, in obtaining, analyzing and using appropriate health information, and assuring the adequacy of training activities within the Ministry.

We suggest that the USAID provide the following staff to the PHCNO:

(1) A training expert who can supervise the training activities at the National Training Centers in cooperation with Cabdi Guri in central PHC, participate in curriculum revisions, and monitor the capabilities of the PHCU staff and village health workers trained by the PHC programs. TBA training in particular is in an early stage in primary health care in Somalia and will benefit by comparisons of methods of selection, deployment and supervision as different approaches are tried (as they have been) in the various regions. Most time would be spent in the field.

(2) A medical adviser to act as a senior medical advisor for Dr. Kassim, to assist central PHC in health planning and the integration of vertical programs into primary health care and to devise and monitor an appropriate system for treating tuberculosis within PHC (all regions).

(3) An epidemiologist with medical training to develop the

peripheral and central health information system within primary health care.

Both positions (2) and (3) have been requested by the Ministry of Health. Personnel should be approved by Dr. Kassim since they will work directly with him and his staff. Although positions (2) and (3) would function as advisers to primary health care at the central office and would work with all regions, they could also serve as a source of medical advice to the MSCI project. It would be important for their effective roles in the central PHC office that they be regarded as working directly with the PHC office and all regions rather than the PHCP alone.

Discussion with UNICEF indicate their support for long-term advisors in the PHCNO. They are limited to the provision of short term consultants and probably could not provide joint salary support. Salary contributions from other agencies might be possible.

(2).MORE AUTONOMY FOR PHC WITHIN THE MINISTRY OF HEALTH

The PHCNO should be assisted in the devlopment of detailed job descriptions with PHC and requirements for assignment to PHC. There should be guarantees that trained staff will not be transferred out of the PHC system without approval and that personnel returning from participatory training through the project be returned to the PHC system.

(C). IMPROVEMENT OF THE NATIONAL TRAINING CENTERS

(1)IMPROVING THE FUNCTIONING OF THE NATIONAL TRAINING CENTERS BY STRENGTHENING THE BASIC TRAINING OF NURSES, MIDWIVES AND SANITARIANS

Major improvements in the nursing curricula and quality of education at the Hargeisa and Mogadishu nursing schools and the Health Personnel Training Institute are necessary to avoid the costly inefficiency of retraining personnel. Adequate initial training would allow the National Training Centers to function as originally conceived: to reorient to primary health care and instruct in the training and supervision of village health workers. The efforts of other donor agencies and individuals to improve the basic training of nurses, midwives and sanitarians should be supported and supplemented if necessary.

(2)TRANSFORMING THE NTCs INTO TRUE NATIONAL CENTERS

The National Training Centers should become true national projects rather than an MSCI/USAID project and the delivery of rural health care in the Bay and Toghdeer regions should be dealt with as a separate task.

Curricula, manuals, field training and the faculty of the National Training Centers should be the joint responsibility of the MOH, MSCI/USAID, UNICEF, WHO, CAA and other donors agencies who become involved in PHC in Somalia. UNICEF might be willing to provide educational materials. Other donor agencies should be approached for the provision of qualified technical advisers to counterpart with the Somali tutors as these positions open with living quarters and logistics supplied by MSCI.

A major step in making the NTCs true national centers has already been taken by the decision that the bulk of instruction should now be in Somali by the Somali tutors. This should be improved by expediting the revision of manuals and curricula to reflect the Somali experience and, once revised, by expediting translation into Somali. The CHW and TBA manuals should also be translated after revision.

(3) ESTABLISHING A FIRM ACADEMIC CALENDAR AND MORE DELIBERATE STUDENT SELECTION

An academic calendar for both both centers should be established around which other activities can be scheduled. A deadline for application and assignment of students could then be set and requirements for student approval delineated. The RPHCC in the student's region should approve the student and there should be written admission requirements enforced by pretesting.

(4) IMPROVED MANUALS AND CURRICULUM

Curriculum and manual revisions should be complete before new classes are accepted at the NTC. Instruction on the training and supervision of CHWs and TBAs should be incorporated into every lesson and each discussion of health problems and their prevention. The current nursing and midwifery manuals and curricula are weighted too heavily toward clinical expertise. A correct clinical approach to problems can still be included but in the context of the functioning of village based primary health care delivery. They should present clear, medically sound and cost-effective empiric approaches to common diseases. A presentation of the basic epidemiology of disease in Somalia, the comparative benefit of preventive versus curative medicine, and the resulting priorities for health promotion should be clearly conveyed early in the course.

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(a). Instruction and reference material in the Somali language

Instruction in Somali, a major improvement, has already been instituted at the NTCs with the decision that the major teaching responsibility should now fall to the Somali tutors. This should expand the time for learning in each student's day and allow the requirement for English to be dropped for NTC attendance.

(b). Manuals The time is overdue for major revisions of the midwifery, nursing and sanitarian manuals which form the basis of some of the teaching in the NTCs. These were written in 1981 before experience in the field and should now be revised jointly with other agencies active in primary health care in Somalia (UNICEF, the RHU, CAA, SCF, etc) in order to produce appropriate manuals that are worth translating into Somali, illustrating and publishing. Use should be made of the Somali translation of Where There is No Doctor and the WHO Primary Health Care Manual.

Care should be taken not to lose the experience and suggestions of technical advisers and Somali tutors leaving the project soon. Too much material has been generated and lost by this project. For instance, the Toghdeer nursing technical adviser, Norma Brainerd, has produced teaching plans and multiple handouts for nurses which should be retained as resource material. If some of the Somali tutors will be spending a period learning English, they should be asked to record successes and difficulties with lesson plans. The Bay sanitarian technical adviser, Edward Mazurosk, should be contracted for a month or two to rewrite chapters of the sanitarian manual and produce illustrated guides to village use of water filtration systems since he is leaving soon.

(c). Curriculum revision The final revisions of the curriculum and manuals should be done in an designated time period with the assistance of a curriculum specialist who has had enough time (or previous experience) to familiarize his or herself with Somalia. Feedback from all groups that have dealt with graduates of the NTC should be obtained in writing and by visits to the graduates in the field to assess their performance.

All regional PHC projects should contribute to the curriculum revision under the direction of Cabdi Guri and the curriculum specialist. Further input from an anthropologist familiar with Somalia should be obtained. From the group involved in revising the curriculum, an ongoing curriculum committee should be formed to which questions of curricular changes can be

referred by the NTC faculty.

An orientation to primary health care and educational and supervisory skills are better taught in a participatory setting. The curriculum should include liberal field experience in a functioning PHCU or apprenticeship with a district team, including teams in the Northwest and Sanaag PHC projects.

(5). Guarantees of competency before graduation and for PHCU or district certification.

(a). Requirements for graduation The current system of evaluations do not provide adequate guarantees of competency of graduates sent to the PHCUs and the districts. We feel an external committee should set and enforce requirements for graduation from the NTC and certification for PHCU or district primary health care work. Representatives from the MOH, USAID, UNICEF, BHU and the faculty of the nursing, midwifery, sanitation and lab tech schools should be included. This committee should enforce requirements for graduation including:

(1) a minimum % class attendance.

(2) certain core skills which all must know and be able to demonstrate and teach in order to avoid dangerous health practices and the dissemination of serious mistakes through the teaching functions of the graduates. These should include: proper mixing and administration of oral rehydration therapy (all 3 disciplines), proper drug dosing (nurses and midwives), correct emergency management of anaphylaxis after drug administration, proper sterilization of medical equipment, etc.

(3) An established battery of exams in Somali which emphasize the practical field performance at the PHCU and a preventive and health promotional orientation.

(b). Final certification after acceptable on-the-job performance This should be followed by a separate certification procedure after a period of acceptable, supervised practice at the PHCU or district level including supervised teaching of CHWs and TBAs.

B. MINISTRY OF HEALTH EAGERNESS FOR AN IMPROVED PHCP

Dr. Kassim and his PHCNO staff have shown eagerness for help to improve the PHCP. They have already implemented several

recommendations and are in agreement with almost all others. (Some had already been under consideration in the MOH.) For example, the NTC staff have already submitted academic calendars and are working on graduation requirements. Arrangements have been made to apprentice a pharmacist at the RHU pharmacy. We were repeatedly impressed by the serious and creative efforts to assure a quality primary health care project shown by Dr. Kassim and his staff.

VII. IMPLICATIONS FOR PHASE II: LOWER JUBA AND MUGDUG

The project paper describes developing an approach to primary health care in Bay and Toghdeer, demonstrating its effectiveness then replicating it in Phase II in Lower Juba and Mugdug.

We feel this sequence should be abandoned since we are recommending a different approach to the implementation of primary health care in the two new regions which requires no demonstration of the efficacy of the approach used in Bay and Toghdeer. There is ample experience elsewhere in Somalia (such as the Northwest PHC Project) of an approach which starts with the training of village health workers by district PHC teams supported by regional training expertise. The end model (health post, PHCU, district health center) will not differ except in the staffing of some PHCUs and the buildings provided. The difference is in direction of implementation.

Given the problems encountered in these two regions, we would not recommend implementing primary health care in the same direction (PHCU to village) in Lower Juba and Mugdug. We would recommend a slower approach which lays the village groundwork carefully and chooses experienced district staff for retraining in the PHC approach, training skills and supervision. This can occur both in the field and through an improved curriculum at the National Training Centers. These supervised district PHC teams then gradually train CHWs and TBAs throughout their district. PHCUs can be added as needed where there is a geographical need for more proximal supervision and a source of referral care.

This avoids the difficulty of finding and training inexperienced staff in large numbers at the beginning of the project for the PHCUs. In contrast, the district level staff with prior experience in the MCH and outpatient clinics and an existing role in district health care are more likely to become solid members of the PHC team.

Development of the PHCU layer of the system after the village health workers will permit use of upgraded village health workers in some locations to staff these units. Although this system will consume more fuel and vehicles initially, considerable cost can be saved in building costs by the renovation of preexisting

structures with community assistance. This will drastically reduce the cost per PHCU and orient the project toward community development and village health worker education rather than building projects.

This slower approach will help guarantee appropriate selection of PHCU sites by catchment population and geography. It will also allow the development of a system of supervision which minimizes the need for vehicles and fuel.

Expatriate staff skilled in training would likely be needed for assisting the MPHCC in developing a supervisory system and assisting in community development and CHW and TBA training. Given the extensive village work required, a PVO organization with well-paid staff who can do without amenities would seem more appropriate than a corporation that is concurrently trying to provide American style accomodations elsewhere in Somalia.

Since this approach resembles that of the Northwest PHC project and not the current approach in Bay and Toghdeer, we see no reason to delay implementation of this phase pending progress in primary health care delivery in Bay and Toghdeer. Implementation should be delayed until an adequate commodity and logistics system is in place and substantial MTC curriculum revisions are in progress.

This general recommendation of an approach to implementation of primary health care in Lower Juba and Mudug is made with no knowledge of the peculiar sociocultural, historical or geographical realities that may exist in these regions. Any project should be preceded by a thorough investigation of the need and desire for primary health care as well as the feasibility of its provision.

Given the repeated disappointments of this project, we feel that an attempt by USAID to excessively delay implementation in Lower Juba and Mudug after what is perceived as a clear commitment would reflect poorly on U.S. government assistance to health in Somalia.

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SECTION III
LOGISTICS

CHAPTER 1

Logistics Management

1. Current logistics inputs to the PHC project are intended to provide the services of Logistics Management which are essential to a cost effective sustainable primary health care system. Such services include, although not necessarily limited to, the following broad categories as they relate to commodities.

   a. Logistics Planning
   b. Procurement
   c. Distribution
   d. Maintenance
   e. Logistics Training

   Category c. Logistics Training, is included because logistics expertise must be passed on to those Somali personnel who will assume full responsibility for the Primary Health Care Program following project completion.

2. The present contractor (MSCI) has established an embrionic Logistics Management entity located in the MOH Logistics Center. An expatriate Logistics Officer was assigned at least a year ago. A highly qualified expatriate Vehicle Maintenance expert was recently brought on board. There has been considerable improvement in recent months in the logistics management area, expecially in motor vehicle maintenance, commodity identification and inventory, warehousing practices, receiving and accountability processes and the development of procedures (unwritten) and forms (now in use). There still remains, however, the need for a comprehensive, integrated logistics system with written procedures manuals, organization charts, functional and positional discriptions, flow charts and other standard management techniques which will facilitate the desired rapid improvement in logistics management and which are essential as training tools for counterparts and others involved in the logistics cycle.

3. Commodity acquisition, notwithstanding earlier procurement difficulties experienced by USAID and MSCI, is taking on an accelerated, if not more routine pattern, and, as drugs, vehicles, equipment and supplies arrive in greater quantities, increased logistics expertise will be required in planning and preparing for receipt, storage, inventory and delivery of these commodities. Greater attention must be paid to procurement follow-up techniques, procurement status controls, commodity inspections, over/short/damaged claim actions and reordering. Planning for phasing of procurement and scheduling of deliveries, especially of drugs, will become more essential. As presently organized and staffed, it is questionable that the Logistics Management Office will be able to adequately cope with the inherent management problems, thus the outputs may fall short of achieving the desired goals.

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4. Radios, requested in February 1983, to improve communications between Mogadishu and the two regions have arrived and have been installed. Communications are now open between Burao, in Togdheer Region and Mogadishu and the equipment in Baidoa (Bay Region) is expected to be operable by April 8th. This input will have a very important affect in the logistics area as well as in other project management activities.

5. Training of counterparts in the Logistics Management Office appears to be haphazard, is not organized and is not effective. The person who was presented as the Logistics Management Officer's counterpart claimed to have only administrative responsibilities and to know nothing about logistics operations. When questioned further he stated that his official position was that of General Services Officer (GSO) and that he was paid as a GSO. During the absence of the Logistics Management Officer an effort was made to illicit essential information about logistics activities and the Logistics Center facilities from this "GSO". Although he was able to provide some simple descriptive information and demensions, it was apparent that his knowledge of Logistics Operations was almost nil. The training input in the logistics management area is obviously difficient. It does appear, however, that training in vehicle maintenance, an important component of logistics management is making some headway and may be approaching a desired output.

6. In the transportation area progress has been made in teaching drivers and others concerned with the operation and care of vehicles to comply with information reporting and recording and the use of forms pertinent to this. The expected result will be improved preventive maintenance and better records of vehicle usage, etc.

7. It is an unfortunate fact that the present Logistics Management Officer has no training in this management field. He has gained some experience over the past year, the hard way. He is, however, well trained and experienced in one component of logistics, i.e., vehicle maintenance. But by the very virtue, his expertise was demanded to keep the vehicle fleet mobile, at the expense of having very little time to devote to the function of overall management of logistics. This officer does have considerable common sense, a virtue required of a logistician. He might be able to develop into a good one, given time, training and experience. But, does the project have this kind of time available? An alternative is discussed in para. IV. A. above.

8. An assessment follows for the progress-to-date in logistics management of each category of physical input used in the Project. These are broken down by individual major components in the logistics cycle.

a. Identifying Requirements (Requirements Development):

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(1) Normally, requirements for project use are determined by appropriate technicians assigned to the project. Logistics Management is involved in the process as advisors at the initial stages of project development in "pre-planning" sessions. Advice is rendered to the technicians on commodity characteristics, potential sources, estimated procurement lead times, estimated costs, invoices and special authority requirements, etc. There is no evidence indicating that a logistician was invited to any such pre-planning session in the development of the commodity element of this project. Nor is it apparent that a logistician was consulted in the development of subsequent requirements since the project was initiated.

(2) As for determination of requirements for commodities used in the maintenance of vehicles (spare parts) and for vehicles in the logistics fleet and other logistics related commodities, considerable progress has been made in determining what is required in a much more timely manner than in the past.

b. Ordering, i.e., requesting procurement action (in this case essentially all commodities are procured by the MSCI Home Office) is now being accomplished on a routine basis. The Logistics Management Officer receives a Parts and Supplies Requisition Form #LV2 (Appendix) from a Field Technician, reviews the specifications and stock levels and submits a Supply Order Form #P-1 or P-2) (Appendix) to MSCI Home Office (HO) for procurement. For more urgent requirements such orders may be communicated by electrical transimmission, i.e., Telex or telephone. Some may be hand carried. The ordering system now appears to be working more effectively.

c. Receiving:

The receiving function is the second activity in the Distribution component of the Logistics Cycle, the first being Port clearance. After commodities are cleared from port (either sea or air) they are taken directly to the warehousing facility at the MCH Logistics Center where a receiving inspection is performed to reveal damages and determine quantity, packaging and other considerations. In the case of pharmacueticals, the Pharmacist also inspects to determine if the labeling, type of drug, dosage form, etc., are correct as well as to assure compliance with any special requirements. A Receiving Report Form #LV-1 is prepared. If discrepancies or over/short/damaged conditions are found this information is also cited on the form LV-2 and is followed-up by the Logistics Management Officer for claim submission and/or reorder as appropriate. The receiving function appears to be satisfactory at present.

d. Establishing and Controlling Inventories:

(Normally refered to as Inventory Control): All commodities on hand have been identified and entered into inventory. All commodities received since November 1983 have been inventoried and, upon issuance to regional stores are recorded on Stock Control cards, Form LV-7, (Appendix). Periodic checks are made by Logistics Management personnel at Regional levels to update Inventory Forms LV-3. At PHCU levels there is still some lack of standardization in the stocking card system although the system does exist. Most PHCUs are currently using a ledger system to record stock receipt and consumption of drugs and medical supplies. A full page is devoted to a single line item. Received, dispersed and balance entries are made and a maximum, minimum level is indicated for reorder purposes. Some variations were found eg., all drugs and medical supplies entered on a single page on a line item basis. This will not work after dispensing several times and is a subject covered in Section IV, above. The implication here is that Logistics Management must establish a uniform system and assure compliance by all PHCUs and PHCPs.

e. Warehousing (more appropriately called "storage" in the Distribution component). Storage facilities range from warehouse rooms at the Logistics Center with capacity to store a minimum three months back up supply of project commodities to small boxes in which to secure drugs at PHCPs. A brief general description of storgae facilities at various locations follows:

(1) The Logistics Center:

(a) Drug Storage Warehouse - 4,960 cu.ft. (496 sq. ft.), two air conditoners, one window. Shipments are palletized. No shelving.

(b) Cold Storage Room. Walk in refrigerator. Approx. 400 cu.ft. with shelving.

(c) Repacking (breakdown) Room - 352 sq. ft. Presently contains one table, inadequate for purpose, and no shelves. Shelves are planned. No air conditioner, but planned.

(d) Spare Parts Room - 930 sq.ft. This includes a 256 sq. ft tool security room. Equipped with shelves, but no bins. Item identification is posted on shelves and inventory control cares are in use.

(e) Stationary Supply Room - 390 sq.ft. No air conditioning, but planned and one window.

(f) Used Parts Storage Room - 256 sq.ft.

(2) Regional Training Center:

Each Regional Training Center has three shipping containers within their respective compounds. A plan exists for modifying these containers. Two for use as warehouses and one for workshop use at each location.

(3) Primary Health Care Units:

In general, drugs and medical supplies are stored in cabinets of various types. Some are secured with locks, many are not. In most cases the cabinets are old and delapidated, insecurable, lack sufficient shelving, if any, and are less than satisfactory for the purpose. Some PHCU and PHCP personnel keep the drug supplies in their own homes for security. Facilities under construction for housing the PHCUs are being provided an equipment and drug storage room. Procurement requests, recently submitted to MSCI-HO, included requirements for locking cabinets with three shelves 36' X 42" x 18".

(4) Primary Health Care Posts:

In most cases it was noted that PHCP personnel kept their supplies of drugs at home although there were some who had floor boxes or foot locker type containers. Recent MSCI Procurement Requests list Plastic Utility boxes with tote tray,central handle on top, white, clasp lock, 16" x 8" X 8".

f. Maintenance:

(1) Vehicle Maintenance: At the end of March 1984 there were five deadlined vehicles in a fleet of 28. Within a week after arrival in Mogadishu, the new expatriate Maintenance Management Officer had reduced the number of deadlined vehicles to only three. The deadlined vehicles were all Chevrolet Suburbans. Given the poor road (in many cases - no road) conditions in the areas where PHC vehicles must operate and the long distances over which they must be driven under these conditions, the Suburbans should never have been procured for this project. The project has now turned to the more rugged Jeep as the primary vehicle for future procurement.

(2) Vehicle Maintenance Facilities:

(a) Logistics Center. Within the present Logistics Center complex there is an automotive workshop which includes an 1800 sq.ft., four stall covered

facility and a 240 sq.ft. uncovered ramp area with grease pit. Sufficient maintenance equipment and tools are on hand to service the project fleet at present. Spare parts are now on hand and replacement orders are submitted on a more routine basis than in the past due to improved stock control systems.

(b) Bay Region: The Training Center at Baidoa has negotiated an agreement with the Bay Projects to permit the Center's mechanic to use the facilities at the Bay Project's large garage complex to repair PHC Project vehicles. This system has worked well except that the RMO often pulls the mechanic away from his duty to act as a private driver for the RMO. See recommendations section IV, above.

(c) Togdheer Region: The mechanic assigned to the Training Center in Burao had 28 days of training only. Local (private) capability to perform vehicle maintenance is very limited. This Center should be supplied with a well experienced, well-trained mechanic, not a 28-day trainee. Shop facilities at the Center are nil. Parts and some tools are stored in one of the shipping containers. See recommendations para. IV above.

(3) Vehicle Maintanance Management:

There has been considerable improvement in the management of the maintenance program. There was no program at all before April 1983. At this time the Logistics Management Officer addressed the subject and, in written memos to the MSCI COP, outlined proposed procedures, forms, organizational patterns and vehicle use instructions and schedules. Use of pertinent forms began in June and in November the Logistics Management Officer supplied the USAID Project Officer with a typed outline of the Vehicle Maintenance Program. See Appendix C . Problems still exist, of course, especially in the Togdheer Region. Recommendations are made in para IV above. Progress has and is being made in Vehicle Maintenance Management and, with the recent arrival of the new Maintenance Management Officer, it appears progress in this area will accelerate. Maintenance operations, however, will continue to suffer a shortage of trained mechanics until more favorable salary ranges attract qualified technicians back from the Trucial States and other more remunerative locations.

(4) Deploying (Delivery):

The Project now has three trucks used to deliver commodities to the two Regional Training Centers.

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The Training Centers then deliver to the PHCUs and the PHCUs issue drugs and supplies to the PHCPs. In many cases the PHCPs come in on foot to receive their supplies at the PHCUs. At present the Regional Training Center temporarily stores, then breaks down the shipments into individual PHCU parcels and delivers these by vehicles (Suburban or Jeep). See recommendations for alternative system, Section IV above. Until now drug supplies have been received in limited quantities and a routine dispatch schedule has not been used. Future deliveries are expected to approach a three month routing interval, then modified as consumption rate data are developed and a practical interval can be established.

g. Transfer of logistics management responsibilities to Somali people. This area has been totally neglected.

(1) Before a Somali official can be tought Logistics Management there must be one assigned as counterpart to the Logistics Management Officer. The man introduced as that counterpart, in his own words, is the General Services Officer. He further stated that his responsibilities are limited to administration. Either way he is <u>not</u> the counterpart to the Logistics Management Officer. As GSO, most of his responsibilities would be operational management with a small amount of administration. Doing only administrativ work he can not be functioning as a GSO. One wonders what he is being paid for doing.

(2) Before teaching <u>anyone</u> Logistics Management responsibilities there should be in existance a Logistics Management system which by its nature and the principles of management, requires a formalized system with an organizational chart, a procedures manual, job and functional descriptions, etc. The system as such does not yet exist, there is no organizational chart or pattern, there are no formalized, written procedures, and job descriptions or functional descriptions were not in evidence. Forms for use in such a system do exist and are being used. But until the system is developed and presented in a coherent, organized, readable manner, training in that system will be useless. Further, when a Logistics Management manual is finally produced, it will have to be translated into the Somali language. Then, and only then, can any amount of training be effective.

(3) Transfer of the Logistics Management functions and responsibilities will be impossible until the steps taken in (1) and (2) above have been accomplished.

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SECTION III
LOGISTICS

CHAPTER 2

LOGISTICS RECOMMENDATIONS

A. IMMEDIATE (WITHIN 6 MONTHS)

1. The logistics center must have a highly qualified, trained and experienced expatriate logistics management officer. A candidate might be found among the multitude of former military officers retired over the past 5 years. Recommend immediate action.

2. It is recommended that 2 expatriate management officers be recruited immediately to assume the management of administration, logistics, general services and maintenance in the 2 regions. These managers would not assume the technical management functions of the senior technician but would take over the horrendous present overdens that have been assumed ad hoc by the technical advisers at the expense of their primary functions. These officers would be responsible for management, administration, communications, logistics, general services for project support and maintenance management of both project and support facilities and equipment and the training of their counterparts. Immediate action is recommended.

3. A qualified counterpart should be selected as soon as possible for the logistics management officer. The concepts of logistics management cannot be learned overnight. It is a key activity where costly commodities are acquired, distributed, maintained and accounted for. The position requires a person of intelligence, comon sense, education and integrity. Salary and incentives should be raised to attract and keep a highly qualified person.

4. A crash program is recommended for the immediate and total renovation and rehabilitation of project support facilities and equipment at both Baidoa and Burao. A "quick-fix" is not the intention here but a complete, conclusive renovation of all facilities and equipment. This means, if necessary, the abandonment of some prefabricated structures and the construction of buildings to replace them using local materials e.g. construction stone. The dormitory at Burao is unsuitable for human habitation and should be condemned immediately. Normal maintenance attention will not resolve the problems.

5. In order to provide readily accessible management data by a continuous surveillance of procurement status of all commodities in the pipeline it is recommended that the logistics management office develop and use a "procurement status control system." On a single format, all critical actions in the procurement cycle will be recorded, each here and at

MSCI/Arlington. This suggestion was made to the logistics management officer in February and to the COP more recently. The former was given samples of two different formats that could be adopted or adapted, copies of which are included in appendix B.

It is urgent that some control of this type be instituted as soon as possible since the volume and frequency of procurements has recently increased.

6. It is recommended that action be taken to complete the renovation work schedule for the logistics center. Funds are in th CIPL budget for this. Immediate action is urged. Further, without waiting for the release of CIPL funds, the MOH should take immedaite action to :

a. Obtain a telephone for the logistics center officer

b. Obtain running water for this facility.

Water lines exist so it may be no more than a plumbing job to resolve this problem. A logistics center needs water for both the sanitation of warehouse facilities and of men who work with everything from drugs to greasy mechanics tools. Furthermore, water is a handy device for fighting fires.

7. In the interest of cost consciousness and the recovery of recurrent costs, it is recommended that fully depreciated vehicles be sould at auction. The funds recovered should be returned to the FHCP. It is understood that the MOF does not prohibit this practice. However, if restrictive laws do exist, it behooves the MOH to pursue action to have such restrictions lifted or at least modified to grant an exception for the FHCP. The alternative is running vehicles beyond the point of economic repairability, at greatly increased operational expenses and with no recovery of costs. A graveyard of dead vehicles will aso clutter up the maintenance locations over time. Recommend early action to resolve impediments to such a program.

8. It is recommended that the MSCI COP exert his management influence on the Logistics Management Officer(LMO) to obtain a transportation plan and alternate plans for commodity deliveries now. Drugs ordered within the last few months are due to arrive in 2 traunches. The first by air is due in momentarily. The LMO should analyze alternatives now, in case the new system of logistics center breakdown for direct delivery to the FHCUs is found, upon trial, to not be fasible.

9. Immediate consideration should be given the possibility of hard surfacing or macademizing the interior "courtyard" gounds of the logistics center.

10. It is essential that the LMO be required to develop a

logistics system and implement this formally with a Logistics Management Policies and Procedures Manual. The PPM, in addition to policies and detailed procedures, should include pertinent forms to be used, organization patterns, charts, positions and functional descriptions, etc. Upon producing a satisfactory manual it must then be translated into the Somali language to be used in training counterparts and, subsequently, to implement management by the Somalis when the project is completed.

11. Thre is some lack of uniformity in the maintenance of commodity (drug) records among the PHCUs and districts. The LMO should be instructed to standardize record keeping. It will be easier to do and the important data will be easier to analyze.

12. In Burao it is urgent that a workshop facility be obtained. One of the 3 countainers in the compound could be used for this if properly modified and insulated. A grease pit will also be required.

13. A fully equipped mechanic should be assigned to Burao. The one that was sent there had only 28 days of training. Maintenance in Burao is a large problem, made more so by the distance from Mogadishu.

14. Arrangements should be negotiated soon for the Logistics Center's Pharmacist and Assistant Pharmacist to be given on-the-job training in the RHU central medical store. It may cost nothing and the benefits are large.

15. The Logistics Management Officer should be brought into all planning processes that bear on the acquisition and distribution of commodities including the development of the CIFL budget.

16. Although budget restrictions complicate the problem, ways must be found to raise the salaries to attract more qualified personnel, especially counterparts.

17. Tangential to paragraph 15 above is the need to reexamine titles for key positions. A mechanic is a mechanic or chief mechanic but an engineer who has responsibility to manage a maintenance organization is a manager, not a mechanic and his title should reflect this. This may be more important than some may believe but prestige of office also helps to retain people and makes for better management.

18. It is urged that copies of the book Managing Drug Supply be obtained for the office of PHC, the MOCI-CDP and the LMO and his counterpart. This book is a detailed volume on the selection, procurement, distribution and use of pharmaceuticals in [illegible]

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health care from a logistics management point of view. This is the book that the Sr. Pharmaceutical Advisor in the AID Office of Commodity Management considers the "bible" on the subject. It is available for $10.00 plus handling(AID related project price) from:
Drug Logistics Program
Management Sciences for Health
163 Allendale Road
Boston, MA 02130

B. SIX MONTHS TO ONE YEAR

1. Apart from the critical need to improve the Logistics Center and its capacities to deliver the services expected of it, our major recommendation is that the center be expanded to meet the needs of the entire PHC national program. This would mean that drug and non-drug medical supplies, sanitarian and other PHC equipment, spares and replacements would be ordered through, handled and delivered to the LC. We also think that the capacity of the LC to act as a central garage for the maintenance and repair of PHC vehicles should be examined and discussed with other donors. The present duplication in the country is a waste.

It makes little sense (in the health sector and for the country as a whole) for each donor to import the vehicles of their agency's choice. Somalia does not have the capacity to service the different models, and spare part stocking becomes much more expensive when no standardization is possible. Thus, each donor trains mechanics to repair their particular type of vehicle, and finding mechanics in the country able to work on particular models is often difficult. Efforts should be made to standardize the motor pool, at least within the health sector.

2. A final determination should be made as soon as possible regarding the proposed modification of containers into warehouses at Baidoa and Burao. At Baidoa a workshop may not be necessary with the arrangement recommended below (3.) However, in Burao a workshop is essential. If the dormitory in Burao is abandoned, that structure might be usable for storage purposes, with certain modifications for security, etc.

3. An arrangement in Baidoa made between the PHC center and the Bay project for joint use of the latter's maintenance facility has considerable merit. This arrangement should be formalized in an agreement covering the status and pay of the mechanic, the handling of spare parts acquisition, etc.

4. All donors in the PHC program should be encouraged to exchange their periodic reports with each other, e.g., UNICEF's monthly, quarterly and annual reports have a wealth of information useful to MSCI's management of this PHC project.

5. All drugs brought into the PHC program should be labled generically, color-coded and numerically coded in the MOH code number system.

6. Those functions of logistics which apply to any appropriate levels of activity in the PHCP should be incorporated into both the pertinent job descriptions and the training programs. For example, use of stock record cards, taking/keeping inventories, requisitioning, etc.

7. The Logistics Management Officer should be required to develop a procurement catalogue library. Even though MSCI/Virginia is the procurement agent for this project, this will not always be so. Somali counterparts must be trained in all phases of logistics, including procurement, for which a catalogue library is essential.

8. The Logistics Management Officer should formalize a full-scale training program to supplement the on-the-job training of counterparts in logistics management.

APPENDIX A.1

RESEARCH PROCEDURES FOR FINANCIAL ANALYSIS

In this Appendix we will detail: (1) the research procedures used to collect data for the financial analysis; (2) the basis for estimating drug costs; (3) the outlines of the PHCP models used as a basis for the financial analysis; and (4) the data limitations of the models.

1. RESEARCH PROCEDURES

The first task involved breaking down the expenditure categories for each of the spending components - the MOH, the Logistics Center, the PHCC offices, the two training centers, the DHCs, the PHCUs, the health posts, and the various training courses. We decided to separate the training functions and the operating functions of each unit. We think it is important to separate investment and recurrent expenditures. Nevertheless, we wanted to show the training expenses because they are important costs in their own right and are, for the time being, considered by MOH and USAID as recurrent costs.

We generated these data through various means. First, we took all expenditure records and asked the people who keep them, and those who had information about the expenditures, to explain them so that we would have some base line numbers with which to work. Second, we made mock budgets for each spending segment. Third, we interviewed the people operating these units (or their superiors or supervisors in the case of PHCUs and health posts), verifying the data we inserted from the rates deduced from expenditure records and asking for the appropriate prices for items for which we had no historical data. Fourth, we used several layers of interviewing in order to check the validity of our price assumptions. We tested the assumptions arising out of the Baidoa training center interviews with people at the Burao center. We asked accountants in five districts about figures and sought explanations about inconsistencies. We discussed our numbers with PHCHO and MSCI staff, USAID personnel and various technical advisors and Somalis in Mogadishu. On the whole, we are satisfied that these figures are the best available, if not wholly accurate. Surprisingly, we were able to generate more hard numbers than we had expected.

For salaries and allowances, we secured a list of the MOH figures for each position in the ministry and introduced these for each person listed in the project. We used the PHCHO 1984 PHCP budget for many rates and much of the data in the budgets for the existing system. For example, although we did not agree with the fuel calculations in that budget, we used its figures for the PHCHO, the LC, the PHCC and the DHCs. We also used the per diem figures in that budget, although we added per diems when adding trips that had been left out but implied by the system. For instance, the procedure of bringing PHC vehicles to Mogadishu for servicing and repair

each month implied fuel consumption and per diems that were not in the 1984 budget; we added them to our budgets. We used a standard per diem of Sh. 100 per day, although the PHCMO varies per diems among personnel ranks.

We used the project paper budget for Phase One and Phase Two data. As indicated in the tables, we did not apply the inflation or contingency funds contained in that budget to the various items. For construction, those rates had been applied when the project paper budget was made up. In order to isolate Phase One from the project paper, we applied the various plans in the paper to the budget. In some cases, we had to make assumptions that probably are not wholly accurate. When they did not significantly affect the monetary outcome, we made these assumptions freely; otherwise we discussed them with the best-informed people available.

We used the USAID/Mogadishu controller's accounts and MSCI monthly reports to the controller for expenditure information. The controller we very helpful in assisting us in breaking down these records so that we could arrange them in the various categories required for our analysis. We used the USAID/Mogadishu report: USAID-SOMALIA'S RURAL HEALTH DELIVERY PROJECT PROPERTY RECONCILIATION PROJECT NO. 649-0107, Katharine A. Burns, February 5, 1984, and the Logistics Center reports on supplies received (and their attached purchase orders and bills) for expanding the information available to the controller on commodity purchases.

We worked with the 1981-83 PHCMO records on expenditures for the PHCP and the CIPL unit records for the same expenditures. We saw the MSCI imprest account records and the petty cash records at the training centers. The RMO accountants in Bay and Togdheer and the DMO accountants in five districts shared their records with us. The MOP and MOF and Central Bank gave us what information they had available and we utilized recent World Bank reports on Somalia. The accountant on the North West PHC project gave us comparative data on their expenditures.

We pieced together the distances in Appendix A.4 (which we used for calculating kilometer/fuel) from charts in PHCUs and DMCs, the memories of training center staff and maps from the Bay project. We used kms per liter for fuel consumption and assumed all project vehicles were CJ10s. We assumed 5 kms per liter for the project trucks. All vehicle prices include a full set of spares, shipping and freight insurance.

2. Estimates of Drug Costs

The estimates of drug costs are extremely crude and potentially unreliable. Actual requirements may fall significantly outside the indicated ranges. Without a functioning system to provide drug usage figures or indications of what population will actually be covered by the primary health care system being developed, these figures can only be regarded as a guess. Drug costs in a primary health care system will be strongly influenced by policy, the quality of supervision, the method and adequacy of supply, and the empirical approaches adopted for the treatment of common diseases. For instance, almost a 30% reduction in antibiotic use could be achieved in many settings observed by limiting antibiotic treatment in diarrheal disease to strict indications (< 3% cases). Large

fluctuations in drug use are also to be expected in a system that is newly extending coverage.

The drug cost estimates do not include estimates of vaccine cost since there appears to be a long term commitment by the WHO EPI program to supply these biologics. No calculations have been made of the savings obtainable from local manufacture or the introduction of traditional, locally available herbal remedies for certain conditions.

Reliable poplulation figures for the regions are not available. Actual population coverage will be influenced by acceptance and geographic factors of proximity of the health posts and PHCUs. A popular guess by personnel on the project is 70 to 80%. Many nomadic and semi-nomadic people may have contact with a health worker or PHCU during only part of the year unless the system is successful in training enough CHWs and TBAs who travel with the camel and goat herds. Experience in the HW PHC project is that this does occur and is one reason we have provided higher estimates of the total number of CHWs and TBAs than current MOH estimates of 200 per region.

There is also considerable use of drugs from private pharmacies in district towns, sometimes preceded by visits to MCH or outpatient clinics where a prescription is issued to those thought to be able to afford medicines due to the limited supply of drugs provided from UNICEF and through the MOH. In addition, a considerable number of drugs are purchased from the private pharmacies without prior contact with a health worker. The recent introduction of the practice of medicine may increase the amount of drugs issued through pharmacies but will likely not significantly influence the drug requirements of the PHC system except perhaps in the towns.

The range for the modified system uses UNICEF or church consortium prices (EHU's source of drugs) and was obtained in 3 ways:

(1) using modified EHU allocation figures and the population estimates for the 2 regions

(2) using the MOH and UNICEF estimates for each PHCU and health post drug and non-drug supply needs for the Lower and Middle Shibelle regions

(3) using the CHW allocation figures from the HW primary health care project.

Efforts should be made as the delivery of primary health care systems develops to obtain true estimates of drug needs.

3. <u>The Models of the PHCP</u>

a. <u>The Existing System</u>

In order to model the PHC system implied from the project paper and present thinking among those who are operating it, we used a combination of the documents and understanding of PHCHO, MSCI, USAID, and training center

personnel. It is important to underscore that the resulting model did not constitute the ideas or recommendations of the people interviewed for what the PHC system in the Bay and Toghdeer regions should look like or how the project should be implemented. In most cases, however, expenditure estimates are largely based on activities actually expected to take place.

In general terms, the following model was deduced. The PHCMO expects to provide considerable budgetary support for the PHCP within its annual budget (and continue to submit it for CIPL funding). The PHCMO sees their activities as being almost exclusively devoted to the PHCP. They also regard the work of the RMO's offices and the DMO's office as being nearly exclusively linked to PHCP. Therefore, they have included all the staff of these units, the travel and per diems costs, and the stationary and supplies, as well in their annual PHCMO PHCP budget. We have included these in the budgets of the existing system.

The Logistics Center is expected to place orders for sanitarian equipment, drugs, and other medical supplies, for the DHCs, the PHCUs and the health posts. It will also order and stock spare parts for project vehicles. Other project commodities, such as replacements for appliances, will be ordered through the LC, and received by it. The LC will service all project vehicles and deliver to the two regions.

The training centers are expected to act primarily as places for the training of nurses, midwives and sanitarians for the staffing of DHCs and PHCUs. It is envisioned that the tutors will perform supervisory functions during the 14 weeks that courses are not offered. Further, it needs to be stressed tht the model constructed is for the period of time after the foreign advisers leave Somalia. While they remain they will be performing supervisory and training functions at the DHC and PHCU levels. These, of course, are not reflected in the recurrent cost analysis.

The DHCs and PHCUs and health posts are the delivery units for PHC. That is, they are expected to see patients and carry out the preventive medicine activities planned for the communities. For the DHCs, the function appears to be primarily supervisory except for what they undertake in the towns, acting as PHCUs themselves. The PHCUs will see patients within their immediate areas, receive referals from the health posts and supervise the CHWs and TBAs, along with the DHC staff. These three units will be supervised by the office of the PHCC.

Training courses for CHWs and TBAs will be carried out by the PHCU staff, with input from the PHCC and the DHC staff, at the PHCU sites. Upgrading courses for CHWs and TBAs will be given periodically. The PHCMO aims at training: (1) two classes of nurses, midwives, sanitarians and lab technicians at each training center each year; (2) 100 CHWs and 100 TBAs for each of two years in each region. Thus, 400 health posts are planned for each region.

Drugs and other medical supplies will be dispensed by DHCs acting as PHCUs, by PHCUs and by CHWs and TBAs. The transport needed for the operational aspects of the program (e.g., non-training) will be provided by the PHCMO, the LC, the PHCC and the DHCs.

b. THE IMPROVED SYSTEM

We modeled the improved system to show the ways in which costs could be reduced within the existing system. We did not model it along the lines we believe the FHCP should have been designed, or modified, when introduced into Mudug and Lower Jubba.

The FHCHO continues to provide support for the FHCP, but is no longer seen as contributing all its activities to that project. The RMO is taken out of the system entirely. The DMO is taken out for budgetary purposes and the FHC part of the DMO becomes the only portion of the FHC budget at that level. The DMO himself continues to support the FHC system, but only in his function as a MCH employee within the greater health system. He does not use either the FHC vehicle or fuel, except when driving to FHCUs for supervisory activities.

The Logistics Center no longer services project vehicles, other than those in Mogadishu. It continues to order and stock parts, sanitarian supplies and drugs, and other medical supplies. The main change is in the delivery of drugs and medical supplies to the regions. We assume that: (1) three months stock will be held at the LC; (2) three months stock will be held at the DHCs and FHCUs; and (3) the LC will make a delivery, once every three months, picking up the FHCC on route, and drop off three months supply to each DHC and each FHCU (for their own use and dispensing onward to the health posts). Emergency service for deliveries and extraordinary vehicle repairs is also included in the improved system.

The FHCC functions remain basically the same, although we add a Midwife coordinator to take the main burden of midwifery supervision, and an administrator to take over much of the office work.

The main changes for the training centers are: (1) their supervisory functions are removed; and (2) a mechanic (and workshop) are included, so that vehicles will now be repaired and serviced there; this includes FHCC and DHC vehicles. Instead of a 44 student course at Baidoa and a 30 student course at Burao, we standardized at 30.

The functions of the DHCs and FHCUs and health posts, as well as the training programs, all remain the same as in the existing model, although some changes are introduced for reducing costs. These are spelled out in Chapter 1 and the tables in Appendix A.3.

4. DATA LIMITATIONS OF THE MODELS

First, a number of items were left out, such as the costs of FHCHO training seminars and workshops. It was not clear to us that these should be charged to the project, even though they would clearly benefit people working in the project. Other items left out were water and telephone charges and various minor fees. An item that might prove important in the future that was left out was maintenance for buildings and non-vehicular equipment. Since there were no adequate records of the items purchased and the prices paid (let alone a full list of the items and buildings planned to be completed by the end of the development phase of the project) it was not even possible to apply the maintenance and replacement percentages from

the project to this category.

We assumed that the MOH will have to purchase fuel at market prices once it takes over the project, rather than at the duty-free prices at which it now buys. We also assumed that both generator systems were fully working at both training centers and that the Baidoa center is only charged for the fuel it uses for its generator, and not the amount used by the Bay Region project and the town of Baidoa. Both generators are assumed to run for 18 hours per day -- the present figure for Baidoa -- in the existing system, but only 8 hours at each in the improved system.

No inflation factor is used in any part of the model. When the cash flow projections are made at the end of Chapter 1, this becomes an obvious limitation. There are no costs for the educational programs expected to be carried out in the villages by the CHWs and TBAs. While these will not be large, they should, nevertheless, be anticipated. Teaching materials are probably understated throughout. For instance, there are none included for the upgrading courses, and the costs of translation into Somali are left out of the development costs.

In general, the application of the costs of Bay and Togdheer to Lower Juba and Mudug are questionable. On the one hand, there are population differences and distance variations which might affect drug/medical supplies and fuel costs. On the other hand, we recommend a much different approach which, if accepted, could significantly alter some of the recurrent costs.

Finally, in many ways these are planning models. It is possible to make a number of policy changes and see how they reverberate throughout the system in terms of recurrent and development costs.

Appendix A.2

Recurrent Costs: Data Base For Existing System

Table A.2.1

Somalia Primary Health Care Project
Ministry of Health Recurrent Expenses for PHCP
(So.Sh. '000)

1. Salaries and Allowances[a]	
a. Mogadishu	435
b. Regional Medical Offices	253
c. District Medical Offices	737
Subtotal	1,425.
2. Per Diems[b]	
a. Mogadishu	72
b. Regional Medical Offices	14
c. District Medical Offices	48
Subtotal	134.
3. Transport[c]	
a. MOHNO - fuel	412
b. District Medical Offices -fuel	435
c. Vehicle Maintenance and Depreciation[d]	850
d. Other	165
Subtotal	1,862.
4. Office and Cleaning Supplies	
a. Mogadishu	313
b. Regional Medical Offices	45
Subtotal	358
5. Total	3,779.

a. Based on MOH salary scales and civil service allowances for staff listed in 1984 MOH PHCP budget but not included in other budgets (Tables A.2.2-7). Some salaries and allowances are lower than now, and by the project.
b. MOH 1984 per diems budgeted for staff included in 1.a-c.
c. Fuel valued at 11.50 So.Sh./liter. CJ10s assumed to get 7kms to one liter.
d. Assumes 5CJ 10s for MOH central. Maintenance calculated at 18% of $17,000/year/vehicle. Replacement is calculated at every three years per vehicle at $21,000 per vehicle, including spares.
e. Air tickets and vehicle insurance for 29/project vehicles.

Appendix A.

Table A.2.2

Somalia Primary Health Care Project
Annual Operating Expenses for Logistics Center[a]
(Shillings)

Item	Cost Per Year (1984 prices)		
	Salary	Allowance	Total
1. Salaries and Allowances[b]			
a. Logistics Officer	14,400	14,400	28,800
b. Chief Mechanic	10,800	24,000	34,800
c. 3 Mechanics	27,000	32,400	59,400
d. Electrician	9,000	10,800	19,800
e. Pharmacist	8,400	7,200	15,600
f. Asst. Pharmacist	8,400	7,200	15,600
g. Welder	8,400	7,200	15,600
h. 2 Storekeepers	12,000	12,000	24,000
i. Toolkeeper	6,000	6,000	12,000
j. Clerk-Typist	5,400	4,800	10,200
k. 2 Janitors	9,720	7,200	16,920
l. 5 Watchmen	30,000	18,000	48,000
Subtotal	149,520	151,200	300,720
2. Per diems[c]			30,500
3. Transport			
a. Fuel[d]			302,000
b. Vehicle maintenance and depreciation[e]			1,446,000
4. TOTAL			2,079,220

a. Assumes logistics center operating as designed by the project and reflected in the MOH 1984 PHC budget. Office supplies are drawn from MOH stocks. The use of spare parts, etc., for the center's work on project vehicles is reflected in the vehicle maintenance figures in the other project operations budgets.

b. Based on MOH salary scales and civil service allowances. Some are different than now paid by the project.

c. For trips to the two training centers from 1984 MOH Budget.

d. Includes MOH estimate of fule for LC diesel truck travel to Bay and Toghdeer valued at 7sh/liter plus daily fuel consumption based on MOH 1984 rates. Fuel valued at 11.50 So.Sh./liter. CJ10s at 7km/liter and trucks at 5kms/liter.

e. Maintenance 18% of $17,000/yr for 36J10s and 20% of $23,000/yr for 3 trucks. Replacement: every 3 years for CJ10s and every two and a half years for trucks. Add sh. 120,000/yr for extra ordinary repair costs.

Table A.2.3

Somalia Primary Health Care Project
Annual Operating Expenses for One PHCC Office
(Shillings)

Item	Cost Per Year (1984 prices)		
	Salary	Allowance	Total
1. Salaries and Allowances [a]			
a. PHCC	11,040	18,000	29,040
b. Clerk/typist	10,800	4,800	15,600
c. Statistician	8,400	6,000	14,400
d. Driver	13,200	7,200	20,400
Subtotal	43,440	36,000	79,440
2. Per diems [b]			6,000
3. Transport			67,443
a. Fuel [c]			
b. Vehicle maintenance and depreciation [d]			170,000
4. Office and Cleaning Supplies [b]			29,000
5. TOTAL			351,883

a. Based on MOH salary scales and civil service allowances. Some are different than now paid by the project.

b. MOH 1984 Budget.

c. Includes fuel for daily use and supervision (Sh. 33,120) other than amount included in CHW training program plus trips to Mogadishu for vehicle service and repair at L.C. (Sh. 34,323). Valued at 11.50 so.sh./liter.

d. Maintenance of CJ10 = 18%/year and replacement every 3 years.

Table A.2.4

Somalia Primary Health Care Project
Annual Operating Expenses for one Training Center[a]
(Shillings)

Item	Cost Per Year (1984 prices)		
	Salary	Allowance	Total
1. Salaries and Allowances[b]			
a. Principal	11,040	9,600	20,640
b. Tutor/Nurse	9,600	28,475[c]	38,075
c. Tutor/Midwife	8,400	28,475[c]	36,875
d. Tutor/Sanitarian	8,400	28,475[c]	36,875
e. Tutor/Lab Technician	8,400	28,475[c]	36,875
f. Cook	4,860	3,600	8,460
g. Asst. Cook	4,860	3,600	8,460
h. Laundress	4,860	3,600	8,460
i. 6 Watchmen	36,000	21,600	57,600
j. 5 Janitors	30,000	18,000	48,000
k. 3 Drivers	39,600	21,600	61,200
l. 1 Truck Driver (½ time)	6,600	3,600	10,200
m. Gardner	4,860	3,600	8,460
n. Generator Operator	9,600	4,800	14,400
Subtotal	187,080	207,500	394,580
2. Per diems[d]			12,360
3. Transport			
a. Fuel[e]			156,195
b. Vehicle maintenance and depreciation[f]			680,000
4. Generator Fuel[g]			580,860
5. Office and Cleaning Supplies			26,000
6. TOTAL			1,849,985

Insert. Table A.4.

a. Assumes training center operating as designed by the project and reflected in the MOH 1984 PHC budget. Where differences exist between the Baidoa and Burao expenses, a simple average has been used.
b. Based on MOH salary scales and civil service allowances. Some are different than now paid by the project.
c. MOH pays a hardship allowance, in addition to the normal allowance, to training center tutors.
d. For travel to Mogadishu. Assumes each tutor and principal travel 12 times per year with driver.
e. Includes: (1) daily petrol allowance (25 kms/day for 315 days); (2) 14 supervision trips to PHCUs and villages between training courses; and (3)/trip/mo per vehicle to Mogadishu for service and repair. Fuel valued at 11.50 So.Sh./liter. CJ10s at 7 kms./liter. Excludes fuel for training program field trips, which is included in other budgets.
f. Assumes 4 CJ10s. Maintenance = 18%/year/vehicle. Replacement every three years.
g. Figures for Baidoa generator in MOH 1984 operating 18 hours/day, revalued at 7 So.Sh./liter.

Table A.2.5

Somalia Primary Health Care Project

Annual Operating Expenses for One District Health Center[a]

(Shillings)

Item	Cost Per Year (1984 prices)		
	Salary	Allowance	Total
1. Salaries and Allowances[b]			
a. Nurse	9,600	7,200	16,800
b. Midwife	8,400	7,200	15,600
c. Sanitarian	8,400	7,200	15,600
d. Lab Technician	8,400	7,200	15,600
e. Driver	13,200	7,200	20,400
Subtotal	48,000	36,000	84,000
2. Per diems[c]			10,000
3. Drugs[d]			115,600-172,125
4. Other Medical Supplies[e]			22,100-88,400
5. Office Supplies[f]			6,755
6. Transport			
a. Fuel[g]			70,000
b. Vehicle maintenance and depreciation[h]			170,000
7. Uniforms			680
8. TOTAL			479,135-601,960

a. PHC operating as designed by the project. These costs include expenses of the DHC operating as a PHCU but exclude expenses not wholly devoted to the PHC functions of the DHC; these latter are included in part in the 1984 MOH budget for the districts.
b. Based on MOH salary scales and civil service allowances. Some are different than now paid by the project.
c. MOH 1984 budget. Includes trips to RMO to collect allowances.
d. Based on March 1984 MSCI drug order and RMU estimates. Both valued at UNICEF prices, plus 18% for shipping and handling.
e. Based on UNICEF and RMU estimates valued at UNICEF prices, plus 30% for shipping to Mogadishu.
f. MOH office supplies for PHC in 1984 budget.
g. Based on MOH 1984 fuel budget for supervision by DHCs of PHCUs, CHWs and TBAs, revalued at 11.50 So.Sh./liter, plus trips to Mogadishu for vehicle service and repair at the L.C.
h. Assumes one CJ10. Maintenance = 18%/yr. Replacement every three years.

Table A.2.6

Somalia Primary Health Care Project
Annual Operating Expenses for One PHCU[a]
(Shillings)

Item	Cost Per Year (1984 prices)		
	Salary	Allowance	Total
1. Salaries and Allowances[b]			
a. Midwife	8,400	7,200	15,600
b. Nurse	9,600	7,200	16,800
c. Sanitarian	8,400	7,200	15,600
d. Watchman	6,000	3,000	9,000
Subtotal	32,400	24,600	57,000
2. Drugs[c]			115,600-172,125
3. Other Medical Supplies[d]			11,050 - 26,520
4. Office and Cleaning Supplies			4,000
5. Uniforms			510
6. Transport[e]			--
7. TOTAL			188,160-260,155

a. PHCU operating as designed by the project. These costs are exclusive of training expenses for CHWs and TBAs.

b. Based on MOH salary scales and civil service allowances. Some are different than now paid by the project.

c. Based on 1984 MSCI drug order and DHU estimates. Both valued at UNICEF prices, plus 18% for shipping and handling.

d. Based on UNICEF and DHU estimates valued at UNICEF prices, plus 30% for shipping to Mogadishu.

e. Assumes staff finds own transport as needed and supervision of CHWs and TBAs undertaken in DHC vehicle with DHC staff.

Table A.2.7

Somalia Primary Health Care Project
Annual Operating Expenses for One Health Post[a]
(Shillings)

Item	Cost Per Year (1984 prices)
1. Salary	
a. CHW	6,000
b. TBA	7,200
2. Drugs[b]	10,030 - 15,045
3. Other Supplies[c]	1,326 - 3,315
4. Uniforms	340
5. TOTAL	24,896 - 31,900

a. Health Post operating as designed by the project. These costs are exclusive of expenses required for health education in the villages, such as charts, pictures and functional literacy pamphlets.

b. Based on 1984 MSCI drug order and RHU estimates. Both valued at UNICEF prices, plus 18% for shipping and handling.

c. Based on UNICEF and RHU estimates valued at UNICEF prices, plus 30% for shipping and handling.

Table A.2.8

Somalia Primary Health Care Project

Costs for Operating One 120-day Training Program
For DHC/PHCU Staff*

(Shillings)

Item	Unit Cost	Cost per course (1984 prices)	
		Baidoa[a]	Burao[b]
1. Start-off Packet	150	6,600	4,500
2. Manuals	100	4,400	3,000
3. Office Supplies		12,000	12,000
4. Food	60/day	316,800	216,000
5. Pocket Money	10/day	52,800	36,000
6. Fuel for Field Trips[c]		13,800[d]	5,900[e]
7. Total		406,400	277,400
Cost per student		9,236	9,247

a. Assumes 44 students per course, as planned by center.
b. Assumes 30 students per course, as planned by center.
c. Assumes one vehicle per trip for Burao and two vehicles per trip for Baidoa, and twenty trips per discipline per 120-day course. Fuel valued at 11.50 Sh/liter.
d. Assumes an average of 70 kms. per round trip.
e. Assumes an average of 60 kms. per round trip.

Table A.2.9

Somalia Primary Health Care Project

Operating Costs for ONE CHW Training Course[a]

(Shillings)

Item	Unit Cost	Cost per course (1984 prices)			
		50-day Course		90-day Course	
1. Start-off Packet	75	600		600	
2. Manuals	50	400		400	
3. Food	60/day	24,000		43,200	
4. Lodging	40/day	16,000		28,800	
5. Supervision: fuel[b]		Bay	Toghdeer	Bay	Toghdeer
- by DHC[c]		673[d]	1,084[e]	1,212[j]	1,952[k]
- by PHCC[f]		1,790[g]	1,479[h]	3,223[l]	2,661[m]
Subtotal: fuel		2,463	2,563	4,435	4,613
6. Total		43,463	43,563	77,435	77,613
Cost per CHW		5,433	5,445	9,679	9,702

a. Assumes 8 CHWs per course and that each secures transport to PHCU.
b. Fuel valued at 11.50 Sh/liter.
c. Assumes 1 trip every 10 days.
d. Bay: at an average of 82 kms./supervisory visit.
e. Toghdeer: at an average of 132 kms./supervisory visit.
f. Assumes 1 trip every 10 days.
g. Bay: at an average of 218 kms./supervisory visit.
h. Toghdeer: at an average of 180 kms./supervisory visit.

Table A.2.10

Somalia Primary Health Care Project

Operating Expenses for One Upgrading Course

(Shillings)

Item	Unit Cost	Cost per course (1984 Prices)	
1. Food	60/day	6,720	
2. Lodging	40/day	4,480	
3. Pocket money	10/day	1,120	
4. Supervision[b]		Bay 233	Toghdeer 158
5. TOTAL		12,553	12,478
Cost per CHW		1,569	

a. Assumes 8 CHWs spend 14 days at DHC.
b. Assumes one visit by PHLC.

Table A.2.11

Somalia Primary Health Care Project

Operating Costs for ONE TBA Training Course*

A. Basic Course (Shillings)

Item	Unit Cost	Cost per course[a] (1984 prices)			
		16-Session Course[b]		50-day Course	
1. Start-off packet	75	600		600	
2. Manuals	50	400		400	
3. Food	30-60/day	3,800		24,000	
		Bay	Toghdeer	Bay	Toghdeer
4. Transport: fuel[c]		3,733[d]	5,047[e]	368[d]	532[e]
5. Supervision[f]		1,074[g]	887[h]	2,865[g]	2,366[h]
6. Lodging[i]	40/day			16,000	
Total		9,607	10,734	44,233	43,898
Cost per TBA		1,200	1,342	5,529	5,487
Cost per day of training per TBA		75	84	111	110

B. Hospital Delivery Observation

Item	Unit Cost	Cost per course	
		3 days in Hargeisa	2 weeks in Baidoa
1. Food	60/day	1,400	6,700
2. Lodging	40/day	960	4,500
3. Transport: fuel		1,331[j]	716
4. Supervisor per diem	100/day	300	
Total		3,991	11,916
Cost per TBA		499	1,490
Grand Total Cost per TBA		1,699-6,028	2,832-6,977

page 2 - Operating Costs for ONE TBA Training Course

* Estimates have been rounded to the nearest 100 Shillings.

a. Assumes 8 TBAs per course held at completed PHCU sites.
b. Assumes 16 three-hour sessions spread over two months.
c. Fuel valued at 11,50 Sh/Liter. Assumes DHC vehicle collects TBAs from villages, transports them to PHCU and returns them to their villages, each session for 16 day course and at beginning and end for 50 day course.
d. Bay Region: Assumes an average of 71 kms. from DHC - village - PHCU.
e. Toghdeer Region: Assumes an average of 96 kms. from DHC - village - PHCU.
f. By PHCC: One trip every 6 sessions.
g. Bay Region: At an average of 218 kms/supervisory trip.
h. Toghdeer: At an average of 180 kms./supervisory trip.
i. Assumes TBAs are resident at PHCU center for entire course.
j. Assumes an average distance of 210 kms. round-trip from Burao training Center to villages plus 600 kms round-trip to Hargeisa.

Table A.2.12

Somalia Primary Health Care Project

Operating Costs for One TBA Upgrading Course[a]
(Shillings)

Item	Unit Cost	Cost Per Course (1984 Prices)	
1. Food	30/day	720	
2. Per diem[b]	100/day	200	
3. Transport[c]		Bay 430	Toghdeer 513
4. TOTAL		1,350	1,433
Cost Per TbA		169	179

a. Assumes 8 TBAs spend 3 days in upgrading at PHCU site, returning home each night.

b. For DHC trainer.

c. Assumes DHC Trainer stays at PHCU two nights and collects TBAs from villages each day and takes them back each night.

Appendix A.3

Recurrrent Costs: Data Base For Improved System

Table A.3.1

Somalia Primary Health Care Project

Improved System

Ministry of Health Budget for PHCP

Item	(So.Sh. '000) Cost Per Year (1984 prices)
1. Allowances[a]	682
2. Per diems	134
3. Transport	
a. MOHNO fuel[b]	96
b. Vehicle Maintenance and Depreciation	510
c. Other[c]	159
4. Office and Cleaning Supplies	358
5. TOTAL	1,939

a. Assumes salaries part of MOH ordinary budget and allowances only are considered for PHCP funding.

b. Assumes: (1) 3 CJ10s at MOHNO travel 40 kms each per day for 315 days per year; (2) district PHC vehicles used only for PHC work and are included in those budgets; (3) supervision of PHC by DMO outside those budgets occurs during the normal DMO travel and, thus, not PHC costs.

c. Air tickets and insurance for 24 passenger/vehicles and 3 trucks.

Table A.3.2

Somalia Primary Health Care Project

Improved System

Annual Operating Expenses for Logistics Center (Shillings)

Item	Cost Per Year (1984 prices)
1. Salaries and Allowances	
a. Logistics Officer	40,000
b. Chief Mechanic	37,000[a]
c. General Administrator	33,000
d. 3 Mechanics	59,400
e. Electrician	19,800
f. Pharmicist	15,600
g. Assistant Pharmacist	15,600
h. Storekeeper	12,000
i. Toolkeeper	12,000
j. Clerk-typist	10,200
k. 2 Janitors	16,900
l. 5 Watchmen	48,000
m. 2 Truck Drivers	40,800
SUBTOTAL	360,300
2. Per diems[b]	14,000
3. Transport	
a. Fuel[c]	126,341
b. Vehicle Maintenance and Depreciation	1,446,000
4. TOTAL	1,946,641

a World Bank pays Chief Mechanic 60,000 S.Sh./year; USAID Ag. Extension project pays Chief Mechanic 26,400 S.Sh./year plus allowance.

b Assumes: (1) two people on each supply delivery; seven days per delivery for Toghdeer and 4 days for Bay; and (2) one person/vehicle on each emergency trip. Per diems at 100 S.Sh./day.

c Assumes: (1) one drug and supplies delivery every three months by diesel truck to each PHCU. Kms. calculated at the average one one way distance between regional capitols and PHCUs X 16 plus round trip Kms. from Mogadishu; (2) two emergency truck deliveries to each training center per year; (3) three CJ 10 emergency trips per year to each center; (4) 40 Kms./day use of each LC CJ10 for 315 days per year. Diesel valued at 7 S.Sh./liter. Gasoline valued at 11.50 S.Sh./liter.

Table A.3.3

Somalia Primary Health Care Project

Improved System

Annual Operating Expenses for One PHCC Office (Shillings)

Item	Cost Per Year (1984 prices)
1. Salaries and Allowances	
a. PHCC	29,040
b. Administrator	20,640
c. HW Regional Coordinator	16,800
d. Statistician	14,400
e. Clerk/typist	15,600
f. Driver	20,400
SUBTOTAL	116,888
2. Per diems[a]	18,400
3. Transport	
a. Fuel[b]	68,853
b. Vehicle Maintenance and Depreciation	170,000
4. Supplies	29,000
TOTAL	403,141

a 100 S.Sh./night/month each for PHCC HW and driver. Per diem also for PHCC on drug deliveries to PHCUs + 1 day 4 X per year, plus 6 trips per year to Mogadishu.

b Assumes: one trip/week to a DHC + 2 PHCUs; one additional trip/week for supervision by the HW to a PHCU; 6,000 S.Sh. per year for daily use, and 6 trips per year to Mogadishu (17,161 So.Sh. per year).

Table A.3.4

Somalia Primary Health Care Project

Improved System

Annual Operating Expenses for One Training Center (Shillings)

Item	Cost Per Year (1984 prices)
1. Salaries and Allowances	
a. Principal	20,640
b. Tutor-nurse	38,875
c. Tutor-midwife	36,875
d. Tutor-sanitarian	36,875
e. Tutor-lab technician	36,875
f. Chief Mechanic[a]	34,800
g. Cook	8,460
h. Assistant cook	8,460
i. Laundress	8,460
j. 6 Watchmen	57,600
k. 3 Janitors	28,800
l. 3 Drivers	61,200
m. Storekeeper	12,000
SUBTOTAL	389,920
2. Per Diems[b]	6,180
3. Transport	
a. Fuel[c]	87,540
b. Vehicle Maintenance and Depreciation	680,000
4. Generator fuel[d]	258,160
5. Office and Cleaning Supplies	26,000
6. TOTAL	1,447,800

a. Burao only. Baidoa to have mechanic working with the Bay project mechanic.
b. Assumes six trips to Mogadishu/year per tutor and principal and driver.
c. Includes daily petrol allowance (25Kms/day for 315 days); and six trips per year per vehicle to Mogadishu.
d. Assumes generator operated for eight hours each day.

Table A.3.5

Somalia Primary Health Care Project

Improved System

Annual Operating Expenses for One District Health Center (Shillings)

Item	Cost Per Year (1984 prices)
1. Salaries and Allowances	
a. Nurse	15,600
b. Midwife	15,600
c. Sanitarian	15,600
d. Lab Technician	15,600
e. Driver	20,064
SUBTOTAL	82,464
2. Per diems [c]	2,400
3. Drugs [b]	100,300-162,996
4. Other Medical Supplies	22,100 - 88,400
5. Office Supplies	5,755
6. Transport	
a. Supervision of PHCUs, CHWs and TBAs [a]	46,631
b. Vehicle Maintenance and Depreciation	170,000
7. Uniforms	680
8. TOTAL	431,330- 560,326

a. For one emergency trip per month to the regional hospital, with driver.

b. Based on some changes in the 1984 MSCI drug order and RHU estimates, both valued at UNICEF prices, plus 13% for shipping and handling.

c. Assumes one trip per month to each PHCU, plus a few villages. Sanitarian travels an additional two times/week to villages. One emergency trip per month to the regional hospital. Vehicle goes to training center once per month for service and repair.

Table A.3.6

Somalia Primary Health Care Project

Improved System

Annual Operating Expenses for One PHCU (Shillings)

Item	Cost Per Year (1984 prices)	
1. Salaries and Allowances		
a. Midwife	30,000	
b. Nurse	32,000	-33%[a] = 61,364
c. Sanitarian	30,000	
d. Watchman		9,600
SUBTOTAL		70,964
2. Drugs[b]		57,851-94,027
3. Other Medical Supplies		11,050 - 26,520
4. Office and Cleaning Supplies		4,000
5. Uniforms		510
6. TOTAL		144,375-196,021

a Assumes each PHCU will, in fact be staffed by two people performing the duties of the three disciplines.

b Based on some changes in the 1984 MSCI drug order and RHU estimates, both valued at UNICEF prices, plus 18% for shipping and handling.

Table A.3.7

Somalia Primary Health Care Project

Improved System

Annual Operating Expenses for One Health Post (Shillings)

Item	Cost Per Year (1984 prices)
1. Salary	
a. CHW	7,200
b. TBA	8,400
2. Drugs[a]	8,840-14,293
3. Other Medical Supplies	1,326 - 3,315
4. Uniforms	340
5. TOTAL	26,106-33,548

a Based on some changes in the 1984 MSCI drug order and RMU estimates, both valued at UNICEF prices, plus 18% for shipping and handling.

Table A.3.8

Somalia Primary Health Care Project

Improved System

Costs for Operating one 120-Day Training Program[a] for DHC/PHCU Staff

Item	Unit Cost	Cost Per Course (1984 prices)	
1. Start-off Packet	150	4,500	
2. Manuals	100	3,000	
3. Office Supplies		12,000	
4. Food	60/day	216,000	
5. Pocket Money	10/day	36,000	
6. Transport for Field Trips[b]		BAIDOA	BURAO
		6,900	5,900
7. TOTAL		278,400	277,400
Cost per Student		9,280	9,247

a Assumes 30 students per course.

b Assumes one vehicle per trip in both centers.

Table A.3.9

Somalia Primary Health Care Project

Improved System

Operating Costs for One CHW 50-Day Training Course[a] (Shillings)

Item	Unit Cost	Cost Per Course (1984 prices)	
1. Start Off Packet	75	1,500	
2. Manuals	50	1,000	
3. Food	60/day	60,000	
4. Lodging	40/day	40,000	
5. Pocket Money	10/day	10,000	
6. Supervision fuel[b]		BAY	TOGWDEER
		1,117	789
TOTAL		73,617	73,289
Cost per CHW		3,681	3,664

a Assumes 20 CHWs per course, held at DHC.

b Assumes 1 trip every 10 days by PHCC. Some of these visits will coincide with the regular supervisory visits of the PHCC, so the fuel costs are somewhat overstated.

Table A.3.10

Somalia Primary Health Care Project

Improved System

Operating Costs For One CHW Upgrading Course[a]

(Shillings)

Item	Unit Cost	Cost Per Course (1984 prices)	
1. Food	60/day	16,800	
2. Lodging	40/day	11,200	
3. Pocket Money	10/day	2,800	
4. Supervision Fuel[b]		BAY	TOGWDEEM
		233	158
5. TOTAL		31,033	30,958
Cost per CHW		1,552	1,548

a. Assumes 20 CHWs spend 14 days at UHC.

b. Assumes one visit by PHCC.

Table A.3.11

Somalia Primary Health Care Project

Improved System

Operating Costs for One TBA Training Course[a] (Shillings)

Item	Unit Cost	Cost Per Course (1984 prices)	
A. Basic Course			
1. Start off packet	75	600	
2. Manuals	50	400	
3. Food	30/day	3,800	
		BAY	TOGNDEER
4. Transport Fuel		3,733	5,047
5. Supervision fuel		1,074	867
6. Total		9,607	10,734
7. Cost per TBA		1,200	1,342
8. Cost per Day of Training per TBA		75	84
B. Hospital Delivery Observation			
		3 days in Hargeisa	2 weeks in Baidoa
1. Food	60/day	1,400	6,700
2. Lodging	40/day	960	4,500
3. Transport fuel		1,231	716
4. Supervision per diem	100/day	300	--
5. TOTAL		3,921	11,916
Cost per TBA		490	1,490
Grand TOTAL cost per TBA		1,641	2,832

a. Assumes 8 TBAs/Courses; 16 3 hour sessions held at PHCU site.

Table A.3.12

Somalia Primary Health Care Project

Operating Cost For One TBA Upgrading Course[a] (Shillings)

Item	Unit Cost	Cost Per Course (1984 prices)	
1. Food	30/day	720	
2. Per diem[b]	100/day	200	
		BAY	TUGHDEER
3. Transport		430	513
4. TOTAL		1,350	1,433
Cost per TBA		169	179

a. Assumes 8 TBAs spend 3 days in upgrading at PHCU site, returning home each night.

b. For DHC trainer.

c. Assumes DHC staff member stays at PHCU two nights and collects TBAs from villages each day and takes them back each night.

Appendix A.4

Table A.4.1

Somalia Primary Health Care Project

Key Distances

	KILOMETERS	
	One Way	Roundtrip
1. Mogadishu to Baidoa	281	562
2. Mogadishu to Burao	1,460	2,920
3. Burao to Hargeisa	300	600
4. Baidoa Training Center to:		
a. PHCUs (218 Km RTrip = Average distance Trg.Ctr. to PHCU; add 30 Km RTrip to villages)		
(1) Bur Haybe	105	210
(2) Ufurow	112	224
(3) Yaq Baxar	211	422
(4) Berdaale	60	120
(5) Buulofuley	177	354
(6) Dooybaab	101	202
(7) Buurteybe	101	202
(8) Bisiqladde	81	162
(9) Gorisane	45	90
(10) Gofgaduubuuray	30	60
(11) Awdiine	30	60
(12) Karabood	60	120
(13) Xabaalo	130	260
(14) Hisra	145	290
(15) Gurbon	145	290
b. District Health Centers (136 Km RTrip = Average distance Trg.Ctr to DHC)		
(1) Baidoa	0	0
(2) Buurahkabe	61	122
(3) Konsedera	90	180
(4) Dinsor	120	240
5. Bay Region DHCs to: (Add 15 Km one way and 30 Km RTrip to villages)		
a. PHCUs (82 Km RTrip = Average distance DHC to PHCU)		
(1) Baidoa To:		
(a) Gorisane	45	90
(b) GofgaduudBuuray	30	60
(c) Awdiinle	30	60
(d) Berdaale	60	120/82average
(2) Buurahkabe to		
(a) Buulotuley	116	232
(b) Dobybaab	40	80
(c) Buurte/te	40	80
(d) Bisiqladde	20	40/108 average
(3) Konsedera to.		
(a) Ufurow	10	20
(b) Karabood	30	60
(c) Xabaalo	40	80/53 average

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(4) Dinsor to:		
(a) Misra	25	50
(b) Yaaq Barroway	64	128
(c) Shidkuus	50	100
(d) Gurbon	25	50/82 average

6. Burao Training Center to: (Add 30 Km RTrip to villages)

a. PHCUs (Average from Trg.Ctr. = 90 one way and 180 round trip)

(1) Gee Loker	90	180
(2) Suq Sade	68	136
(3) Megalayor	60	120
(4) Ainabo	120	240
(5) Qorilugud	85	170
(6) Warabeye	76	152
(7) Godaweyene	91	182
(8) Widh Widh	115	230
(9) Durugsi	110	220
(10) Harosheek	90	180
(11)		
(12)		
(13)		
(14)		

b. District Health Centers (Average from Trg.Ctr. = 48 one way & 96 round trip)

(1) Burao	0	0
(2) Sharkh	60	120
(3) Odwine	45	90
(4) Buuhoodle	85	170

7. Toghdeer Region DHCs to: (Add 30 Km RTrip to villages)

a. PHCUs (132 Km RTrip = Average distance DHC-PHCUs)

(1) Burao to:		
(a) Warabeye	76	152
(b) Meqalayor	60	120
(c) Durugsi	110	220/164 average
(2) Shaikh to:		
(a) Geelokor	30	60
(b) Suqsade	26	52
(c) Godawenye	150	300/137 average
(3) Odwine to:		
(a) Harosheek	40	80
(4) Buuhoodle to:		
(a) Qorilugud	20	40
(b) Widh Widh	30	60
(c) Ainabo	120 (from Burao)	240/ 113 average

APPENDIX A.5

PLANNING BUDGETING AND MANAGEMENT

In order to put the PHC project within the national context of Somalia, it is necessary to briefly describe the planning, budgeting and management systems in Somalia, insofar as they are relevant to the health sector and the project. Evaluating the ability of the Somalia Government to take over the financial and management burdens of the project, depends on an understanding of the national systems. In Somalia's case, these systems are complicated and change fairly frequently. Many of them are inconsistent with one another and there is a tendency, especially on the part of foreign donors, to operate their projects on an ad hoc basis relative to those systems. That is, donor financial and management decisions are made when required and fit into whatever budget that seems to be appropriate at the time. This, we found, is partly due to a general lack of knowledge about how the Somali systems work.

There are currently some steps being taken to revise the national budgeting and public finance systems.

1. PLANNING

The Five Year Plan is the responsibility of the Ministry of Planning. Projects are generated by the technical ministries, e.g., the Ministry of Health. If a project is fully foreign financed, it is more or less automatically included in the plan. If there is a local cost component to a project, the MOPA evaluates the project in terms of overall development resources available during the plan period. These local costs are evaluated by the Ministry of Finance during the planning process and are subject to its approval. Most projects are almost entirely foreign-funded during the development phase. When foreign funds are in grant form, MOF negotiates with foreign donors and signs for the government when agreements are reached. When foreign funds are in loan form, the MOF negotiates and signs.

Most major sectors - agriculture, livestock, industry, etc. - are represented by a technical specialist in the MOP. Health is one of the exceptions; no one in the MOP specialises in health. Thus, all the health sector inputs for the development plans, their revision and evaluation, emanate from the MOH. This usually means that donors prepare projects and submit them to the MOP and MOF. The annual analysis of projects undertaken by the UNDP team in the MOP depends entirely on material submitted by the MOH, in the case of health. The five year plan for the MOH was undertaken independently of, and not coordinated with, the MOP. Currently, there is a Three Year Plan which was used as a negotiating document at the 1983 Paris donors' conference. An annual plan is drawn up by the MOP by calling forth

project implementation plans from the technical ministries. The approval process with respect to foreign and local costs that applies to the long-term plans also operates with respect to the annual plan.

There is no analysis, either for the annual or long-term plans, of the capacities of the economy to implement the projects or absorb the outputs. That is, the construction, port, storing, and shipping capacities and manpower availibility required to implement the development phases of the projects and to continue them after technical assistance is withdrawn, are not evaluated in any phase of the planning process. This proves to be a major weakness which reverberates throughout the development and subsequent phases of activities. Sometimes local counterparts are not available for the projects and other times counterparts do not have any of the background or expertise required for their posts. In still other cases, background and training are not appropriate to the needs of the project. This has been the case on many aspects of the PMCP.

When decisions must be made to reduce the number of projects in the long-term or annual plans, or to cut funding within some projects, several procedures may be followed: (a) MOF may cut projects with relatively large amounts of local costs; (b) an across-the-board percentage cut may be used as a directive to the technical ministries by the MOF; (c) negotiations may take place between technical ministries and the MOF on local costs; and (d) individual technical ministries may go directly to the President in order to save a project, especially those with high local costs.

There are two main consequences of this planning and decision-making system with respect to the PMCP. First, projects that must be fully-supported by the GSM (i.e. after the development is complete) will have a difficult time competing for scarce funds with development phase projects that have a high foreign support component. Put another way, recurrent costs in support of activities receive a lower priority than the GSM share of development costs. Second, in the competition for funds, high priority sectors and strong ministries have the advantage. In both respects - health and the MOH - are weak.

Local government planning and funding is worth mentioning as background. Although local government plans are presented to the MOF through the Ministry of Local Government and Regional Development, the MLGRD does not possess the capacity to undertake the planning itself. Thus, the districts formulate the plans. They also mobilize revenues and formulate budgets for both the regional development councils and their portion of the MLGRD budget. The projects themselves come to the district from the villages, through the Local Peoples Assembly. The district projects pass through the regional development councils before going to the MLGRD.

Local governments have a long history of supporting development efforts in Somalia. For example, the 1974-75 rural development campaign and the 1979-81 community development projects were nearly entirely financed by local governments. Revenues can be raised through local taxes, fees for piped water and profits from various commercial activities. Local mayors are important people in the district level development efforts. Poor districts are eligible for assistance from the central government, a decision made each year by the MOF when reviewing local applications for

central support. One of the activities local governments have supported throughout the years is health. The Local Peoples Assembly is responsible for the "maintenance of public health through sanitation and prevention of contagious disease"(1) ; they also build dispensaries. Village level self-help projects go through the district development budgets and needed materials and other support are funneled back to these projects through the district.

2. BUDGETING

a. GENERAL

In addition to the development planning and budgeting already discussed, recurrent budgeting practices are important to outline. In general, the budgeting system for the local cost component of development phase activities and the recurrent costs of projects and non-project activities wholly operated by the GSDR is a process of building from the bottom upwards. District, regional and ministerial accounting offices draft various budgets (or, sometimes single budgets with various components for specific activities) which are submitted to the level above. These are discussed within the ministry in question before being submitted to the MOF for annual funding. Thus, for example, the accountant in the District Medical Office will draft district budgets for the PHCP and local costs in his district and budgets for other MOH activities outside the PHCP. In the end, these budgets all go to the MOF. Budget meetings are held between the MOF and each ministry and what has occurred in the last several years is that the MOF allocates funds to each ministry by adding a percentage to the previous year's budget.

Although this system is unlike those in other Third World and many developed countries, there is virtually no budgetary analysis or planning at any level. The country has no financial planning and no foreign exchange planning. Thus, no effort is made to match GSDR expenditures to development priorities, social policies or growth potentials. Whether or not a particular project or activity receives funds from the MOF depends on decisions made outside the economic analytical and formal policy spheres. On the foreign exchange side, only the crudest form of project budgeting (usually at the project paper level) is used to indicate the foreign exchange component of the GSDR's contribution. No attempt is made to examine the long-run foreign exchange implications to the GSDR of the recurrent costs of particular projects. In the case of the PHCP, this is a key omission, since drugs, medical supplies, spare parts, vehicles and fuel are large parts of the recurrent costs. Further, ministries are not required to indicate the foreign exchange portion of budgets they submit, either for the GSDR contribution to specific projects or non-project ministerial budgets. As a result, the MOF and Central Bank have no accurate view of the country's foreign debt, or even payment schedules. When a telex is received that a payment is due a donor, the payment is made, if exchange is available. If foreign contributions to a project are in-kind, rather than in the form of direct cash, the values are not included in the GSDR budgets. Finally, donor aid is sent directly to implementing ministries.

However, the relationship between donors and ministries is neither simple nor consistent on budgetary matters. Donors make differing

contributions to projects (not particularly unusual). But they are not required to coordinate their budgeting or spending with the implementing ministry. Spending schedules over the life of projects - to the extent that they exist at all - are not given to, or worked out with, the ministries. Accounts are not subject to ministry examination or approval and, often, summary reports are not even given to the ministries on the amounts spent by donors on specific projects. UNICEF project budgets, for instance, are prepared regionally and go through the local UNICEF offices and on to headquarters, passing through the MOH. Many expenditures are financed out of UNICEF funds allocated to the country and specific accounts for specific projects are not kept on many expenditure categories. Some donors fund all salaries and allowances of local staff on their projects; others pay only allowances; neither are consistent from one donor to another or even within various projects funded by the same donor. Still others pay a combination of some salaries and some allowances. This latter practice is followed by USAID on the PHCP. As there is no monitoring system, many donors report suspicions that the same people are given salaries and allowances on several projects. Whether or not the same people appear on more than one project budget was not pursued by the team, nor was the question of what was done with the funds that might be received in this duplication process.

b. PHCP BUDGETING

For the PHCP there are three budgeting and spending bodies: USAID, MSCI and the MOH. From the inception of the project until late 1982, USAID was responsible for purchasing project commodities. In addition, it contracted for project construction (with non-Somali contractors), paid for overseas training and hired some consultants. At this time, USAID does little direct spending on the PHCP except with respect to construction and major building maintenance. MSCI was responsible for all technical assistance expenditures from the beginning and took on commodity procurement in late 1982. Nearly all of its expenditures are made out of the home office in Virginia. There is a local imprest account operated by the COP and his accountant in Mogadishu. MSCI/Virginia, transfers funds on a monthly basis to a local MSCI bank account in Mogadishu, out of which payments are made for local labor (as needed for specific tasks and as staff members for the COP office), communications, office supplies, local travel, etc. The MOH is responsible for: local salaries and allowances for all Somalis on the PHCP, per diems, all project fuel, supplies for the various units, some construction (with Somali contractors), vehicle insurance, internal air travel and vehicle and equipment maintenance and depreciation.

The MOH budget for the PHCP is drawn up with the aid of MSCI COP. This budget is submitted to USAID/Mogadishu for scrutiny on a line item basis. Problems are discussed between USAID and the MOH. The agreed upon budget is then submitted to an administrative unit of the Generated Shillings Proceeds Committee for further scrutiny and a final decision. The GSPC is a four-member body (two from MOF and two from USAID) created to oversee the expenditure of funds generated by the Commodity Import Program and the PL 480 Title I Program. According to the USAID Program Officer in Mogadishu, these funds are to be used exclusively in support of specific projects fundable under guidelines agreed-upon by GSDM and USAID and are

not for commodities or labor not wholly within a fundable project. Once final agreement is reached, funds are transferred from the CIPL account to the MOH account in the Central Bank. A special CIPL unit (of USAID and Somali personnel) monitors the expenditures under the account.

3. SPENDING

On the expenditure side of the PHCP, there are various levels of complexity. USAID project funds expenditures are fairly straight-forward and follow well-defined procedures. MSCI/Virginia makes expenditures along major budget categories, securing bids on commodities and depositing monthly amounts to the MSCI/Somalia imprest account. MSCI/Mogadishu spends its own funds (has its own accountant), as well as utilizing its fuel allowance from the MOH.

The MOH system of expenditures on the PHCP is extremely complex. The ministry receives quarterly deposits in its account at the Central Bank from the MOF. These are based on "needs", rather than a percentage of the annual approved project budget (CIPL financed). The MOF accountant working in the MOH, in turn, makes deposits to the regional accounts of the MOH; these are managed by regional accountants (also MOF employees but paid for by the MOH) in the Regional Medical Officer's office. Further deposits are made to the District Medical Office accounts (sometimes in a local bank and others in the post office) by the regional accountants. At the regional level, the Primary Health Care Coordinator (working out of the RMO's office) oversees the expenditures of the training centers at Baidoa and Burao. These are, essentially, petty cash expenditures. Fuel expenses are paid by the PHCC's office to the local branch of the Somalia National Petroleum Agency. Users (RMO, PHCC and the training centers) draw on quarterly allocations through a chit system. The fuel system is duplicated at the district level. Salaries are paid by the regional accountant/PHCC office and district accountants, respectively. Allowances, however, are paid only by the regional accountant, and district PHCP employ (both in the DMO's office and in the PHCUs) must travel to the regional capital to receive their allowances.

Food and per diem expenses are paid on a reimbursement basis. On the MOH expenditures in Mogadishu, vouchers are submitted to the Central Bank, who then makes the payment to the vendor. A payroll is made up for MOH central employees and those in the regions and districts. This is submitted by the MOF accountant to the Central Bank, who issues cash to the MOH cashier, who pays employees in Mogadishu. The Bank sends regional and district payrolls, by check, to those levels.

Monthly accounts are prepared by all spending units and submitted to the appropriate overseeing bodies. However, as will be pointed out below in more detail, there is no accounting system, either physical or financial, for commodities.

4. MANAGEMENT

Project management is undertaken in the usual manner in Somalia. Functions are divided among the donor agency, project contractors and divisions within GSDR ministries. For the PHCP, USAID manages through a

project officer within the health division of the Mogadishu Mission. Accounts are managed by the controller, and program officer is one of USAID's representatives on the GSPC (CIPL funds committee). The project officer's management is supported by a division head, a contracts officer and the engineering officer. MSCI has a record of USAID contracts in the public health sector. In Virginia, a commodities procurement section manages procurement. Project management is undertaken by two officers, one of which is senior, but neither work on the PHCP on a full-time basis. MSCI/Mogadishu manages its side of the project through a COP (a senior health professional), and a Logistics Management Officer. The PHCP is within the Primary Health Care division of the MOH. The PHC Director and Deputy Director manage the MOH side of the project. All PHC projects fall under this division. The division is responsible to the higher authorities in the MOH. The PHCC manages the PHCP at the regional level. This is done in conjunction with the RMO at regional level and the DMO at the district level. Each training center has a principal, who is responsible to the PHCC, and manages the day-to-day aspects of the center. Center tutors are responsible to the PHC division of the MOH.

5. DEVELOPMENT AND RECURRENT EXPENDITURES: HEALTH RELATIVE TO OTHER SECTORS

It is not possible to present an enlightening analysis of Somalia's development and recurrent budgets. As noted previously, many segments of foreign-aided projects are left out of the development budgets. Local contributions to these projects are, variously, under and overstated and there is no guarantee that a project budget used as part of the Project Agreement between donors and the GSDR in turn becomes the basis for the figures used in the actual project development budget. Further, there are lags between decisions made with respect to projects and their receipt as information by the MOF. Until 1984, the CIPL budget contributions were not included in the national budget estimates and we were unable to discover to what extent this has been and still is true for other projects. It is also not clear, from talking with PHCP accountants, vendors and employees, whether all the budgeted funds actually reach their budgeted destination. There is some indication that funds are transferred among ministries by the MOF after the budget is passed, and MOH accountants clearly stated that project funds were moved among projects within the ministry, as the need arose.

It is also well understood that Somalia's overall financial position over the past several years has been bad and continues to deteriorate. The debate between the GSDR and the IMF has further undermined Somalia's financial position, deepening the severe foreign exchange shortage.

Although no accurate quantative picture can be presented, it may be stated that health has ranked ninth in terms of sectoral development expenditures for the past few years, behind all the economic sectors (except forestry), water, transport and communications, trade and education. This position is projected to remain the same for the next several years. Its ranking was several notches lower - near the bottom of all ministries, before the injection of funds from the USAID Primary Health Care project in 1983. For the 1984-86 period, the project is expected to represent 24% of the total health public investment program and 3% of the

Primary Health Care program.

On the recurrent expenditures side health as a ministry has ranked fifth or sixth since 1978, behind defense, finance, police and education. There are no accurate data on the recurrent costs of PHC projects, but the PHCP actual expenditures in 1983 were 3% of total health recurrent expenditures.

APPENDIX B1

Health Information in the PHCP

Current state of health information in the project regions

The health information available on Bay and Toghdeer regions is sparse. The epidemiological data necessary for appropriate health planning (including the determination of adequate empiric approaches to disease) and for the monitoring of program progress is severely deficient. Estimates of disease incidence and prevalence and infant and child mortality rates must be inferred from national estimates and clinical observations.

Accurate population data for either region are not available. The 1975 census figures are inadequate and official figures have not been released. Somali authorities point out that the census was taken during a time of drought and resulted in significant undercounting of the nomadic population. The 1975 preliminary census figures contrast with the estimates used by the Ministry of Planning and those used in the Smallpox Eradication campaign:

Population Estimates of Bay and Toghdeer Regions

Region	1975 Census	Smallpox Eradication	MOP-1984
Bay-rural	241,000		
-town	61,000		
total	302,000	497,000	450,986
Toghdeer-rural	240,000		
-town	18,000		
total	258,000	270,000	383,867

Village and town censuses (house to house) conducted by PHCO trainees from the program, under the direction of the MSCI technical advisers, provide reasonably accurate estimates of settled populations at one point in time (in a minority of villages). Similar demographic data has been obtained in the Bay region by the University of Wyoming socioeconomic study and may be obtained in preliminary form by spring. These population figures should be cumulated in one location for project use. A national census is being planned with assistance by the U.S. Bureau of the Census in 1985 or 1986.

Insight into the appropriateness of dividing the population

into nomadic and settled can be obtained from Abby Thomas' reports on Toghdeer region(13). For instance, boys and men travel with camel herds until they marry then assume a more settled existence although still involved in the direction of herd movements. Some towns flourish during part of the year and are mostly abandoned in other months. It is difficult to predict to what extent the PHCUs and village health worker staff will provide primary health care coverage to the nomadic and semi-nomadic population since this will depend on the choice, location and number of village health workers trained as well as their orientation. Experience reported from the Northwest and Sanaag PHC projects is encouraging in that some CHWs have been traveling with nomadic groups to provide care. Some PHCU sites have been chosen where large numbers of nomads and semi-nomads gather with their herds during the rainy season.

Several estimates of infant and child mortality in the Bay region will be available from the Westinghouse Family Planning Survey (now being analyzed) and the Bay socioeconomic study. The Bay project (University of Wyoming) has been using a stratified multistage cluster sample of village households. They use well trained interviewers to administer household and women's questionnaires. The household questionnaire, in addition to a large volume of information on economic and social parameters, asks informants what is done when a household member is sick; who is consulted, what is done and how much is paid for these services. Deaths in the last year and a stated cause of death are recorded.

Data from population-based studies of disease incidence and prevalence are not currently available for either region. However, a 1981-1982 WHO population based survey collected blood smears for malaria, sputums for TB, and stool and urine examinations for parasites. Results are not yet available. WHO in Somalia has been trying to develop hospital and clinic based surveillance of communicable diseases and will be including the Bay region in their project. This data should also be made available to the PHCP.

An MSCI consulting epidemiologist assessed the health problems of the northern nomads for 6 months in 1981. His report summarized a portion of the relevant literature and reports from informants in Somalia. Important omissions in this report include a complete literature review and an assessment of the validity of the data summarized. No surveys to generate new data were performed although several were recommended. These recommendations have not been followed by the project nor have any population-based surveys of disease prevalence been undertaken.

Several simple surveys would have been very helpful to assess baseline health conditions at the beginning of the project and are still greatly needed at this stage. The results of these and comparisons on repeat would provide valuable information on the efficacy of the project health interventions and would help assess the validity of the developing disease surveillance system. The current surveillance system consists of clinic registries (morbidity reporting). Birth and death reporting is frequently mentioned in progress reports but there is little evidence that reports are being made. It will be some time before the surveillance system provides solid information and there will always be limitations to clinic-based morbidity information. Like many developing countries, Somalia's health information system will have to rely for a period on periodic surveys to supplement the surveillance system in order to obtain the information needed for health planning and replanning.

Forms proliferate in this project for reporting information related to health indicators, including many vestigial forms from the first two years of the project. Many of the forms in use at the district MCH used by the PHC staff are titled PHC forms but are identical to MCH forms used in areas without primary health care programs. The same is true of the district outpatient clinic morbidity reporting forms. In addition, some forms have been modified in the two regions. There are forms in the back of the MOH CHW manual which are not yet in use. Each discipline-nursing, sanitation and midwifery- has forms peculiar to their work with the sanitarians using more than 10 survey forms (for water, solid waste disposal, health facility inspection, etc), an epidemic investigation questionnaire, a broad village assessment form, and a census form (including economic questions, +/- latrine, etc). Altogether we counted about 40 forms (if regionally modified forms are counted separately). At the PHCMO, 7 forms are tabulated from quarterly reports from the districts but there seems to be no other analysis (and there are errors even in this.) Attempts to assess the collation and analysis at the regional PHCC's office were frustrated by the absence of the RPHCC in Baidoa and the misfortune that the accountant who had been tabulating the health statistics in Burao had left town weeks before with the key to the thick lock on the file cabinet and was not expected to return.

Several forms could not be found. One monthly report mentioned that the epidemiologist in 1981 had developed birth and death reporting forms that had been introduced into the national office at the same time statistical training was provided to a group of statistical clerks. No one recalls these specific forms. There is no central tabulation of births and deaths in any form

although in the field the forms are occasionally filled out. Death registration sometimes occurs with local government because of requirements for a burial permit but this does not appear to have been utilised yet to obtain mortality information.

New forms are being devised by a recently acquired WHO consulting statistician who is working with the Department of Statistics in the MOH. He has started on an ambitious plan to field test new birth and death forms, an MCH and dispensary clinic registry and a CHW contact diary in similar format to the clinic registry: serial #, date, visit #, name, address, symptoms, Diagnosis (with space for supervisor to fill in dx based on symptom reporting) and action. He plans a field visit soon to test whether CHWs in nearby regions are able to fill out the diary then will begin field testing of forms in several regions before a presentation for institution on a nationwide basis later this year.

Clinic- based morbidity reporting is currently only available from the district town MCH and outpatient clinics. With the opening of PHCUs, registry data should also be available from these locations and soon from the diaries of the CHWs. The limited clinic morbidity information does not appear reliable with wide variations in the numbers of tetanus cases (contrasting with all DMOs reporting having seen almost no tetanus) and no indication, for instance, of whether tuberculosis cases are new cases or returns for treatment. For some reason several quarterly reports suddenly list no anemia from the outpatient clinics. There is no evidence that this morbidity information is being analysed and used for feedback to health personnel or for health planning.

The records of immunisations are limited to tabulations from the district towns despite some village immunisation in both regions. Health education (by topic, attendance and teacher) and community assessments (#health facilities surveyed, # wells surveyed, #new latrines, # wells dug etc) are tabulated in the same manner as morbidity reports. Village assessments include inquiry into perceived health priorities. The village committees are usually the informants and often listed animal health as the first priority.

Deriving an estimate of the rates of diseases in the community from morbidity reports is fraught with the usual hazards

1. <u>Inadequate resources</u>: poor logistics and lack of trained personnel to collate and analyse the data

2. <u>Numerator problems</u>
   a. Not all persons with disease contact the health

system (there is an exponential decline in attendance at clinic with distance from home in most countries; many people choose traditional healers for certain or all illnesses).

b. Accuracy of reporting is often inadequate. Reporting is the responsibility of health workers without full diagnostic training and often inadequate validation and supervision of diagnosis exists. Diseases vary as to the ease of diagnosis. Diagnosis is also more difficult when there are multiple infections or co-existing malnutrition.

3. Denominator problems
   a. Inaccurate census or demographic data
   b. True catchment area of health center is difficult to determine
   c. Population movements

General requirements for health information in a primary health care system

Basic health indicators should measure progress toward intermediate and final targets in the attempt to provide some degree of health for all.

Health information in a primary health care system should be simple, should not impose excess burdens on a fledgling system, and should provide information which can actually be used for planning and the education and direction of the health worker.

Plans for gathering information within the health care system should include deliberate identification of the reason for obtaining the information and plans for where it will be analysed and used. Information needs for primary health care fall into several categories:

1. Demographic data- to determine resource allocation and denominators for rates

2. Health status- morbidity and mortality rates, prevalence and incidence of key diseases, etc.

3. Health services and activities- outputs (e.g. clinic visits, immunizations, etc.)

4. Community health- information on community health practices environmental hazards, perceived priorities(1).

The ultimate question regarding a health programs is whether it causes peoples' health to improve. A scientific answer requires precise measurement of key health status indicators and appropriate study design. Routine health service programs must aim first at the timely and useful monitoring of inputs and outputs and supplement this with periodic survey assessments of more direct health indicators such ass the infant mortality rat .

Program activities can be measured in terms of volume, coverage, quality, effectiveness and efficiency(1). Information priorities must be set and focus on problems that are remediable. However, it should be kept in mind that health workers' behavior is often adjusted to data requirements. For example, if reporting emphasizes easily quantifiable measures such as the number of new latrines, supervision must also monitor latrine use. If the reporting of the amount of ORS dispensed is requested, supervisors must also monitor its proper mixing and administration.

Supervision and the health information system in a primary health care system should reinforce priorities and avoid an overemphasis on disease and its cure. Methods should be incorporated to assess the mix of preventive, health promotional and curative activities . This mix should reflect the priorities in health and what can be achieved through simple primary health care interventions.

Suggestions for improving the health information in the PHCP

(1) Surveillance Reduce the number of forms, simplify those already in use and concentrate on improving the reliability of disease reporting. Institute any cha ges gradually after extensive pilotting.

Ie few relevant health indicators as possible should be concentrated on. Close attention to improving the reliability of reported symptoms should be pursued both in staff training and ongoing supervision.

Although surveillance systems usually rely on univer al clinic and hospital based morbidity reporting, a selective surveillance system to meet the situation and needs of a developing PHC system may be more appropriate. For example, a few selected PHCUs or health posts can be chosen on the basis of the quality of information available and staff willingness to put extra energy into the reporting system. These become sentinel sites to provide augmented information. Similarly, long-term surveillance of a selected population (e.g. sentinel households) can provide improved information on morbidity and mortality patterns.

(2) Surveys Supplement the surveillance system with several simple surveys to estimate population rates of important health indicators. Surveys can address important problems where the PHCP needs more information to plan or promote health activities or to provide baseline data as disease control activities are begun. Repeated surveys will provide more reliable information than passive surveillance at this stage in the development of a health system and have the additional advantage of orienting health staff to the prevalence of disease in the population, not just those who come to clinic. The surveys should be done by Somali staff after further training in field epidemiology.

The following questions, for instance, would be useful to answer:

What are the infant and child mortality rates? (retrospective one year mortality survey)

How widespread is malnutrition in the community? (simple nutritional survey)

What is the annual risk of infection with tuberculosis? (periodic Tine surveys in schoolchildren)

How widespread is bottlefeeding? What are the risk factors for it and what is the relative risk of diarrhea in bottlefed infants?

How widespread is deliberate undernutrition in late pregnancy to avoid birth complications? Does this correlate with growth in offspring? What are the risk factors for this practice?

What is the incidence of neonatal tetanus? Does it justify a campaign to immunize women of childbearing age- what priority should this have? Active case detection of neonatal tetanus by cluster sampling techniques is preferable to reliance on counting cases which present to a health facility. This disease causes death at home which is often not reported. The striking nature of the clinical syndrome allows incidence to be assessed by sample surveys.

What is the coverage of the health services-- how many Somali nomads and villagers know a CHW, have attended a PHCU, have received health education in OST?

(3) Use requested health information to promote desired behavior,e.g. inserting a blank for follow-up will encourage follow-up of patients. Requesting that health education be

recorded as a treatment or output in the registry may encourage or legitimate the practice. Encourage records of visits in the CHW and PHCU registry for health education, advice and ORS, not just for drug prescription. This will also permit supervisors to assess, for instance, what percentage of patients presenting with diarrhea were treated with ORS and with an antibiotic.

(4) Analyze existing data at the most useful level.

For example, the adequate supply of safe drinking water and basic sanitation is currently being monitored in some locations in Bay and Toghdeer by the project sanitarians. Existing data should be summarized and tabulated at the district level with more stress on household coverage than, for instance, the absolute numbers of latrines built, etc. A chart listing all the districts villages with indications of which have been surveyed, which have safe water, % houses with latrines, etc would help orient the district sanitarian supervisor to the work to be done. Sanitation forms that eventually make it to Mogadishu announcing numbers of latrines built or hotels inspected are not particulary useful other than as evidence of activity.

More decentralized data analysis will help fight the natural apathy surrounding record keeping by prompt feedback through supervision and on-the-spot collation and preliminary data analysis.

(5) Train the PHCC and several district PHC staff in epidemiology by short in-country courses. This might be coordinated with the WHO course.

(6)** Devise a simple form for following pregnancy outcome and recording receipt of iron prophylaxis that does not require literacy. This prospective approach to surveillance through the TBA's list of pregnant women she is following will provide information on both pregancy outcome (incidence of miscarriage, stillbirth, maternal infection, hemorrhage, etc) and neonatal mortality. The CHW or a literate "scribe" (another villager or a child) can assist the TBA in listing names.

(7) Diligent protection of the village health workers from excessive information ruquests early in their careers is essential. The CHW should initially work entirely out of two notebooks:

(a) Registry (diary). Deaths with cause can be recorded in the same list as health post and home visits and extracted by the supervisor. Health education activities can also be recorded. When TB therapy is aided, this will require separate pages for each patient to record therapy and side effects.

(b) Drug ledger to record receipt of drugs and other medical supplies, cumulative supply, and the date a drug runs out.

(3) The above activities need the long-term guidance of an epidemiologist interested in working with the peripheral development of health information within primary health care.

Specific forms developed by short term advisers are unlikely to be useful and none will be presented here.

APPENDIX B2

Specific medical recommendations to reduce drug overuse and misuse*

The curriculum, manuals and supervision should be directed toward reducing drug misuse and overuse by the CHWs, TBAs, PHCU staff and the district PHC team. The reduced cost from decreased drug use are twofold: (1)lesser drug quantities are used and, (2) in the case of antibiotics and antimalarials, there is less pressure for the development of drug resistance to the less expensive drugs Drugs needed to treat resistant malaria, tuberculosis, and other bacterial pathogens (causing dysentery, pneumonia and otitis, for example) are all more expensive.

Appropriate drug use requires a drug list or formulary appropriate to the prevalent diseases, the ability of the drugs to make a difference therapeutically if used correctly, the ability of the CHWs and TBAs to use them corectly and cost. Appropriate drug choices should be backed by consistent training and supervision and consistent, cost-conscious medical advice (from a medical adviser or director).

(1) Schistosomiasis:recommendations regarding choice of drug

Inadequate knowledge of the magnitude of the schistosomiasis problem and lack of adequate medical guidance has resulted in the purchase of excessive and overly expensive medications for this disease.

Review of the scant literature on schistosomiasis in Somalia, the clinic morbidity reports and discussions with physicians practicing in the area indicate that there is probably little transmission of Schistosomiasis haematobium in either region with cases being imported from the riverine areas of Somalia. There is no evidence that S. mansoni is transmitted in Bay or Toghdeer.

Metrifonate is the drug of choice in this setting. It is inexpensive, effective (90-95% of treated patients have reduced egg burdens; 80-90% are cured) and has few side effects. Although it is usually given in 3 doses at two week intervals, single dose therapy at 10 mg/kg results in significant egg reduction. Metrifonate is used by both the Northwest PHC project and the RHU. For a 60 kg person, at IDA price of $.084/100 mg tablet, the cost of three-dose therapy is $1.176.

Niridazole was initially ordered for the project. This is a second line drug with many side effects and much greater expense than metrifonate. The quantity ordered would have cost more than $136,000 (in a total drug order of $350,000 for 3 months supplies

* section a

for 2 regions) and this order was recently cancelled by the Project Manager.

Niridazole has now been replaced, however, by Praziquantel. This is certainly the newest and easiest drug to use, requiring only a single dose, but it is extremely expensive. For a 60 kg man at IDA price of $3.825/600 mg tablet, the cost of therapy is $15.30. The U.S. price is approximately $8 per 600 mg tablet!

A consistent source of medical advice with an orientation toward a cost-effective and affordable system would avoid these choices. An additional problem with an inappropriate drug is that the PHCU staff learn one drug which cannot be continued after the project and then must learn the dosing and side effects of the appropriate drug later.

(2) Diarrheal disease: avoidance of drug use and the promotion of oral rehydration therapy (ORT)

(a) Avoidance of drug use in diarrheal disease

Approximately two-thirds of diarrheal deaths can be prevented by ORT alone if properly used. In the functioning PHCU's in Bay and Toghdeer and the district MCH and outpatient clinics, diarrhea was often treated with ORS plus sulphadimidine (most common) or ORS plus tetracyline syrup or chloramphenicol or an antibiotic alone was listed although reassurances were voiced that ORS was recommended and demonstrated in clinic. This appears to be common practice throughout the Somali health system and likely reflects habits learned in previous training and not effectively or appropriately addressed in training at the NTCs.

In many of the clinics, diarrheal disease constitutes 30-40% of the listed cases in the registries. Drug overuse for this complaint can consume a significant proportion of antibiotics dispensed by the clinic. Diarrhea without blood or mucous does not require antibiotic therapy in almost all cases and constitutes the majority of cases seen at the PHCUs, MCH and outpatient clinics. Reliable data to indicate how much dysentery (diarrhea with blood and fever) is due to Shigella or Campylobacter is not available for these regions. Shigella and Campylobacter usually account for only 5 to 10% of acute diarrhea (except in epidemic outbreaks) and, although recovery is speeded, even these infections usually resolve without antibiotic therapy.

According to Dr. Mohammed Sadir, head of the microbiology laboratory in Central Public Health, Mogadishu, almost all salmonella and shigella species are resistant to sulpha and only some are sensitive to ampicillin. The NAMRU study (final results

are pending) apparently also showed suplha alone was ineffective while trimethoprim-sulfamethoxazole (Bactrim, Co-trimazole, Spectrine) was effective. Sulpha has no efficacy against viral or protozoal agents (giardia and amoeba) or diarrhea following measles. The few cases of true dysentery caused by shigella which would benefit by appropriate antibiotic therapy are in all likelihood resistant to the drug most commonly overused for diarrhea (sulphadimidine) and still included on the project drug list. Apparently good activity of sulphadimidine may be due to most disease being due to self-limited infections and the inadequacy of follow-up in the clinics. In addition, sulphadimidine is a hazardous drug to use without guarantees of adequate hydration since crystallization in the urine can cause kidney damage.

An effective antibiotic with twice daily dosing and suitable for use in children under 8, trimethoprim-sulfamethoxazole, is not on the project drug list currently. Although trimethoprim-sulfamethoxazole is more expensive than sulpha alone, restriction to appropriate cases can make total antibiotic expenses less and efficacy more. It also would provide a drug to cover staphylococcal pneumonia in infants, missing from the current drug list.

The written curricula and manuals in both regions show no evidence of a proper, cost-effective approach to handling the frequent complaint of diarrhea and the requests for drug therapy. An empiric management scheme that treats all diarrhea, including diarrhea with blood, with ORS only on the first visit would reduce antibiotic use substantially and avoid patient or parental education that they should report diarrhea with blood in order to get the desired drug (see the RHU pediatric guidelines)(11). The few cases of true dysentery can then be treated on the second visit with an appropriate empiric combination of co-trimazole (or another antibiotic known to be active against Shigella) plus metronidazole for amebic dysentery in patients over 2.

(b) Promotion of oral rehydration therapy

This redirects attention to the most important therapy for diarrhea: adequate hydration with ORS. Every stage of the PHC project should emphasize and guarantee proper use of ORS: in training, supervision, pharmacy checks, etc. ORS solutions should be mixed by the mother in clinic or the health post under supervision and rehydration begun then and there. Follow-up should be emphasized to insure the adequacy of hydration and the continued provision of breast milk to infants and solid foods to older children. Later checks for malnutrition will permit early intervention. The proper use of ORS should be taught by every

discipline and in as many settings as possible. TBAs should train expectant mothers; sanitarians and nurses should teach the technique in the schools; etc.

The wealth of educational materials available on oral rehydration therapy should have been provided to this project long ago as well as materials on which to base educational campaigns against bottle feeding, an increasing practice in towns in both regions and a leading contributor to diarrheal disease. Communication with WHO about their Diarrheal Disease Control Program, scheduled for the Bay region in 1985 and Toghdeer in 1986, should be actively sought by the program, rather than waiting for evidence of activities.

The teaching of safe ORT requires information on the usual size of containers and measuring devices used by mothers in the area and an ongoing assessment (through organized supervision) of the salt and sugar concentrations actually achieved after instructions in mixing the packages or using raw materials. Studies in several countries on the osmolality and sodium concentration of homemade ORS have shown a hazard of excessive sodium concentrations which can lead to dangerous hypernatremia and death in infants (8,12). Particular care must be taken when giving instructions for mixing small quantities of ORS.

No student should graduate from the NTC in any discipline without being able to properly mix and teach the mixing of reliable oral rehydration solution. Periodic retesting in the field is also advised.

Supervisory techniques that would promote appropriate use of ORS and reduce antibiotic misuse include requiring that all cases are listed in the registries (whether antibiotics are used or not) and that diarrhea with blood or fever be recorded differently than "plain" shuban. ORS should always be listed as a therapy when it is used and "health education" listed as an intevention. . On PHCU visits, the percent of diarrhea cases treated with ORS and with antibiotics can quickly be reviewed and remedial education instituted.

A general policy to register all patients rather than only those receiving drugs may help shift emphasis from drug use.

(3)Respiratory infections: providing for rational management

Too many colds (hergip) are being treated with antibiotics. The curricula and supervision should clearly distinguish between an upper respiratory infection of viral origin (URI) and a suspected bacterial pneumonia. Emphasis should be put on checking

for other signs of a viral infection (conjuctivitis, rhinorrhea), documentation of fever, and count of the respiratory rate and other physical signs of pneumonia. Bronchitis as a diagnosis is often misused to justify antibiotic use for a URI as should be scrutinized during supervision. The requirement that the actual temperature be recorded when antibiotics are dispensed for a respiratory infection may be helpful. The registry should show many visits by people who have received advice only.

The current drug supplies at the Bay FHCUs include only one injectable antibiotic:streptomycin. This is now being used for the treatment of bronchitis and pneumonia in the absence of injectable penicillin or ampicillin. This should not be allowed to occur since this will result in the treatment of some misdiagnosed tuberculous pneumonitis with a single drug and development of resistance to streptomycin, an inexpensive and effective antituberculous drugs that must be reserved for appropriate multidrug regimens. More effective and less expensive oral drugs are available for the treatment of bacterial pneumonia.

(4) <u>Tuberculosis: Treatment in FHC requires a comprehensive system as well as correct drug choice and usage</u>

Major mistakes are being made in the treatment of tuberculosis in both regions. In Bay, there are no TB registers and the FHCU nurses are not equipped to obtain sputum smears on patients with suspected disease, resulting in empiric therapy when patients are unable or unwilling to travel to Baidoa for a CXR and sputum examination. Nurses and midwives are not being adequately taught at the NTC how to obtain sputum smears from patients in whom the diagnosis is suspected or who should receive smears on therapy to monitor treatment. These can be sent to the district lab, requiring no transport.

When a reliable diagnosis is not available, several serious problems result: (1) Persons who don't have tuberculosis get treated for TB and are unnecessarily exposed to drug toxicity and inconvenience for 1 year (!). (2) Patients who do have tuberculosis are not diagnosed and continue to infect other adults and children in the community. (3) Those patients in whom an empiric diagnosis of tuberculosis is correct (that is, a good guess) may not complete therapy since CHWs give up pursuing the patient when he defaults since "we really weren't sure of the diagnosis." With laboratory technicians being trained for the district health centers, an adequate system for diagnosis by acid-fast staining of sputum smears obtained in the FHCUs should be possible and carry <u>the highest priority</u> of any laboratory work. In a developing FHC system, this should probably be the

only laboratory test performed until it is done correctly and efficiently.

In Toghdeer, no TB registry or record of duration of patient therapy are in use and the single drug treatment of TB with streptomycin observed in a PHCU is worse than useless. There are no reliable sputum AFB results available in Toghdeer according to Dr. T. Thomas.

Isoniazid without thiacetazone is on the current drug order, leaving the program with a regimen that would require streptomycin injections for an entire year in the absence of 2 oral drugs for maintenance therapy. Although thiacetazone is not available in the United States, there are readily available alternative sources of TB-1 (the preferred combination tablet). A waiver should have been obtained long ago for the purchase of a needed drug outside the U.S..

A system with appropriate diagnosis of pulmonary tuberculosis, record keeping and some hope of keeping the patient on therapy for a year should be in place before attempting to deliver antituberculous therapy. Tuberculosis is a very large problem in both regions and expert guidance is needed to establish a successful and affordable tuberculosis program within primary health care. The Ministry of Health has requested an expert for the PHC program to assist in this task and our recommendations for central PHCMO (see below) include this function.

Successful reduction of the immense burden of morbidity and mortality from tuberculosis in Somalia requires a well thought out and uniform program integrated within PHC. There is no way to effectively prevent tuberculosis besides curing active cases of pulmonary tuberculosis, a task that requires an effective, well planned and tested system.

(5) Pre-eclampsia- conservative management at the PHCU level

The primary health care level of care of pre-eclampsia should include the least expensive method to check for urine protein (acetic acid and a spirit lamp rather than Uristix) and home monitoring of bedrest and salt restriction. If the pregnant woman's blood pressure and proteinuria are not controlled with this, referral to the district hospital is indicated. Diuretics dispensed at the PHCU can exacerbate volume depletion often present in this condition and further endanger the fetus. Drug use also risks deemphasizing conservative management.

(6) Hypertension: is it a problem at the village level?

The MSCI drug provisions currently in the PHCUs include two diuretics. Although the technical advisers in Toghdeer have the impression that hypertension occurs in the villages (it definitely occurs in the larger towns), no attempt has been made to document this by survey and reports are based on single cases. This is not sufficient justification for antihypertensives being on the regular formulary at the PHCUs. Although the primary health care system will eventually have to address the management of chronic disease, patients with diagnoses of hypertension or congestive heart failure should be confirmed at the district level before chronic (expensive) therapy is begun at the PHCU. This does not preclude provision of emergency drugs for heart failure, if this is determined to be a significant problem.

(7) Drug lists: failure to base formularies on the regions' diseases wastes money.

Diethylcarbamazine, the treatment of choice for filariasis and nothing else, has been purchased by the project. Filariasis is not a problem in either region.

Thiabendazole is included on the current PHCU drug order. It is a second line drug for trichuriasis (whipworm) and a first line drug only for strongyloidiasis which should not be a problem in the arid conditions of both regions. Mebendazole, the most broad spectrum and an inexpensive antihelminthic drug (effective against ascaris, whipworm, pinworm and hookworm) is absent from the drug lists. Piperazine is included and with justification (it is safer in pregnancy and infants for ascaris, whipworm and pinworm) but it cannot completely replace mebendazole if hookworm is a problem because piperazine is ineffective against hookworm. The cost of a treatment course in an adult (IDA price list) is $.14 for mebendazole; $.10 for piperazine.

Knowing the local epidemiology of disease is necessary for rational drug choices and the establishment of effective and simple empiric regimens which can be taught to village health workers and PHCU staff. This project has still not established the basic health information necessary for health planning. This is reflected in the current drug list as well as other areas noted elsewhere in this report.

APPENDIX B3

PRIMARY HEALTH CARE UNIT (DISPENSARY) DRUG LISTS- COMPARISON BETWEEN THE MINISTRY OF HEALTH LIST FORMULATED IN 1982, THE CURRENT DRUG LIST ORDERED FOR THE USAID/MSCI PHCP, AND THE NORTHWEST PRIMARY HEALTH CARE PROJECT

DRUG CLASS	MOH(1982)	MSCI(CURRENT ORDER)	NW
ANALGESIC			
	ASA 300 mg	ASA 300 mg	ASA 300 mg
	ASA 100 mg		
	Paracetomol tab	Paracetomol tab	Paracetomol tab
		Paracetomol elixir	
ANTACID			
	Aluminum hydroxide	"antacid"	
LOCAL ANESTHETIC			
	Lidocaine 2%	Lidocaine 2%	Lidocaine 2%
ANTIBIOTIC,ORAL,SUITABLE FOR KIDS < 8			
	Ampicillin tab		Ampicillin tab
	Ampicillin susp	Ampicillin susp	Ampicillin susp
	Penicillin tab		Penicillin tab
	Penicillin susp		
	Cotrimazole tab		Cotrimazole tab
			Cotrimazole susp
	Sulphadimidine tab	Sulphadimidine tab	
ANTIBIOTIC, ADDITIONAL ORAL ONLY FOR KIDS > 8			
	Tetracycline tab	Tetracycline tab	Tetracycline tab
ANTIBIOTIC; INJECTABLE			
	Procaine PCN	Procaine PCN	Procaine PCN
ANTIBIOTIC; EYE			
	TCN ointment	TCN ointment	TCN ointment
	Sulfacetamide 20%		
ANTITUBERCULOUS			
		INH	TB-1
		Streptomycin	Streptomycin
ANTIMALARIAL			
	Chloroquine tab	Chloroquine tab	Chloroquine ta
	" syrup		" syrup
	" injection		" inj
ANTIAMEBIC			
	Metronidazole	Metronidazole	Metronidazole
ANTIHELMINTHIC			
			Mebendazole
	Thiabendazole	Thiabendazole	

	Piperazine tab Piperazine susp	Piperazine tab	Piperazine tab " susp
ANTISCHISTOSOMAL		Praziquantel	(Metrifonate) if regional need
ANTIHISTAMINE	Promethazine tab	Diphenhydramine inj	Prometh. tab " syrup
ANTICONVULSANT	Phenobarbitone		Phenobarbitone
ANTISPASMODIC	Belladonna tinc		
ANTITUSSIVE	Cough linctus non- exp	Cough syrup	
BRONCHODILATORS			Ephedrine tab
CARDIOVASCULAR		Epinephrine inj	Epinephrine inj
DISINFECTANTS	Chlorhexidine	Providoneiodine Hydrogen peroxide	Chlorhexidine
HEMATINIC	$FeSO_4$	$FeSO_4$/folate	$FeSO_4$/folate
OBSTETRIC	Ergonovine tab	Ergonovine tab " inj	Ergonovine tab " inj
ORAL REHYDRATION	ORS	ORS	ORS
OTIC PREPARATION		Locortin vioform otic drops	
PLASMA SUBSTITUTE	NaCl 0.9%		Dextran70
RESPIRATORY STIMULANT-NEWBORNS	Vendid drops		
TOPICAL	Antibiotic oint		Benzyl benz Gentian violet

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	Iodine 2.5%		
	Whitfield's	Whitfield's	Whitfield's
	Zinc oxide		
VITAMINS			
	Folate		
	Multivit	Decavitamin	
	Vit A	Vit A	Vit A
	Vit D		
	Vit K inj		

LOGISTICS MANAGEMENT

APPENDICES PACKAGE

APP C-1 (1-8) Logistics Management

APP C-2 (1) Somalia Contributions to Recurrent Costs Outside The Budget

APP C-3 (1-12) Procurement and Distribution Management

APP C-4 (1-8) Transportation Management

APP C-5 (1-12) Miscellaneous

APP C-6 (1-12) Sample Forms Offered to Logistics

APPENDICES

PACKAGE

C-1(1-4)

Logistics Management

Title

1. Overall Conditions-Background
2. Logistics Management - The Current Scene
3. Example of Other Health Project UNICEF
4. Project Support Facilities

APPENDIX C.1

A. LOGISTICS MANAGEMENT

1. Overall Conditions - Background

Somalia has a land area of 640,000 sq. km. with a coastline of about 300,000 km. Although most of the land is flat and less than 1,000 ft. elevation, altitudes in the highlands, along the Gulf of Aden coast, range up to 7,000 ft. It is 1,115 nautical miles from Mogadishu to the Port of Berbera on the Gulf of Aden and 228 nautical miles to the Port of Kismayo, to the South of Mogadishu, on the Indian Ocean. The Port of Mogadishu is 7,612 nautical miles from New York; 9,174 from Houston; and, (via the Straits of Singapore) 11,280 nautical miles from Los Angeles. By land the distance between Mogadishu and Berbera is 1,445 Km. and from Mogadishu to Burao via Berbera it is 1,575 km. Communications are a vital problem in Somalia and over the past 15 years the government has given priority to the development of land and maritime transport facilities.

a. Port Facilities and Shipping

(1) Port of Berbera: Over 70 percent of the Somali population is devoted to nomadic pastoralism, contributing 60 percent of the GNP and 80 percent of the value of national exports. Until very recently, the Port of Berbera was the World's leading livestock shipping point. It is now second only to an Australian port.* The huge traffic of camels, goats, sheep and cattle impact on Berbera's port facilities, especially during the main export season from September to January. Since priority is given to livestock vessels during this period the availability of the port facilities to other vessels are limited. Further, shipping movements in and out of Berbera are sometimes suspended during the May to September period when particularly strong and dusty winds blow off the land from the southwest. It can be seen from the above that the Port of Berbera, for a period of about 9 months out of the year, is less than a satisfactory port for off-loading regularly delivered commodities, e.g. PHC supplies, destined for locations in the Toghdeer and Northwest Regions, and more specifically to Burao and Hargeisa. However, the Port does have a 320 m. long quay, built by the Soviet Union in 1964, and an extension presently under construction comprises a 230 m. quay southwest of the existing structure. There are 2 berths at present, 160 m. long with a depth alongside of 9.5 m below low tide. Total covered storage space is 9,760 sq. m. There are 4 cranes with a maximum single lifting capacity of 30 Tons.

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*Somalia's Nomadic Livestock Economy, by E. Renise, Senior Marketing Advisor, Agricultural Services Division Food and Agriculture Organization (FAO) Rome.

(2) Port of Kismayo: Located 375 km south of Mogadishu, and 45 km from the mouth of the Juba river, the port is well positioned. It is the only natural harbor along the East coast of Africa between Berbera and Mombassa. Design of this Port was participated in by the U.S. International Cooperation Administration (ICA) and the U.S. Army Corps of Engineers. The ICA funded construction of the Port. The Port of Kismayo primarily serves the Juba valley. The entrance to Kismayo Bay is protected by its own natural barrier - a series of reefs and shoals with two passes leading into the bay. The channel was dredged to 9.5 m. The total port area is 600,000 sq. ft. and the quay length is 619m. There are 4 berths, three of which are for general cargo and one is a molasses terminal. Covered storage space amounts to 6,600 sq. ft. There are 4 cranes with a maximum single lifting capacity of 9 Tons. Banana and livestock vessels are given priority, other vessels take their turn. At the present stage of development of the PHC program in Somalia this port would be of limited interest. Given a substantial national PHC program in the future it should be given consideration is a port serving the south of Somalia.

(3) Port of Mogadishu: This is, of course, the main port of Somalia, serves Mogadishu and completes the triangle of deep water harbors in which all the three ports were commissioned since 1969. The depth of Mogadishu Port's open sea harbor entrance is 13 m. at low tide and the need for maintenance dredging is negligible. The East facing entrance has a depth of 10 m. at low tide. Ships use their own gear to load and discharge cargo, which is landed direct to transport or taken to storage. The total Port area is 270,000 sq. m., there is a 930 m. breakwater. Total quay length is 1,000 m. and there are six berths. Berth #6 is a container/general cargo berth of 200 m. with a 25 x 25 Ro/Ro platform and a water depth of 10 m., low tide. Total covered storage space is 15,000 sq. m. There are three transit sheds. Open storage space amounts to more than 30,000 sq. m., much of which is used as a container marshalling yard. Total crane lifting capacity is 109 Tons with 9 cranes and a maximum single lifting capacity of 30 Tons. There are 7 forklifts with a total lifting capacity of 20 Tons; maximum single lift capacity of 5 Tons. There are 14 tractors and 56 trailors. The port readily handles both 20 and 40 ft. containers. There is very little, if any, congestion at dock-side and no long lines of vessels waiting in the harbor to get a berthing. The port seems to be well managed, by most African standards. The principle shipping lines calling regularly at the Port of Mogadishu include MSC, Messina Lykes Line and Lloyd Treistino.

(4) PHC Project Considerations: Until recently there was a major problem in clearing PHC commodities from the Port of Mogadishu. These problems appear to have been resolved and commodities are now clearing port without undue delay. A major problem in the shipping area has come up from time to time due to the

arbitrary actions of the shipping lines in transhipping commodities at intermediate ports. This has occurred in violation of terms of the shipping documents and Bills of Lading. On one occasion MSCI-HO Procurement had written unusually stringent language into the shipping contract with Lykes Lines. It was clearly stipulated that the container would not be transhipped and that the seals on the container were not to be broken. Lykes lines in deliberate violation of the terms of their contract, offloaded the container in a European port, broke the seal, removed the shipment from the original container and transfered it to another container. The shipment was several months delayed in arriving at the Port of Mogadishu. MSCI is understood to be weighing a legal suit against Lykes over this incident, which was not the first.

b. Other infastructure:

(1) Roads: There is only one macadam highway traversing the country North and South. It extends from Mogadishu to Berbera where it forks, with a branch to Burao and one to Hargeisa. The Berbera - Burao route is an exceptionally excellent road and the Berbera - Hargeisa road is quite good. The long stretch from Mogadishu is reportedly a very good road as well. The macadam road from Mogadishu to Baidoa is generally in considerable need of repair. There are some stretches that are in quite good condition, however, especially the first 40 or 50 miles out of Mogadishu. Lesser roadways, between Baidoa and the major towns within the Bay Region for example are mostly gravel, although the government is presently developing new access roads and repairing some existing roads. Between villages is noted a rapid deterioration in road conditions, most are gravel or dirt in various states of deterioration. Some routes between villages and hamlets are little more than double paths or tracks in the dry season and it is understood that many become impossible during the wet season even to four wheel drive vehicles. These conditions impact on the PHC project to make it difficult for supervisory personnel to perform their primary functions of supervision and of collecting management data from the PHCUs and their satelite posts. Road conditions in the Toghdeer Region are even worse, and distances that must be traversed between the PHCUs and their satelite posts are greater than in the Bay Region. Some roads completely wash away during the rainy season, and some become quagmires of mud. Not only are these conditions impediments to communications, but result also in very rapid deterioration of vehicles.

(2) Telephone Communications: Telephone service is difficult to obtain, even in Mogadishu. In fact, the MOH Logistics Center has been without such service since its inception, as incredible as this may seem. One finds it difficult to believe that the facility where responsibility for the management of all the commodity component of the MOH PHC Project rests cannot be assigned a telephone. But even when telephone are installed in Mogadishu the service is less than satisfactory. In outlying communities, and between those communities, e.g., Baidoa and Burao what telephone service is in place is absolutely undependable.

These conditions, too, impede the effecient management of the PHC Project. One bright light in the darkness of Somali communications is the recent acquisition, by the PHC Project, of radios and their installation at Burao, Baidoa and Mogadishu thus permitting direct conversation between and among these locations.

(3) Electrical Power: Brown-outs and black-outs are a routine phenomina in Somalia. Insuficient local current to operate electrical equipment and facilities hampers operations and has a depressing affect on the morale of the Project staff. Generators must be used for back-up power and these require maintenance and parts - an added burden to the support of the Project.

c. In summary, with the exception of the Port of Mogadishu, the remaining Somali infrastructure is far less than adequate for the PHC Project to rely on for support. These conditions should change with time but until they are improved the Project will have to relay much on its own resources.

2. Logistics Management - The current scene

a. General: To determine the effectiveness of methods used by the Logistics Management Office in performing the various tasks in the Logistics Management Cycle, we looked at logistics related activities in Mogadishu and in Bay and Toghdeer regions within the framework of componentary of the Logistics Management Cycle:

- Logistics Management Planning
- Procurement Management
- Distribution Management
- Maintenance Management
- Logistics Management Training

b. Logistics Management Planning: Little evidence was found to indicate that there had been any forward or pre-planning with technicians in the development of drug or other requirements. It appears that coordination with the technicians, rendering advise on such matters as procurement lead-times, delivery scheduling, phasing, field conditions to which commodities would be subjected, etc., does not generally occur. However some pre-planning did occur with regard to the most recent orders for vehicles when it was decided to procure jeeps and not to replace the Suburban Chevrolets.

c. Procurement Management: In this project practically all procurement is effected by MSCI/Arlington's Procurement Officer. Technicians submit their requirements to the Logistics Officer on a Parts and Supplies Requisition, Forms LV-2 (Copies of this and subsequent forms discussed in this Para 2 will be presented together in Appendix). Logistics reviews stocking levels and projected requirements and prepares an MSCI Supplies Order (Form P-1) or a Vehicle Parts Order (Form P-2), as appropriate, obtains the approvals of the MOH Project Director and the USAID Project Officer and forwards to MSCI/Arlington for procurement

action. During the procurement cycle MSCI Arlington advises Logistics by telex, or other means, of each significant step as it occurs, e.g., receipt of the order, status of tendering, contract execution, date of marshalling by Freight Forwarder, ETA Mogadishu, etc., and sends shipping documents when issued. In case of air shipment, Logistics is telexed the airwaybill number and ETA, since the shipment might arrive before the AWB copy. Copies of contracts (Purchase Orders) are also sent to Logistics when executed. Comment: the above procedure is adequate, but no record of procurement status information is kept where it can be viewed in a composite perspective. Instead, it is necessary to search commodity procurement files to determine procurement status at any one moment for any particular item. Thus there is no automatic alert when a bottleneck or delay occurs.

d. Distribution Management:

(1) Port Clearance:

Upon receipt of notification of an ETA, Logistics arranges to set up a watch for the vessels arrival at the Port of Mogadishu to coincide with the ETA date. If the vessel is overdue one week, Logistics sends a telex tracer to MSCI/Arlington and, at the same time, endeavors to trace the shipment from Mogadishu. Official MOH and MSCI representatives jointly clear commodities from the Port. Upon clearance of the goods from the port or airport, they are inventoried on Inventory Form LV-3 into the Logistics Center warehouse.

(2) Receiving Report:

The commodities are recorded on the Supplies Received Form LV-1. This is a Receiving Report form and, after signature by the Logistics Management Officer, a copy is attached to the original contract and filed in the Logistics Office. copies of the Receiving Report are also sent to the Project Director, MSCI Chief of Party (COP) and the USAID Project Officer. MSCI/Arlington is notified of the goods received and their condition. Over/short/damaged information is relayed to MSCI/Arlington for claims action and/or reorder. Comment: The importance of careful inspection of the goods was left to the imagination. This is a critical inspection made prior to the signing of the receiving report and, for drugs, involves the Pharmacist.

(3) Storage: As the commodities are stored in the Logistics Center warehouse they are entered on Stock Record Cards Form LV-7. Comment: The Stock Record Cards, which are used at each succeding level of storage, do not have a "reorder level" entry but only maximum - minimum stock levels.

(4) Delivery: Delivery from the Logistics Center warehouse into the Regional Training Centers is documented on a packing list, Form LV-6. Here storage takes place again and commodities are once more entered on Stock Record Cards. Commodities subsequently are broken down and delivered to District Health Centers where temporary storage again takes place and commodities are once more entered on Stock Cards. Subsequently delivery is made to the PHCUs (See Distribution Chart No. 1, and the Internal Logistics Flow Chart in the Logistics Forms Appendix). Comment: This system of deliveries is cumbersome, overburden all levels and requires too much transportation service.

(5) Consumption Reporting: PHCUs record commodities received and issued or expended in a Ledger Book, one page being used for each line item. Received, issued (or expended) entries are made as they occur and a running balance is kept. This system is quite adequate and provides a good historical record of consumption. Comment: It was noted during field trips that PHCUs were not always uniform in the way they kept stock records. Some used a stock card system instead of the ledger system and some used a ledger system. In Sheikh District/PHCU in Toghdeer all drugs were entered on a single page. In the latter case running balances could not be shown, and only one receipt and expenditure could be recorded for each item on that page.

(6) Miscelleneous Procedures:

(a) Supplies Returned to Stock: When any item is found to be excess to the need, not suitable, or repaired for re-use and suitable for re-issue it is returned to stock, re-entered into inventory and stock record cards. Form LV-4. (See Appendix).

(b) Repairs - General: When a piece of equipment is in need of repair a form "Request for Repair" Form LV-5 is used to request the repair. This is used for equipment, supplies, facilities, etc., as well as for vehicle repair. Repair requests for other than vehicles are submitted to the Logistics Office, Mogadishu. Vehicle repairs that can be accomplished in the field are submitted to the mechanic stationed at the respective Training Center. In Mogadishu, vehicle repair requests are submitted to the Maintenance Management Officer. Comment: It seems to be a cumbersome, time waisting procedure to send a request for say - a household plumbing problem - all the way to Mogadishu from Burao and wait for the Logistics Management office to act. The resident might have been flooded out and washed away in the first three weeks of waiting.

e. Transportation Management:

(1) Delivery Operations: Delivery is frequently the least organized activity in the Distribution component of Logistics Management, and so it appears to be in the PHC Project. Careful planning and execution is needed in such areas as:

(a) Transport selection
(b) Delivery Interval
(c) Schedules
(d) Routes
(e) Transportation options

(2) An ad hoc approach seems to have been the order of the day in the early stage of project development, especially in the selection of vehicles. It is realized that there has been little experience to date, without drug deliveries, to have based a transportation program on. However, the planning element can be carried out to the extent information is available. For example, road and topographic maps are available. Sketches can be made to depict locations and distances. Road conditions can be analyzed and recorded on maps, overlaps or other media. Routes can be defined and modified as necessary when better data is available. Tentative schedules can be established based upon estimates of future needs. Transportation options can be investigated, e.g., pooling resources with other agencies, using commercial transit services, other alternatives, etc. This is called Transportation planning, and it is apparently deficient in the PHC Project. See recommendations in Section IV above.

f. Vehicle Maintenance Management:

This management activity belongs under the Transportation Management component, but here will be treated separately. There seems to have been a reasonably good start made in developing maintenance management procedures, although at this stage still unwritten and not formally issued in a procedures manual format.

(1) Vehicle Use/Responsibility Instructions: A memorandum, dated April 4, 1983 was sent by the Logistics Officer thru the COP to the Director, PHC. The subject was Vehicle Distribution and Responsibilities. This memorandum cited the arrival of the new CJ8 and introduced the new maintenance and reporting system. Vehicle assignment policy was spelled out as follows: Each discipline at the training centers was assigned the use of and the responsibility for, one Jeep CJ8. The vehicle was assigned to that discipline and not to the individual expatriate staff member, however the expatriate member was held responsible for all vehicle documentations, reporting and maintenance scheduling. He was also to assure that the vehicle was used for official purposes only. The Regional Coordinator was assigned one Chevrolet Suburban and

made responsible for its' documentation, reporting and maintenance scheduling. The expatriate sanitarian was delegated the responsibility to oversees these policies and to forward the vehicle documents to the Logistics Center. The Sanitarian also was given responsibility to oversee repair activities. Each vehicle was assigned a driver who was to exclusively drive the vehicle, except as otherwise authorized by the Sanitarian. The driver was made responsible for all daily maintenance and reporting of malfunctions. The Sanitarian was to supervise the driver in carrying out his functions. An organogram was prepared by the Logistics Management Officer which depicts the lines of authority and responsibility and identifies the reporting schedules. The forgoing policy is still in effect.

(2) Procedures for recording vehicle use maintenance and historical data:

(a) Vehicle History Record, Form V-1 is the basic historical record of a vehicle's performance and its maintenance costs. The form is maintained at both the Logistics Center workshop and the field workshops. Basic, identifying data is recorded on this form and it is kept in the file of the particular vehicle. Data for inclusion in the form is obtained from other maintenance documents.

(b) A Repair Order, Form V-2 is used for recording maintenance and repair items and costs. One copy is filed in the individual vehicle file and one goes into the regular maintenance file.

(c) Each driver must maintain a Daily Vehicle Usage Report, Form V-3 which is countersigned by the person to whom the vehicle is assigned. This form records not only usage of the vehicle but acts as a check list for the driver for preventive maintenance performed each day before vehicle is driven.

(d) Scheduled Maintenance is recorded along with parts used and costs on a Scheduled Maintenance form, Form V-4. With the expected arrival of some CJ-10s, the Maintenance Management Officer should examine this form to determine if it needs to be modified for use with the new vehicles.

(e) A form is used for tracking all vehicles not based in Mogadishu. The report is completed each month by the senior team member or other responsible party at each site. Monthly Vehicle Status Report, Form V-5.

(f) A Request for Repairs Form LV-5 is used for vehicle repairs in the same manner as it is used for other equipment and facilities.

(g) The Logistics Management Officer (LMO) at this writing was developing a new form "Maintenance and Repair" (not yet numbered) which will consolidate some of the data collected in several other forms, thus reducing paper work.

(h) The LMO is also working on the development of an improved stock record card designed to better facilitate stock control of spare parts and reflect the job numbers covering each issue.

(3) Comment: The general procedurss and the forms used for maintenance management appear to be adequate. Some refinement is needed here and there. All need to be integrated into a formalized policies and procedures manual.

g. Logistics Management - Training:

In the overall logistics management sense, it will not be possible to train Somali counterparts properly until the Logistics system, policies, procedures, functional and positional descriptions and organizational paterns have been developed into a uniform set of management manuals and these translated into the Somali language.

f. Facilities:

Further renovation/expansion of the Logistics Center awaits approval of the use of 300,000 Shillings in the CIPL Budget. When these funds are released, according to the Director of PHC, the Logistics Center renovation will be completed within three months after receipt of funds.

The Logistics Center still operates without a telephone and without running water. There is no forklift nor cart for movement of shipments.

Storage facilities range from warehouse rooms at the Logistics Center with capacity to store a minimum three months back up supply of project commodities to small boxes in which to secure drugs at PHCPs. A brief general description of storage facilities at various locations follows:

(1) The Logistics Center:

(a) Drug Storage Warehouse - 4,960 cu. ft. (496 sq. ft.), two air conditioners, one window. Shipments are palletized. No shelving.

(b) Cold Storage Room - Walk in refrigerator. Approximately 400 cu. ft. with shelving.

(c) Repacking (breakdown) Room - 352 sq. ft. Presently contains one table, inadequate for purpose, and no shelves. Shelves are planned. No air conditioner, but planned.

(d) Spare Parts Room - 930 sq. ft. This includes a 256 sq. ft. tool security room. Equipped with shelves, but no bins. Item identification is posted on shelves and inventory control cares are in use.

(e) Stationary Supply Room - 990 sq. ft. No air conditioning, but planned and one window.

(f) Used Parts Storage Room - 256 sq. ft.

(2) Regional Training Center: Each Regional Training Center has three shipping containers within their respective compounds. A plan exists for modifying these containers. Two for use as warehouses and one for workshop use at each location.

3. Example of Other Health Project UNICEF

The UNICEF project in West Galbeed Region in the North West is actually considerably more than a Primary Health Care project. Their program includes, in addition to Primary Health Care, a number of projects, some related and some not.

There is a Sanitarian project, a Water project and an Applied Nutrition project, all related to PHC. In addition there are Transportation Maintenance, Education and Fuelwood Forestry projects. The UNICEF PHC project terminates in 1987.

There are 55 to 70 villages being served by this project. Local participation has been enthusiastic toward involvement in the management of community level Primary Health Care. This includes formation of health committees. The committees pay the PHWs.

Regional headquarters for the PHC project are in Hargeisa and there are six Districts. Usage (consumption) factors are obtained from periodic Surveillance Reports submitted by the Districts and PHCUs. These factors are checked against actual amounts issued. Distribution of drugs and supplies is made from the Regional warehouse. Inventory control cards are maintained at Regional Headquarters. A Procurement Status sheet is also maintained on a large 2' x 4' card. The District MCH visits the villages to obtain the surveillance reports, at the same time he questions villagers about the impact of the project, etc., and visits the PHCUs. He records data and submitts it to the Regional Headquarters.

Requisitioning is effected by the UNICEF Ordering Officer at Regional Headquarters. All drugs and medical supplies are obtained from UNIPAC (Copenhagen). Lead time averages between 6 and 9 months.

All drugs are labeled in generic terms. Containers are color coded by type to prevent mixing and comingly at the dispensing level.

Initially drug supplies furnished by UNICEF were in "kit" form and contained numerous items not needed in Somalia. These have had to be disassembled and stored or disposed of un-needed items.

Distribution is handled by Districts comming to Region for supply "pick-up". At present this is done on a six week basis, may be more frequent later, after more experience has been gained. Land Rovers are generally used, but use a long-base Toyota when needed. Each District has one Land Rover.

All commodities are brought in to the Region thru Djibouti where UNICEF maintains a Liaison Office (one Somali man). He arranges clearances at Port, and transhipments by truck to Hargeisa. The contract with private Transit Agent (in Djibouti) costs UNICEF $110.00 per ton of commodities moved. Pilferage is minimized. The cost is about the same as transporting the commodities by truck from Mogadishu but from Djibouti it takes about 10 hours compared to 3 days from Mogadishu. Maintaining the Liaison office in Djibouti costs about $10,000 per year plus a $5,000 fund for handling, clearances, etc.

The UNICEF vehicle fleet in Hargeisa consists of:

- One Truck 10 Ton, Fiat
- Two Trucks 7 Ton, Fiat
- Three Suzukis (for around Hargeisa)
- Eight Land Rovers (one for each District).

Maintenance of vehicles is accomplished at a workshop UNICEF has established in Hargeisa staffed with one expatriate mechanic and two Somali mechanics.

Storage in Hargeisa is at the Regional warehouse. It is exceptionally well secured, well organized, properly shelved and drugs and supplies are properly identified. This facility is managed by an expatriate lady pharmacist.

4. Project Support Facilities:

1. Bay Region: Without discussing who is responsible, given the historical background of the procurement problems associated with the acquisition of prefabricated buildings and other equipment for the Baidoa facilities, it must be stated that all of the prefabricated buildings are in a very sad state of disrepair. The dormitory is unfit for humans to live in, no ventelation, regurgitating toilets, collapsing ceilings, broken windwos, the list would be endless. Other prefabricated buildings likewise have major problems. It taxes the imagination to contemplate how such conditions not only came about but how they have been permitted to continue without a major effort being expended to correct the situation. The establishment of the Field Service Unit, under Mr. Jean Varenne, is commendable, but it can't possibly be the ultimate solution. Some of these structures should be abandoned as quarters for people. Appendix is a copy of Jean Varenne's field trip report covering the period from February 29 thru March 7, 1984. It describes some of the maintenance problems. He has done a good job of listing deficiencies that need urgent attention. But no man, in 7 days, can assimilate all the things that are wrong with the support of this project in Baidoa. His report is mild by comparison with the conditions that prevail.

Recommendations are made in Section IV.

2. Toghdeer Region: The project support problem looms as large in Burao as in Baidoa. To avoid repetition it should suffice to say that similar problems exist and need even more urgent attention. Jean Varenne's report on his Burao field trip should also be appended. See recommendations in Section IV.

APPENDICES

PACKAGE

C-2(1)

Somalia Contributions to Recurrent Costs Outside The Budget

Title

1. Pharmaceutical Production Capabilities

APPENDIX C.2

B. SOMALIA CONTRIBUTIONS TO RECURRENT COSTS OUTSIDE THE BUDGET

PHARMACEUTICAL PRODUCTION CAPABILITIES

a. ASPIMA:

All drugs (other than those from donors) imported into or manufactured within Somalia are under the control of ASPIMA, an independent, state-owned agency which operates within the Ministry of Health. ASPIMA has the only indigenous local production capability for pharmaceuticals at the present time. Its primary output is currently in vitamins (in ampules) although in recent years its Pharmaceutical Production Unit is known to have produced a larger range of drugs including adrenalin, ephedrine, glucose, bismuth salicylate, aspirine, sulfaguanidina and a dozen others. In addition to ampules the Production Unit is known to have produced solutions and tablets. This Pharmaceutical Production Unit has the following facilities or sub-units:

Raw Materials Storage Room
Laboratory
Tablet Production Room
Ampule Sterilization Room
Ampule Drying Room
Bottle Sterilization Room
Water Distillation Room
Ampule and I.V. Bottle Filling Room

The equipment in the I.V. Bottle Filling Room has a capacity for producing up to 25,000 ampules per day.

Recent production has been limited by various impediments, eg., inadequate electric current, non-availability of methane and oxygen, etc.

There is a Quality Control Unit but it is capable of only basic identity tests.

Any upgrading of the Pharmaceutical Production Unit would require an input of expatriate technical advice and improved management techniques and procedures.

ASPIMA is prepared to consider joint venture investments by foreign pharmaceutical manufacturing firms and/or technical assistance from either the public or private sector.

b. In addition to the existing ASPIMA Pharmaceutical Production Unit is a new facility for pharmacuetical manufacture, the Somali Pharmaceutical Institute (SPI). This facility was developed with funds from the European Economic Community (EEC) and the Italian Government.

The EEC mission in Somlaia is actively searching for either foreign investment capital or a joint venture between the Somali Government and a Pharmaceutical manufacturer. The production of this facility would be transferred by SPI to ASPIMA. The items proposed for production at the SPI plant are shown in Appendix C. (2.1, 2.2, and 2.3). The items and quantities were arrived at from analysis by SPI of 1981-1982 drug import data and projected increases in consumption supplied by ASPIMA. Production, as planned, would include capsules of Tetrasycline, Ampicillin and Chloramphenical and tablets of Paracetamol, Chloroquin, Promazine, Ascorbic Acid, Erythromycin, Acetytsalisylic Acid and and eight or ten other drugs. Lyrups, ampules, solutions, ointments and suppositories of a number of other drugs would also be produced.

SPI plans to have expatriate technical expert assistance in country for managing production, quality control and technical and plant services.

c. Any analysis of the potential benefits of local pharmaceutical production must include as a minimum consideration of the following factors:

(1) savings on overall cost of drugs to the national health services;
(2) savings on foreign exchange to the nation;
(3) quality assurance may be facilitated;
(4) continuity of supplies may be facilitated;
(5) employment is created in the pharmaceutical manufacturing enterprise itself as well as in ancillary industries.

d. Law No. 7 of 29 January 1977, Foreign investment, is published in a booklet entitled Opportunities for Foreign Investment by the Government of Somalia. It is an investment incentive law which permits up to 30% of invested capital ("...of the capital invested of profits income, interest," etc.) to be repatriated per year. Further, if profits for a year are less than 30%, the investor may accumulate the unused portion for repatriation in the succeeding three years. Certain tax exemptions are available to the foreign investor for periods of up to ten years, and guarantees of equitable compensation are stipulated in the event of expropriation.

e. The MOH will have to take steps to convince the Government that assurances must be given

that budgetary and exchange restrictions will not act to constrain the acquisition of raw materials from abroad. A continuous line manufacturing plant must have a continuous input of raw materials. Without such assurances the attractiveness of Somalia to foreign pharmaceutical manufacturers/investors is greatly deminished.

APPENDICES

PACKAGE

C-3(1-12)

LOGISTICS MANAGEMENT

Procurement & Distribution Management

Title	Form No.
1. Supplies Order	P-1
2. Vehicle Parts Order	P-2
3. Supplies Ruined	LV-1
4. Parts & Supplies Requisition	LV-2
5. Inventory Form	LV-3
6. Supplies/Materials/ Parts Returned	LV-4
7. Request for Repairs	LV-5
8. Packing List	LV-6
9. Stock card(Parts and Supplies)	LV-7
10. Glossary	No#
11. Distribution Chart #1	No#
12. Internal Logistics Flow Chart	No#

Form P-1 MSCI Supplies Order

This requisition form is to be used as a requisition to MSCI/Arlington for ordering any budgeted items other than vehicle spare parts. It is designed to be approved by the MOH, USAID, and MSCI for release of funds to allow MSCI/Arlington to arrange for purchase and shipment of materials to the project within the prescribed regulations.

As required signatures of MOH and USAID are obtained, a copy should be sent to each party.

To expedite procurement of vital or emergency items, the order signifying that all approvals have been obtained may be telexed to MSCI/Arlington, with initiation of procurement to be completed when MSCI/Arlington receives the signed requisition from MSCI/Mogadiscio.

The use of air freight shipment and telex establishes the highest priority.

Form P-2 MSCI Vehicle Parts Order

This requisition is used in the same manner as described for form P-1. Special care must be given to parts identification and vehicle identification. This will eliminate queries both from suppliers to MSCI/Arlington and from MSCI/Arlington to MSCI/Mogadiscio.

Description: Part Number: Shelf Location:

Maximum Stocking Level Minimum Stocking Level

Date	Job No.	In	Out	Balance	Date	Job No.	In	Out	Balance

P-2
MSCI

MSCI VEHICLE PARTS ORDER

SOMALIA

NO.

DATE SUBMITTED _____

MAILED [ ]
TELEXED [ ]

1 AIR FREIGHT [ ]
2 SEA FREIGHT [ ]

YEAR _____
MAKE _____
MODEL _____

ORIGINAL P.O./PIOC
NO. _____
DATE _____

PARTS CATALOG
NO. _____
DATE _____

ITEM NO.	CAT. PAGE/ GROUP NO.	DESCRIPTION	PART NO.	QNTY.	UNIT PRICE	TOTAL COST

_____ DATE

USAID APPROVAL _____ DATE

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TO:
MSCI

MSCI SUPPLIES ORDER

SOMALIA

NO.

DATE SUBMITTED _____

MAILED [•]
TELEXED [ ]

1 AIR FREIGHT [ ]
2 SEA FREIGHT [ ]

ORDER FOR: _____ CATALOG NAME _____ CATALOG NO. _____ DATE _____

1 DRUGS 2 MED. SUPPLIES 3 MED. EQP. 4 OFFICE EQP. 5 EDUC. SUPPLIES 6 TOOLS & EQP.

ITEM NO.	CATALOG PAGE	DESCRIPTION	ID OR PART NO.	QNTY.	UNIT PRICE	TOTAL COST

MGR APPROVAL DATE

GRANT APPROVAL DATE

26

Form LV-1 Supplies Received

This report is to be used whenever any items are received for use or stored for later issue.

When used at any location other than the Logistics Center, Mogadiscio, one copy is retained, one sent to the shipper, and one sent to the Logistics Center for inventory and reorder purposes.

Form LV-2 Parts and Supplies Requisition

When a requisition is filled out for an item out of stock, no longer stocked, or on order, indicate this in the column "Availability." If the item is on order, give an estimated date of arrival. If the item is still needed after that date, it can then be reordered.

Form LV-3 Inventory Form

This is to be used as a working record of any and all items used and stocked in the project. It is needed at all levels stocking any commodities: Logistics Center, training centers, regional health centers, PHCUs, and the village health posts.

Inventory of stored items should be made vitally at least once every six months and copies sent to the Logistics Center.

Form LV-4 Supplies/Materials/Parts Returned to Stock

Use this form at any level of the project where an item may be issued for use out of inventory but found not needed, not suitable, or repaired for reuse and suitable for reissue. Reentry into inventory and stock record cards will keep the inventory in balance and save ordering replacements for these items.

Form LV-5 Request for Repair

Use this form to request repairs of vehicles, generators, housing, classrooms or other project properties. Requests for everything but vehicles will be sent to the Logistics Officer in Mogadiscio. Vehicle repairs in the field go to the mechanic stationed at the training centers.

In Mogadiscio, vehicle repair requests go to the Maintenance Supervisor.

One copy is retained by the originator.

Form LV-6 Packing List

This is used for all shipments of supplies from the Logistics Center to the field and can be carried by the driver.

One copy is retained by the shipper, one by the receiver, and one is returned to the Logistics Center. When outside shipping methods are used (air, commercial truck or bus) documents are to be enclosed in one of the containers and the container marked "PACKING LIST ENCLOSED."

Form LV - 7 - Stock Record Card

This card is designed to be used for all different items stocked by the project. File cabinets have been obtained for them. All issuing and receiving should be entered each day on each item's card.

Like the Inventory Form, Stock Record Cards will be used at all levels of stocking.

LV1

No.

PRIMARY HEALTH CARE
MSCI MOH

SUPPLIES RECEIVED

SIGNED _____

_____ POIC/P.O. NO.

DATE RCVD. _____

_____ DATE

AMOUNT _____

_____ SUPPLIER

SHIP REC # _____

BOX NO.	ITEM NO.	DESCRIPTION	BACK ORDER	TOTAL RCVD	MISSING

LV 2

PARTS & SUPPLIES REQUISITION

PRIMARY HEALTH CARE
MSCI MOH

DRUGS [ ] GENERAL SUPPLIES [ ] VEHICLE PARTS [ ]

PART NO.	DESCRIPTION	AVAILABILITY	QNTY. ORDERED	QNTY. ISSUED	COST

REQUISITIONED BY _____ RECEIVED BY _____ ISSUED BY _____

DATE _____ DATE _____

:V 3

PRIMARY HEALTH CARE

Date _____

Sheet No. _____

MSCI MOH

Type of Items

INVENTORY FORM

DESCRIPTION	PART NUMBER	QTY	CONDITION

LV-4

SUPPLIES/MATERIALS/PARTS RETURNED

DATE _____

The following items are returned to stock:

PART NO.	QNTY.	DESCRIPTION	REASON	USED	UNUSED

RETURNED BY _____ RECEIVED BY _____ DATE _____

LV 5

REQUEST FOR REPAIRS

Date _____ Repair Order No. _____

By _____ Telephone No. _____

Equipment Type _____ Registration No. _____

Location _____ Odometer Reading _____

The following repairs/service is requested

LV-6

PRIMARY HEALTH CARE

MSCI MOH

Date _____

PACKING LIST

From _____ To _____ Location _____

Driver _____ Mileage at Start _____

Item No.	Part Number	Description	Quantity Shipped	Discrepancies

Received By _____ Date _____ Arrival Mileage _____

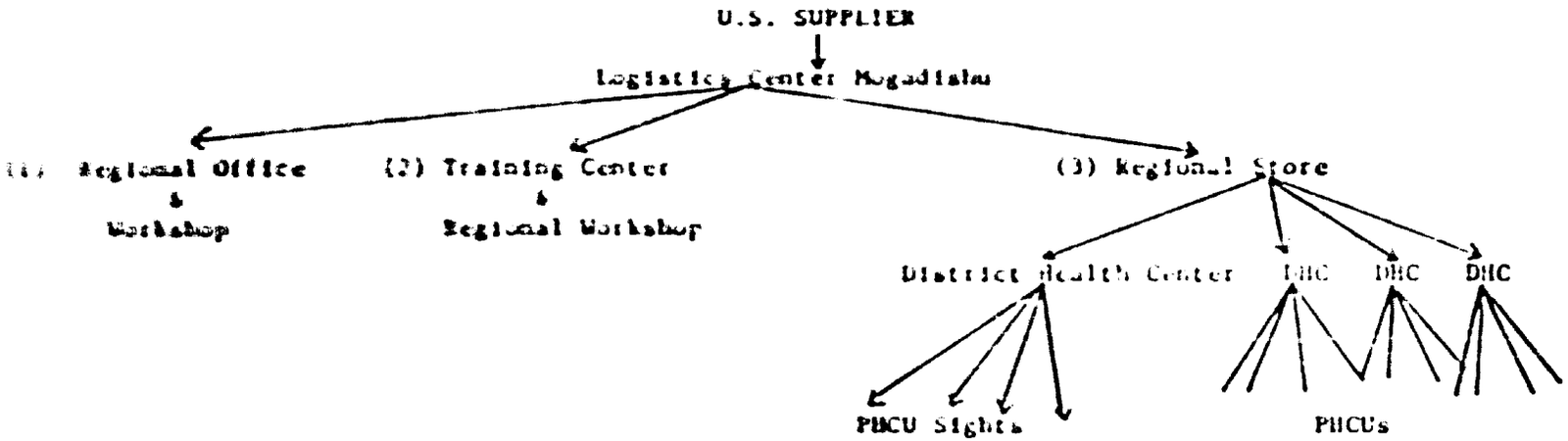
v 7 SPARE PARTS & SUPPLIES PRIMARY HEALTH CARE NO.

MSCI MCH

ESCRIPTION _____ PART NO. _____ LOCATION _____

PIOC/P.O. NO.			RECEIVED		QNTY.	QNTY		REQ	RCVD.	PRICE	
	NO.	QNTY.	DATE	LOT NO.	IN	OUT	BAL	NO.	BY	SHS.	DOL

BAL	Balance
CAT	Catalog
DOL	Dollar
EDUC	Education
EQP	Equipment
ID	Identification
MAINT	Maintenance
MED	Medical
MOH	Ministry of Health
MSCI	Medical Service Consultants, Inc
No.	Number
PIOC/P.O.	Project Information Order Commodities/Purchase Order
POL	Petrol, Oil, and Lubricant
QNTY	Quantity
QTY	Quantity
RCVD	Received
REQ	Requisition
Ship Doc #	Shipment Document Number
SHS	Somali Shillings
USAID	United States Agency for International Development
VIN	Vehicle Identification Number



Distribution Chart No. 1

INTERNAL LOGISTICS FLOW CHART

SUPPLY CENTERS ARE:

MOG: Major supply center

TRAINING CENTERS: Supplier to District

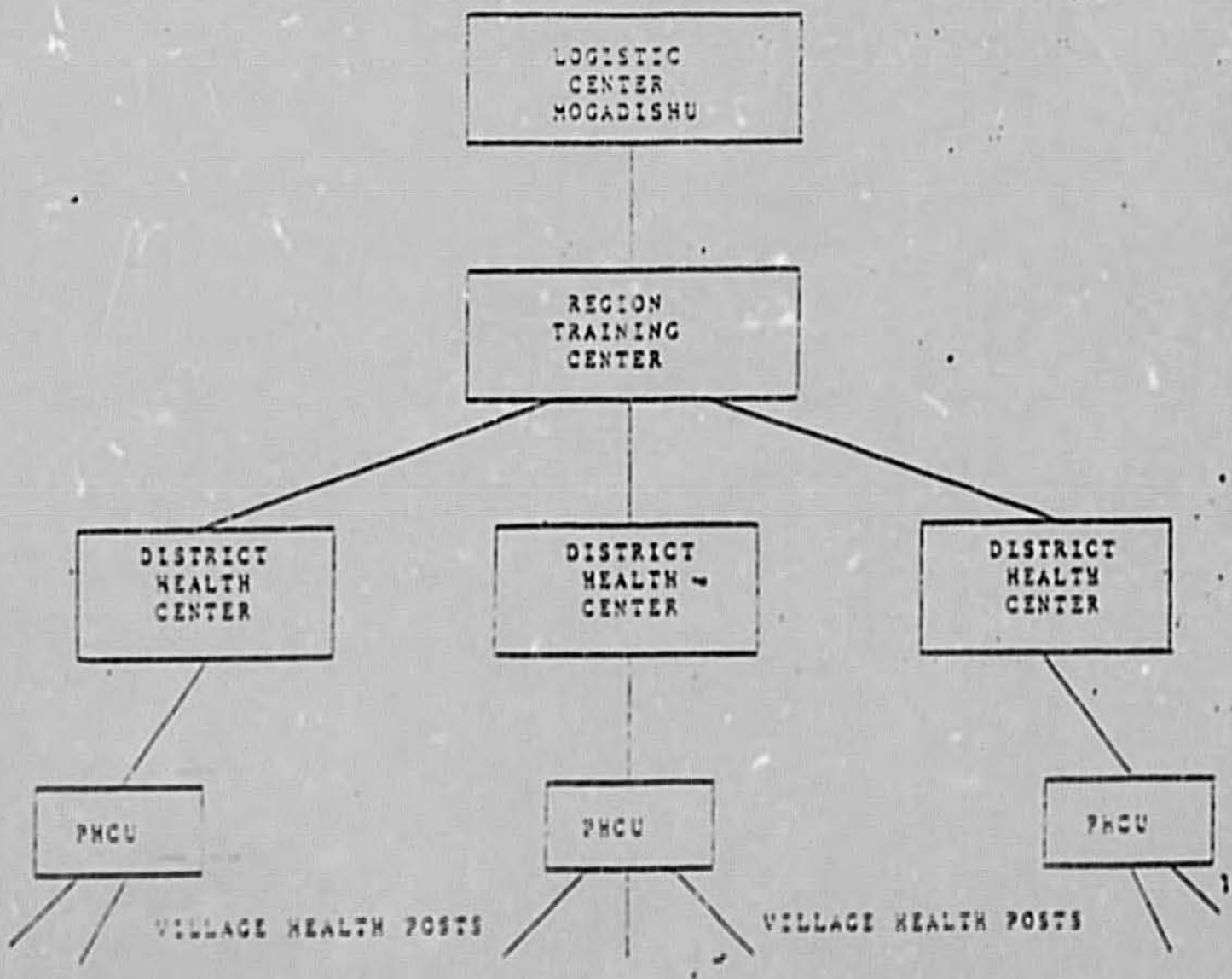
DISTRICT HEALTH CENTERS: Supplies to PHCUs

PHCUs: Supplies to Village Health Posts

VILLAGE HEALTH POSTS: End user

TRAINING CENTERS	- 2
DISTRICT HEALTH CENTERS	- 8
PHCUs	- 32
VILLAGE HEALTH POSTS	- to be determine

SUPPLIES: are procured by the Logistics Center from the U.S. and other sources, and flow downward from the Logistics Center, Mogadishu through the Training Centers, DHC, PHCU, Village Health Posts and used on patients. Supplies are maintained by requisitions through the Logistics Center and subsequent reordering through off-shore procurement or local purchase.



APPENDICES

PACKAGE

C-4 (1-7)

LOGISTICS MANAGEMENT

Transportation Management

Vehicle Maintenance

Title	Form No.
1. Vehicle History Record	V-1
2. Vehicle Repair Order	V-2
3. Daily Usage	V-3
4. Schedule Maintenance	V-4
5. Monthly Vehicle Status Report	V-5
6. Maintenance and Repair	No#
7. Organogram	No#

Form V-1 Vehicle History Record

The Vehicle History Record is kept in the Mogadiscio Logistics Center by the Maintenance Officer and at field workshops. The form for each vehicle should be kept in a separate file or jacket.

Pertinent data from all repair and maintenance records will be kept up to date.

Periodic evaluations of vehicles as to excessive costs, life expectancy, replacement, parts usage, etc. may be made from this form.

Form V-2 Repair Order

The repair order is to be used each time any scheduled maintenance procedures or repairs are performed on any vehicle.

When the mechanics at the training centers complete the form, two copies are to be immediately sent to the Logistics Center in Mogadiscio and the original retained at the training center.

When outside work at a machine shop or local shop is done, a copy of a MOH repair order should be attached for the records at the Logistics Center.

The Logistics Center will maintain one copy of each repair order in the file jacket of the individual vehicle and one in the regular maintenance file.

Form V-3 Daily Usage

This form should be made out daily by the driver and countersigned by the person to whom the vehicle is assigned. Upon completion, it should be given to the Logistics Officer or Maintenance Supervisor.

Form V-4 Scheduled Maintenance

This form is designed to document the necessary regular maintenance of the GMC and Chevrolet vehicles on hand. As other vehicles are acquired, the Maintenance Supervisor will add and/or delete operations for special equipment as needed.

Scheduled maintenance forms will be used as indicated for all vehicles along with a repair order. The original is to be retained by the using workshop and a copy sent to the Logistics Center.

Form V-5 Monthly Vehicle Status Report

This report is for tracking all vehicles not based in Mogadiscio. The report is to be made out each month by the senior team member or responsible party at each site. All vehicles based at a site during the month are to be included in this report. The report is to be regularly forwarded to MSCI/Mogadiscio along with other required reports. One packet of forms will be sent to Baidoa and one to Burao. The file will be kept by the Maintenance Supervisor.

VEHICLE HISTORY RECORD

PRIMARY HEALTH CARE .
MSCI MOH

MAKE _____ MODEL YEAR _____ TYPE BODY _____ VIN NO: _____

PIOC/P.O. NO. & DATE _____ DATE ARRIVED _____ REGISTRATION NO. _____

DOOR KEY NO. _____ IGNITION KEY NO. _____ ASSIGNED TO: _____

SPECIAL EQUIPMENT _____ TOOLS _____

DATE	REPAIR ORDER NO.	REPAIR AND MAINTENANCE	COSTS	
			PARTS	LABOR

DISPOSAL

DATE _____ TOTAL COSTS _____

V2

PRIMARY HEALTH CARE
MSCI MCH

VEHICLE/REPAIR ORDER/EQUIPMENT

No.

Date In _____

Date Out _____

Vehicle No.	Mileage	Assignee	Location

Description of Repairs	Parts Used	Part No.	Cost

Mechanic: _____

Hours Repaired _____

Supervisor: _____

Outside Repairs Cost

Parts Labor

Parts _____

Labor _____

Outside Repairs _____

Total Cost _____

Sergeant: _____ Date _____

DAILY VEHICLE USAGE

VEHICLE NO. _____

LOCATION _____

DATE _____

DRIVER OPERATOR DAILY CHECK	TIME		KILOMETERS		FUEL/OIL	DRIVER	PURPOSE OF TRIP
	OUT	IN	OUT	IN			
BEFORE STARTING CHECK:							
1. WATER IN COOLING SYSTEM							
2. WATER IN BATTERY							
3. AIR IN ALL TIRES							
4. GASOLINE IN TANK							
5. OIL IN ENGINE							
6. LEAKS: WATER, OIL, FUEL, GREASE							
AFTER STARTING ENGINE CHECK:							
1. NOISES OR UNUSUAL SOUNDS							
2. CLUTCH OPERATION							
3. BRAKES OPERATION							
4. HORN OPERATION							
5. LIGHTS AND GAUGES							
6. WINDSHIELD WIPERS IN RAINY SEASON							

RESPONSIBLE OFFICER: _____

DATE: _____

V-4

DATE IN _____

OUT _____

VEHICLE MAINTENANCE

PRIMARY HEALTH CARE

MSCI MOH

NO.

REPAIR ORDER NUMBER _____

VEHICLE NUMBER	MILEAGE	ASSIGNEE	LOCATION

FREQUENCY (MONTHS) 1	6	SERVICES DESCRIPTION	CHECKED	ADJUSTED	REPAIRED	PARTS USED	COST
X	X	LUBE CHASSIS					
X	X	CHECK FRONT AXLE AND DRIVE UNIT					
X	X	CLUTCH PEDAL FREE TRAVEL					
X	X	CHANGE ENGINE OIL					
X	X	CHANGE ENGINE OIL FILTER ALTERNATING MONTHS					
X		CHECK REAR AXLE LUBE, CHANGE AFTER DEEP FORDING					
	X	ROTATE TIRES					
	X	REPACK WHEEL BEARINGS					
X	X	CHECK COOLING SYSTEM					
X	X	CHECK AUTO TRANSMISSION FLUID					
X	X	CHECK POWER STEERING FLUID					
X	X	CHECK TIRES, WHEELS AND BRAKE LININGS					
X	X	CHECK EXHAUST SYSTEM					
X	X	CHECK SUSPENSION AND STEERING					
X	X	CHECK OPERATION OF BRAKES AND POWER STEERING					
X	X	CHECK ALL ENGINE DRIVE BELTS					
X	X	CHECK FUEL CAP, LINES AND TANK					
X	X	CHECK ENGINE IDLE SPEED AND CHOKE OPERATION					
	X	CHECK SPARK PLUGS AND WIRES					
	X	CHECK SPARK TIMING					
X	X	CHECK AIR CLEANER AND VALVE					
X	X	CHECK MANIFOLD HEAT VALVE					
		OTHER OPERATIONS					

MECHANIC _____ HOURS _____ PARTS _____

SUPERVISOR _____ RECEIVED BY _____ LABOR _____

DATE _____ TOTAL _____

V-5

MONTHLY VEHICLE STATUS REPORT

MSCI MOH

LICENSE NO.	YEAR MADE	TYPE BODY	MILEAGE KILOMETER	MAINT. REPAIRS	LOCATION	FUEL USED	POL USED	COST REPAIRS

JOB NO. _____

PRIMARY HEALTH CARE GARAGE

MAINTENANCE AND REPAIR

VEHICLE NO: _____

MILEAGE: _____

LOCATION: _____

ASSIGNEE _____

DATE IN / DATE OUT _____

PARTS / SUPPLIES				SERVICES
PART NO.	QTY	DESCRIPTION	UNIT PRICE	OIL CHANGE & FILTER
				Air Filter Change
				Fuel Filter Change
				Check Fluid Levels
				Replace PCV Valve
				Clutch Pedal Adjust.
				Break Pedal Adjust.
				Grease Points
				Tire Check/Rotation
				Repack Wheel Bearings
				Suspension Check
				Linkage/Hose Check
				Spark Plug Check
		TOTAL		

MECHANIC:

MECHANIC'S HOURS:

PARTS OFFICER - O.K.

CHIEF MECHANIC REVIEW

DISPOSITION:

RECEIVER

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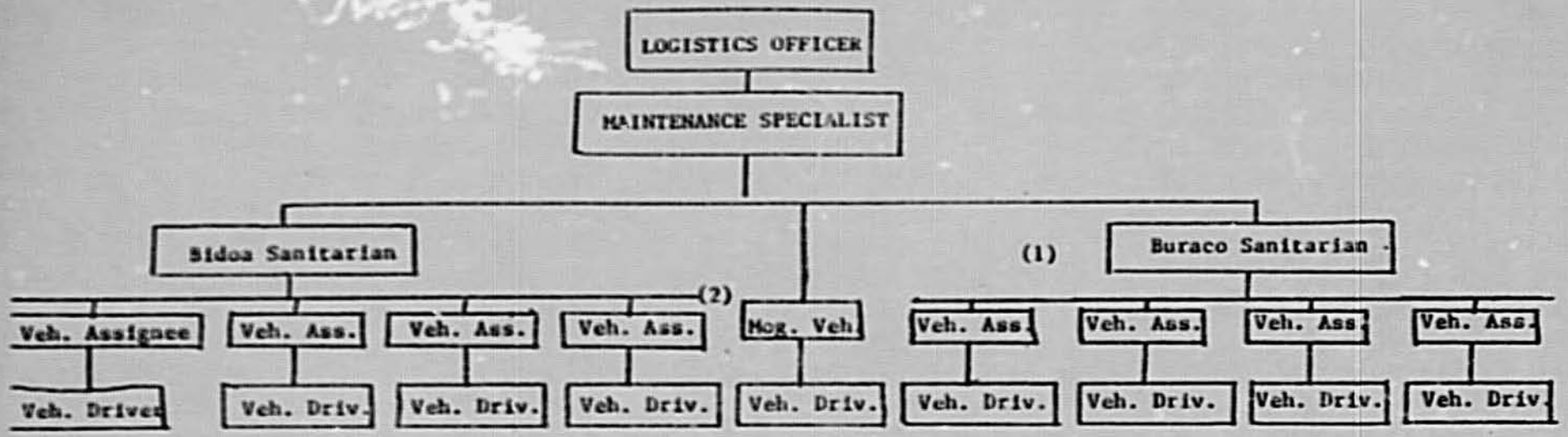

1. Monthly Reporting; 1) Requests for repairs, 20 Daily Usage, 3) Repair Orders, 4)Vehicle Status

2. Weekly Reporting of; 1) Requests for repairs, 2) Daily Usage

   Daily Reporting of; 1) Daily Usage form (Fuel Milage), 2) Maintenance Chart

Vehicle Responsibility and Reporting Sequence Chart

APPENDICES

PACKAGE

C-5 (1-2)

LOGISTICS MANAGEMENT

Miscellaneous

1. SPI Pharmaceutical Factory Data
2. Report on Baidoa by Jean Varenne

2.1 Production mix

Product	packaging	1st year quantity	2nd year quantity	3rd year quantity
a) Capsules				
Tetracycline 250 mg	1000 capsules	5,000	8,000	10,000
Ampicillin 250 mg	1000 capsules	3,000	6,000	10,000
Chloramphenicol 250 mg	1000 capsules	2,000	3,000	4,000
b) Tablets/sugar-coated tablets				
Nistatin 100 mg	1000 tablets	200	400	500
Paracetamol 50 mg	1000 tablets	500	2,000	3,000
Chloroquin	1000 tablets	2,000	3,000	5,000
Triamcinolone 4 mg	1000 tablets	300	500	500
Betamethasone	1000 tablets	200	500	500
Sulphadimethoxine +Paracetamol	1000 tablets	2,000	4,000	5,000
Promazine 25 mg	1000 tablets	200	300	300
Chlorpheniramine 2 mg	1000 tablets	100	200	200
Lorazepam 2 mg	1000 tablets	200	300	300
Ascorbic acid 500 mg	1000 tablets	1,000	2,000	3,000
Trimethoprim+sulphamethoxazole	1000 tablets	2,000	4,000	6,000
Erythromycin stearate 250 mg	1000 tablets	1,000	2,000	2,500
Acetylsalicylic acid 300 mg	1000 tablets	3,000	3,500	4,000
Carisoprodol+propyphenazone	1000 tablets	2,000	2,000	2,000
c) Syrups				
Codeine 100 ml	syrup	200,000	300,000	500,000
Trimethoprim+sulphamethoxazole	syrup	200,000	300,000	300,000

Product	type of packaging	1st year quantity	2nd year quantity	3rd year quantity
d) Ampoules				
Kanamycin 1 g	6 ampoules	15,000	15,000	30,000
Promazine 50 mg	6 ampoules	8,000	8,000	8,000
Vitamin B_{12} 1000	6 ampoules	50,000	100,000	100,000
Gentamicin 10 mg	6 ampoules	—	5,000	6,000
Gentamicin 40 mg	6 ampoules	—	3,000	4,000
Gentamicin 80 mg	6 ampoules	—	15,000	18,000
Distilled water 5 ml	100 ampoules	10,000	30,000	50,000
e) Solutions for phleboclysis				
5% Dextrose	500 ml bag	100,000	100,000	100,000
0.9% Sodium chloride	500 ml bag	150,000	150,000	150,000
Dextrose + 0.9% NaCl	500 ml bag	100,000	100,000	100,000
Ringer-lactate	500 ml bag	50,000	50,000	50,000
f) Ointments				
Kanamycin 10 g	box of 20 packs	—	7,500	12,500
Kanamycin+Triamcinolone 10 mg	box of 20 packs	—	7,500	12,500
g) Suppositories				
Carisoprodol+propyphenazone	box of 100 suppos.	—	200	300
Sulphadimethoxine+acetomino-phen+chlorfeniramine - adults	box of 100 suppos.	—	200	500
Sulphadimethoxine+acetomino-phen+chlorpheniramine - paed.	box of 100 suppos.	—	100	200

Tables 2.2. and 2.3. compare production volumes with the nominal potential of the plants.

Pharmaceutical forms	Annual productive capacity of the SPI unit	1st year		2nd year		3rd year	
		units	%	units	%	units	%
Capsules	24,000,000	10,000,000	41,7	17,000,000	71	24,000,000	100
Tablets	50,000,000	14,700,000	29,4	24,700,000	49,4	32,800,000	65,6
Ampoules	15,000,000	1,438,000	9,6	3,876,000	25,9	5,996,000	40
Syrups	lt 100,000	lt 40,000	40	lt 60,000	60	lt 80,000	80
Solutions for phleboclysis	400,000	400,000	100	400,000	100	400,000	100
Ointments	kg 10,000	—	0	kg 3,000	30	kg 5,000	50
Suppositories	110,000	—	0	50,000	45,4	100,000	90

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4.1 Currency balance for the 1st three-year period of SPI industrial activity

	1st year US$	2nd year US$	3rd year US$
Outlay of currency for variable costs (1)	793,650	1,329,825	1,851,258
Outlay of currency for fixed costs (2)	750,000	785,000	820,000
A - Total outlay of currency (3)	1,593,650	2,114,825	2,671,258
B - Import value of goods supplied C&F. . . . (4)	1,639,400	2,755,252	3,719,892
Result: B - A	95,750	640,427	1,048,634

(1) Outlay for the import of raw and packaging materials.
(2) Outlay for foreign experts living abroad and for imports of fuel oil, electric power, and sundry consumer materials.
(3) Total outlay in foreign currency which the SPI must bear for local production.
(4) Total outlay in foreign currency which the SPI would have to bear in the case of imports from abroad of the same drugs contemplated for local production.

5.1 Economic/financial results

Profit and loss appropriations account	1st year		2nd year		3rd year	
	USD/000	%	USD/000	%	USD/000	%
Invoicings	1965,1	100,0	3317,6	100,0	4480	100,[illegible]
Variable costs	- 1004,8	51,1	- 1700,4	51,25	- 2379,3	53,[illegible]
Contribution margin	960,3	48,9	1617,2	48,75	2100,7	46,[illegible]
Fixed costs	- 1300,0	66,2	- 1400,0	42,2	- 1500,0	33,[illegible]
Gross operating margin	- 339,7	17,3	217,2	6,5	600,7	13,[illegible]
Financial charges	—	—	- 60,5	1,8	- 75,0	1,[illegible]
Result	- 339,7	17,3	156,7	4,7	525,7	11,[illegible]

Financial structure	1st year USD/000	2nd year USD/000	3rd year USD/000
Net floating capital	710	1255	1650
Financing:			
own means	370	527	1053
third party means	340	728	597

8,1984.

MEMORANDUM.

TO : Barnett Chessin M.O.
John Rose H.O.
M.S.C.I. Mogadishu.
M.S.C.I. Baidoa.
FROM : Jean V.Varenne F.S.U./MGT.
SUBJECT : F.S.U. mission in Baidoa from FEB.29,1984 thru MAR.07,1984.

Dear Barney,
At John Rose'and yours request',I went to Baidoa compound to check and try to f different equipments & materials as in describe in Noël Brown's (MSCI,C.P.) memo you transmitted to me,on Feb.27,1984 before my departure from Mogadishu As you know this project started in June 1983 with the poorest and cheapest quality material available in the States.As you know too,no maintenance have been provided,because the project paper never programed a service man position Soqur people,on the site have been obliged to employ local "blacksmiths" (absolutly uncompetent) for emergency repairs.So,as you can understand,alot of things have been destroyed or seriously damaged by several wrong actions. A physician or a nurse is not supposed to be an electrician or a mechanic, we cannot engage the project team responsability,and I'm surprise to don't find this conpound in worst conditions.
As following I describe:
- The Works I did
- The works which must be done after to have purchase the necessary materials, tools,and accessories.
- A complete check-list of material which must be immediately ordered or locally purchased.

A) Have been repaired.
Dormitories (Nationals)
- Toilets leaks ,fixed.
- Ceilling (3rd. bed-room on the right in the corridor,boys section) replaced in its normal position,was comming down.
The ceilling in the first bed-room on the left is completly destroyed — must be reconstrucded with new materials —

Cafetaria,and kitchen.
Examination of the frige and the freezer.
These two units cannot be started on.It's no gas (Freon 12)in the both unit and need respectively 22 Lbs & 26 Lbs of freon
Evaporator fan (Frige) destroyed by wrong connection (115 volt fans connected on 220 volt)

Midwife counterpart's house.
Stove fixed,but two surface units are destroyed and must be exchanged.
A/C room unit checked . Compressor damaged,take over 80 Amp. when starting Must be exchanged and unit reloaded with appropriate gas(Freon 22)

Sanitarian Counterpart's house.
Portable hot plate fixed (Cannot be considered as as a definitive repair,it a local purhase,must be exchanged by a new one.
Checked a domestic refrigerator.This unit seems to have a gas leak,and/or a damaged compressor.Must be checked with appropriate frigorist instruments
We are still waiting for this material at the FSU ordered in the States in October 1984.
The A/C and the frige are actually stored at the FSU office to be repaired locally at MOG athe MSCI request.

Expatriates
One washing machine fixed at the Midwife's house.

One washing machine (PHN) examinated.Washer dial and timer damaged.Must be exchanged.

Central A/C.

I checked two units and the both need spare-parts (Not available on the local market)

Low voltage circuit out of order (24 volt transformer and thermostat)

The two other units seem to have the same trouble provocated by no stabilized voltage from the power unit

On this subject see below

Generators

Up to-day the project has,

- Two 350 kva (Synchronisable)units- Detroit Diesel-
  In order of service but not used .See below on this subject
- One I25 kva - Fiat- Out of order after 75 hours of work(Short circuit in the stator)This unit is not the project property it's a loan(unknowed origi
- One 85 kva Up to nw in service This unit is not too, the project property It's a Louis Berger International loan.

Because the fuel is only available with too much difficulty, and because a 350 kv has an average consumption of 25 liters per hour the compoud cannot use these two generators.

Meanwhile,only these units used in alternance, could give the normal quantity of electricity the project needs with a maximum of satisfaction and a minimum of troubles.

Some one could say,the project doesn't need a 350 kva powered generator,but this calculation is justified by the fact ~~they are~~ used at full capacity to avoid an excessive temperature increase.In this way take into consideration these generators have been designed for a use in temperated or cold countries which is not the case in Somalia.So, this choice is perfectly justified.

Concerning the I25 kva FIAT out of order after only 75 hours,it's not necessary to return to repair it.It would not be feasible as the parts are insta led

The 85 kva is without any doubt of good quality,but the risk is permanently the samebecause with its only 85 kva it's working at the overload limits

The project has the experience of some over loading due to a faulting I5000 BTU A/C .The only way the project has,is to have a sufficient quantity of fuel at his disposal - I month and half seems to be the minimum but requiring more storage

Common Installations.

(Dormitories,cafetaria,etc...)

This is the problem of all communities where nobody is in charge of the materia and if you consider the students are on the compound for a short time transit (4 months) it's normal to have an advanced degradation.

Some immediate repairs and modifications must to be done in the shortest time possible.

- Complete reconstruction of one ceiling (I st. bed-room on the left in the corriddor - Boys section-)
- One intake wall fan must be installed in each bed-room (Four students sleep in a room of 4 m. x 4m.) Up to now,nothing have been provided for a correct air regeneration exepted a rectangular apperture above each window and supposed to reiceve an A/C never installed,because may be stollen or lost like on the Burao compound.It's really an impression to be in a stove in this bed-rooms.
- A large capacity exhaust fan must be provided in each sanitaries.
- A modification of the water draining system has to be realized ASAP to avoid the rubber boots when going to the showels or the toilets
- Frige and freezer problems are up to day still existing in the collective kitchen (exepted the gas problem) because the power supplied by the energen

generator is not sufficient.The same problem exists too for the range in this kitcchen-The "chef" works outside with wood fire It's seems this is not the easiest solution to feed over 40 people.

Expatriates and Counterparts ' houses .

Two major problems appear in the housing.

- Central A/C.
- Water leakages (Sinks,Showels,Tubs etc...)

The four A/C units seem to have the same trouble.. (auxilliary low voltage circu O.O.O see above on this subject)

After to have consulted the project Team the best way is to exchange the actual installationby several room-units A/C. and as follow:

- Living-rooms : I unit 18000 BTU.
- Kitchen : I unit 9000 BTU.
- Each Bed room: I unit 9000 BTU. (3 Bed-rooms per house)

This solution has several advantages

- Not any expansive spare parts in stock
- No qualified people for the maintenance
- A defectuous unit can be easly transorteted to Mog. by a team member to be repaired when some one have to travel to the capital.
- A faulting unit doesn't occur a privation of fresh air in all the house
- Spares beeing available on the local market it's result a quick intervention in case of stock rupt at the FSU.
- To remake the air conduct above the ceilling will not be necessary (The constitutive matter of these conducts have been reversed during the installation by the service men factory and it result a propagation of fiber glass particles when the fresh air is flushed inside.To breath these particles is very hazardous for our guys'health.It's also very fastidious and need a long time to be done.Personnaly I would be obliged to refuse to do this job because havigg a skin allergy with this material.(fiber glass)

Always according to the team'opinion a 9000 BTU A/C unit could be provide for each Couterpart's housefor better home live conditions

Water Leaks.

In the practice all the faucets are leaking - Must be removed and exchanged- Same action for the Sinks Drain Trap

Electricity.

- GROUNDING SYSTEM
- Aerian Power Lines.

- Not any functionnal GROUNDING SYSTEM is existing on the compound

As you know these buildings are built with aluminium (All is aluminium: Walls,Doors, window frames,locks etc . ..)

As you know too,aluminium is the metal having the best electrical conductivity after the red copper.A faulting wiring in the houses may occurs serious hazard Some one,could objectagainst my system Ipreconnize and I describe below that's to expensive and to save money the best way would be to ground each house to the water pipesIf this system is used in some countries where the ground has a good conductivity I say that's a crime to take the risk to energize the water conducts in a country like the Somalia where the sand doesn't have any conductiblity.Consider too,in this case the risk is multiplicated by as much as it's ~~x~~ houses(Return current)I NEVER'LL ACCEPT to do this work in these conditions, I'm an electrician,not a murder.

I suggest.

From the electrical panel located in each house (laundry)to install a wire copper (3/8" O.D.) connected to a 3 feet red copper rod grounded in the soil

AT I2 feet from the nearest wall of each house.
This same rod will be connected(by the intermediate of another no-insulated wire copper 3/8" O D.) to a main ground cable I/2"O.D. installed in a 2 feet depth trenche all alonng the two sides of the road.One cable per side of this road because the houses and other buildings are locatedlike that.This system avoid digging several trenches in the asphalt.The two cables will be connected togethe to make a buckle and connected in an artificial ground.well.All the trenches wil be covered with out stones and with vegetal ground.
All connections will be brassed - Mechanical ground clamps are refused-
In my ppinion and at the best of my knowledges the bedt is the "Cadwell System"
This description is in conformity with with the electrical code in Virginia and Maryland.

Aerian Power Lines.

A major problem on these installations constitued by three phases and neutral no-insulated wires appears when the wind is blowing.These energized conductors moving with the wind action come into contact with themselves,and the resulting over'load provocated by this short-circuit obliges the main panel protective magneto-thermic relay to switch-off the power distribution.
The solution to avoid this problem and which was suggested by a "very wise" team member would consist to join the conductors together with insulators - two per section- (A section beeing the distance between two consecutive poles)
It's may be the solution,but this energy transportation system beeing so primitive (No-insulated wires),I never worked on it,and I would appreciate an authorized advice on this subject.
Note_ All the poles have to be grounded too.Up to now it's not done .
A leak between the line and the poles(Faulting insulator) may occur a serious hazard for people in contact with the metallic parts

IMMEDIATE WORKS & ACTIONS TO BE DONE ON M.S.C.I. COMPOUND I SUGGEST.

I) To replace a glass on a window in the PHN's house.
2) To reconstruct a newceilling with local purchased material
3) To repair on local market a domestic refrigerator (Compressor)
4) To repair on the local market an A/C (Compressor)
5) To see the possibilities in local purchase for sink drain trap and faucets
6) To order in the States all not available materials.They are not heavy material, could be ordered in air freight.
7) To plan the next trip to Baïdoa compound.

FSU mission report

NEEDED MATERIAL FOR NEW WORKS AND MAINTENANCE

Ligth bulbs 220 V 100 W Screw type (E27)	each	=	200
Ligth bulbs 220 V 60 W Screw Type (E27)	"	=	200
Flourescent Lamp 40 W Lenght 1,20 M	"	=	50
Starter for above 2 x 40 W	"	=	20
Plug Adapter			
US male (-11)			
EU female	"	=	100
Plug Adapter			
EU male			
US female (-11)	"	=	100
Switche US standart			
Single Way	"	=	10
Two Ways	"	=	10
Faucet (Kitchen)			
Cold Water	"	=	15
Hot Water	"	=	15
Faucet (B ath-Room)			
Cold Water	"	=	15
Hot Water	"	=	15
Mixer Combination Faucet (Tub)	"	=	5
Gate Valve (W/ Screw Connection- Garden) 3/4" O.D.	"	=	10
A/C. Expatriates			
18000 BTU 220 Volt	"	=	5
9000 BTU 220 Volt	"	=	16
A/C. Counterparts			
18000 BTU 110 volt	"	=	3
9000 BTU 110 volt.	"	=	3
Sink Drain Trap O D 40 mm (Screw Type)	"	=	15
PVC Elbow I" O D	"	=	10
Galvanized Union I" O.D.	"	=	10
Coupling Female Galv. Male PVC I" O.D	"	=	10
Coupling Female Copper Male PVC I" O.D.	"	=	10
Intake Wall Fan (Air Booster Fan) 10" O.D	"	=	15
Exhaust Wall Fan 24" O.D	"	=	3
Aluminium Angle I"	Per Lenght		4
Aluminium Tee I"	" "	=	5
Fiber Board	Per Sheet	=	5
Blind Rivet NO 4	Each		100
6' Step-Ladder	"		1
Galvanized wire 5/64" O.D.	Roll	=	1
Hacksaw blades	Pcs.	=	10
Glass (Window) II 1/2" x 33"x 1/8"(or5/32")	"	=	1
Cement (for above)	Pack	=	1
Jig Saw	Each	=	1
Blades (for above)	Pkg	=	10

J.V.V./FSU/MGT/Sheet FIVE/03/08/1984.

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NEEDED MARIALS AND TOOLS FOR NEW WORKS. (Cont.)

GROUNDING SYSTEM.

Red copper no-insulated cable I/2" O/D (or I3 mm)	Meters	=	300
Red copper no-insulated cable 3/8" O/D (or I0 mm)	"	=	400
Red copper Rod 3/8" O/D 3 Feet Lght.	Each	=	50
Terminal (for connection between 3/8" cable	"	=	50
and flat metalic surface	"	=	I
Crimper (for above)			
Bolt (complete w/ screev,nut,and washer All brass)	"	=	50
(for above)	"	=	I
Chmeter (Megometer)			
CADWELL system Kit with following assortment of....			
Parall. 3/8" ... graphit molds.	"	=	2
Tee 3/8"	"	=	2
90°Ang. 3/8"	"	=	2
Parall. I/2"	"	=	2
Tee I/2"	"	=	2
90°Ang. I/2"	"	=	2
Parall. 3/8" x I/2"	"	=	2
Tee 3/8" x I/2"	"	=	2
90° Ang 3/8" x I/2"	"	=	4
Unmachined (Rough) graphit mold	"	=	500
Lighting podwer w/metall brass (Cartbidges)	"	=	2
Graphit Mold for round surface 3/8"	"	=	2
Graphit mold for flat surface 3/8"	"	=	5
Shovels	"	=	5
Picks			

New A/C installation.

Alumium Angle 2" wide;
Quantities cannot be determinated before defintive A/C choise.

Arc To TIG Welding conversion Unit			
(MacMaster NO 89 Page I88I Ref. 7846AII US Dol. 357.35	"	=	I
Electric Welding Rod			
(MacMaster NO 89 Page I885 Ref .7973A272 US Dol. 5.3I	Pack.	=	2
Blind Rivet (4 mm or 5/32")	"	=	3
Jig Saw Blades (Metal Cutting Blades) 2 3/4" Lght	"	=	I0
Caulking	Cart	=	I5
A/C Room Units (Recapitulative)			
- I8000 BTU	Each	=	8
- 9000 BTU	"	=	I9

(Concerning the A/C units see above sheet N° 5)

WORKERS & TIME NEEDED TOCOMPLETE THE DIFFERENT WORKS AS ABOVE described (SheetN° 546)

General maintenance

Ceilling / Two Days With a Carpenter.
Plumbering / Seven Days with a QUALIFIED plumber
Electricity / Bulbs could be installed by Team Members.
TOTAL : SEVEN DAYS ON THE SITE

Intake & Exhaust Fans

Room Units : Three Days with a QUALIFIED Electrician.
Bath-Room Units : One Day (Perhaps Two maximum) as above
TOTAL: FOUR DAYS on THE SITE

Grounding System

From TWO weeks thru THREE weeks following the hardness of the soil with HEIGHT unskilled workers and ONE Electrician.

Room Units A/C

MOGADISHU : SEVEN DAYS to prefabricate the wall frames and the external supp
ON THE SITE : SEVEN DAYS Opening the walls,Crimping the frames and the supports,Installing and connecting the units.

This schedule is estimated and cannot be considered as definitive and perfect exact,because it's always a foreseeable lot of problems appearing on the sit

APPENDICES

PACKAGE

C-6 (1-14)

LOGISTICS MANAGEMENT

SAMPLE FORMS

GIVEN TO THE

LOGISTICS MANAGEMENT OFFICER

For Information

Title	Form No.
1. Procurement Action Request	P.1 a
2. Procurement Document Continuation Sheet	P.1 b
3. Local Procurement Request	P.2
4. Receiving Report	P.3
5. Issue Slip/Hand Receipt	P.4
6. Document Distribution & Shipping Instructions	P.5
7. Procurement Status Report	P.6
8. Inventory Control Sheet (NonExpendable)	P.7 a
9. Inventory Control Sheet (Expendable)	P 7 b
10. Logistics Management Flow Chart	No Number
11. A Suggested Filing System	No Number
12. Procurement Status Report	PSR
13. Warren Memo to Rose	No Number
14. Sample Routing Order	No Number

INSTRUCTIONS

PROCUREMENT DOCUMENT CONTINUATION SHEET

PDC

The Procurement Document Continuation Sheet (PDC) is used when the space provided in a procurement document (PA, LPR, PO, RR) is insufficient to accommodate all required information. Instructions applicable to pertinent parts of the original procurement document face sheet are applicable to the PDC. Three entries under "Articles or Services": "Weight/Volume", "Unit Price" and "Amount", are to be estimated if face sheet is a PA. For an LPR the actual cost factors are entered under Unit Price and Amount.

PROCUREMENT ACTION REQUEST	PA	(AA-1)	Form P.I.a.	Page __ of __

Date (AA-2)	PA# (AA-3)	Project Title Project Number Project Location

CATEGORY		AUTHORIZATIONS		SHIPPING PRIORITY
(AA-4)	1	(AA8)	Requested by	(AA10) Emergency
(AA-5)	2	(AA8a)	Approved by	(AA11) Rush
(AA-6)	3	(AA9)	Authorized by	(AA12) Routine
(AA-7)	4	Other Clearances		Required Date:

SHIPPING METHOD				COMMUNICATIONS	
(AA-13)	Surface	(AA16)	Incl. Air Mail	Telex ☐ Cable ☐ Phone ☐ Radio ☐	
(AA-14)	Air Freight	(AA17)	State Dept. Pouch	Date	No.
(AA-15)	APO	(AA18)	Hand Carry	SOURCE OF FUNDS	
Registration Rqd.	Yes ☐	No ☐	If Hand Carried by:	Identify:	

ARTICLES OR SERVICES

Item No. (AA19)	SPECIFICATIONS (AA 23, 25, 26, 27, 28, 29, 30, 31) See reverse for additional instructions	Qty. (AA20)	Unit	ESTIMATES Weight dimensions (AA21-22)	Unit Price (AA24) Cost	Per	Amount

Use continuation sheets as necessary (Form AP-1.b.)

SPECIAL INSTRUCTIONS

(Insurance, special packing, handling, preservatives, crating, etc.)
For consignment, shipping, marking & documentation, attach Form AP3)

Attachment 17

INSTRUCTIONS
PROCUREMENT ACTION REQUEST
PA

I. General

The Procurement Action Request (PA) is used to initiate a request for procurement action or to document such a request if made by electrical transmission or other means of communication. The initiator or "Requestor" prepares the PA in an original and four copies. Normally the requestor is the Field Technician, but could be the Chief of Party or the Field Logistician. The Requestor forwards original and copies 1, 2 and 3 to the Logistician for review and further processing. Copy 4 is retained by the Requestor and is suspended for future follow-up actions.

II. Instructions for Completion of PA form.

[illegible] in this section refer to specific paragraphs in the MARC Procurement Manual.

A. Basic Data and Authorization:
   1. Indicate project title, number and location.
   2. Insert date of preparation of PA. (AA 2)
   3. Indicate PA number, obtained from Logistician (AA 3)
   4. Check "Category" which designates how the procurement is justified. (AA 4-7)
   5. Sign PA as requestor. (AA 8) Signatures of other appropriately designated persons will be obtained after PA is reviewed by Logistician. (AA 9)

B. Procedural and Handling Data:
   1. Check "Shipping Priority" desired. (AA 10-12)
   2. Indicate date required at project site.

C. Modes of Packing and Transportation:
   1. Check "Shipping Method" desired. (AA 13-18)
   2. Paragraphs AA 13-18 in the Manual should be studied carefully before determining modes of packing and transportation.
   3. If commodities are to be hand carried, indicate by whom.

D. Communications (Procurements initially requested by means other than a PA)
   1. Check to indicate type of communication, if this PA is documenting an earlier request made by telex, cable, telephone, radio or letter.
   2. Cite date and number of communication. If other than electrical transmission, indicate date and type.

E. Source of Funds:
   To be obtained and inserted by Logistician.

F. Commodities' Source and Description:
   1. Under "Articles and Services" assign each item a sequential number in the "Item No." column. (AA 19)
   2. Under "Specifications" provide as full a description as possible. Use "Continuation Sheets" as necessary. The more complete the specifications are, the more easily a suitable item can be procured. For items such as chemicals and fuels, use generic names, as well as brand names, when possible. List [illegible] if available. If catalogs are not available, list potential suppliers. Indicate quality desired; model number/year; voltage, cycle and other specifications for electrical items; horsepower, cylinder [illegible], fuel type, etc., for engine driven equipment, and so on. Provide comparative features, product application information and replacement parts data, etc. (AA23 [illegible]-31)
   3. Indicate in appropriate columns the quantity required, approximate weight, size and volume. (AA20-22/24)
   4. Insert estimated costs in appropriate columns. (AA26)

G. Shipping Instructions & Document Distribution: [illegible] Form 475.
Note: Use separate forms for various classes of commodities, e.g., [illegible] equipment, chemicals, [illegible]

Best Available Document

PROCUREMENT DOCUMENT | DOC. (AA-1) | FORM (...B) | 21

Continuation Sheet
for use with
PA, LPR, PO, RR, IS/HR

Indicate type of document:
PA ☐ LPR ☐ PO ☐ RR ☐ IS/HR ☐ Other _____

Date
Cite Type, Number, & Date

ARTICLES OR SERVICES

Item No.	SPECIFICATIONS	Qty	Units	Weights Volume	Unit Cost	Price Per	Amount

TOTAL CONTINUED

LOCAL PROCUREMENT REQUEST (PURCHASE ORDER & RECEIVING REPORT)	LPR	Form P2	Page ___ of ___

Date	LPR #	Project Title	
Requested		Project Number	
Approved		Project Location	
Source of Funds:		If Purchase Order--Enter Number:	PO#

ARTICLES OR SERVICES

Item No.	SPECIFICATIONS	QTY	Unit Price Cost Per	Amount	Totals

SPECIAL INSTRUCTIONS

Requisition Official: Title _____ Name _____ Signature _____ Date _____

RECEIVING REPORT (RR)

Item No.	All items on above LPR/PO were received in quantities ordered and in good condition, except as indicated below. (List exceptions by item number and describe condition) Use continuation sheets if necessary.

Receiving Official: Title _____ Name _____ Signature _____ Date _____

Original issued to Finance to initiate.

SEE LPR PAGE 2

INSTRUCTIONS

LOCAL PROCUREMENT REQUEST, PURCHASE ORDER AND RECEIVING REPORT

LPR

The Local Procurement Request is a multiple form which is useable: (1) for initiating a request for procurement action, (2) as a purchasing document and (3) as a receiving report.

1. As the Local Procurement Request (LPR): The initiator of the request or "Requestor" prepares the LPR in an original and four copies, citing the date and forwarding all but the last copy to the "Logistician" for further processing. The Requestor suspends the last copy for follow-up use and to subsequently compare original requirements with the commodities received. For further guidance see instructions II on PA (Form P.1.a.)

2. As a Purchase Order (PO): The Logistician enters an LPR sequential number in the appropriate block and reviews the contents of the "Articles or Services" block. If the LPR is found to be adequate and complete, the Logistician may use the same form as a PO, in which case he assigns a PO sequential number, cites funds and obtains the approval of the Chief of Party (in consonance with the level of purchasing authority delegated by the latter). The Logistician then effects purchase of the articles or services and enters in the Special Instructions block the name/address of the vendor.

3. As a Receiving Report (RR): The Logistician accepts delivery of commodities and delivers the items to the Requestor, obtaining the latter's signature to verify receipt and to complete the RR. Exceptions noted on the RR become the Logistician's responsibility to effect timely corrective actions. The Logistician immediately enters all items received on the appropriate inventory control sheets and orders replacements as necessary. A reproduced copy of the RR may also be used as a transfer document when appropriately signed by the Requestor. (See instructions on Receiving Report Form P3.)

RECEIVING REPORT | AR | Form PJ | Page ___ of ___

Date ____ MAR ____

Project Title _____
Project Number _____
Project Location _____

Related PO# _____
Date _____

ARTICLES OR SERVICE

Item No.	Brief Description	Qty.	Units	Remarks

Item No. All items on this receiving report were received in the quantities offered and in good condition except as specified below. (List exceptions by item number here or in remarks column and describe condition. Use additional sheets as necessary.)

Receiving Officer Name Rank Grade Signature Date

INSTRUCTIONS
RECEIVING REPORT
RR

The Receiving Report (RR) is used to record the receipt of goods from the supplier or other source and to check quantities and conditions of all items against various procurement documents, i.e., Purchase Orders, Bills of Loading, Packing Lists, Invoices, etc. For the purpose of this ( ) form, for convenience and to reduce paper work, reproduce copies of the RR may also be used to transfer commodities to the Requestor instead of preparing an Issue Slip or Hand Receipt.

1. The Logistician physically checks the quantities and condition of all items received, as listed on the Purchase Order, and records these items on the RR. Any shortages or damages are indicated on the RR and initialed by the Logistician who then delivers the commodities to the Requestor.

2. The Requestor confirms the Logistician's findings and examines the commodities for quality to assure the specifications have been met and signs the RR in the appropriate place at the bottom of the form.

3. Exceptions noted in the RR become the responsibility of the Logistician to effect timely corrective actions. The Logistician immediately enters all items on the appropriate inventory control sheets and orders replacements as necessary.

4. If it is desired to use the RR as a transfer document, in place of an Issue Slip or Hand Receipt, reproduced copies are adequate for this purpose when so indicated on the document and appropriately signed by the receiving party.

260

ISSUE SLIP/HAND RECEIPT	IS/HR	Form 4P4	Page ___ of ___

IS/HR# _____ DATE _____

Project Title _____
Project Number _____
Project Location _____

ARTICLES ISSUED				TURNED IN	
Item No.	BRIEF DESCRIPTION	Qty.	Unit	Date	Initials

The above listed items were received by the undersigned on the date indicated below.

Name _____ Title _____ Signature _____ Date _____

When turning are required on this document, the Logistician and the above named will both initial the "Turned In" column on each other's copy of the form and indicate date of turn in.

Attachment XIII

201

SHIPMENT DISTRIBUTION AND SHIPPING INSTRUCTIONS

Form 20..

1. Date

2. P.O. No.

3. Page ____ of ____ Pages.

SHIPPING

4. Consign Shipment to:

5. Mark for (Final Destination):

6. Partial Delivery Acceptance a. _____ yes b. _____ no

DOCUMENTATION

7. Address to receive information regarding Status of Procurement Request.

8. Address to which Billing Documents are to be sent.

9. SHIPPING DATA (Insert complete address(es) below, items a through c to receive shipping documents in the number of copies indicated.)

Address	Ocean Bill of Lading Negotiable	Ocean Bill of Lading Copy	Air Freight B/L	Packing Lists	Export Invoice
a.					
b.					
c.					

10. Special Documentation or Instructions:

Requisitioner

| | | |

INVENTORY CONTROL SHEET	ICS	Form #71a	If all items on same procurement document, cite Type and Number:	Doc. Type _____ # _____ Date ____	Page ___ of ___

*LOCATION: _____	NON-EXPENDABLE COMMODITIES	Project Title _____
Inventory Date ____ By Whom _____	Indicate Class:	Project Number _____
		Project Location _____

Seq. No.	Proc Type	Doc No.	Item No.	Brief Description	Identification Number	Date Rcd	Source	Initial Qty	Initial Unit	Location (if varied)	Then Qty	Date Unit	Condition	Remarks
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														

Condition: E-Excellent; G-Good; F-Fair; P-Poor; U-Unusable Initial of Custodian: _____

*If all items at same location, enter here. If at several locations enter in appropriate column.

Attachment II

INSTRUCTIONS

INVENTORY CONTROL SHEET NON-EXPENDABLE COMMODITIES

A. General:

This Inventory Control Sheet (ICS) is the form on which an accurate record is maintained at all times reflecting the quantity, location and condition of every item of non-expendable property in the custody of the Project Field Team. The Logistician prepares the form with the assistance of the appropriate custodian or end-user (Technician, etc.) in an original and two copies. He retains the original, custodian retains second copy and the first copy is sent to the Project Chief of Party. An ICS is initiated simultaneously with the issuance of a Receiving Report or when commodities are transferred from one custodian to another. It is updated when any change of quantity, location or condition occurs. Periodic inspections are made by the Logistician for verification on a predetermined basis at the direction of the Chief of Party.

B. INSTRUCTIONS FOR THE PREPARATION OF THE ICS-NON-EXPENDABLE COMMODITIES:

1. Separate ICS forms are used for recording Project and Administrative Support commodities and, normally, different classes of commodities are also entered on separate sheets, e.g., Transportation Equipment, Household Furniture, etc. However, where a small facility exists with only a very few items in each class, these may be recorded on the same ICS form but separated by a heavy line identified under appropriate class headings. Files must then be cross referenced to reflect classes under proper file heading.

2. In the form heading indicate procurement document type (e.g., P.O.) number and date, if all items were purchased on the same procurement document. If more than one procurement document was used, leave space blank and indicate document and number in "Proc Doc" column. See para 9 below.

3. Project Identification: Enter project title, number and location.

4. Indicate Class: Cite commodity class, e.g., Farm Machinery and Equipment, Maintenance Equipment, Laboratory Equipment, Household Furniture, Transportation Equipment, Office Machines, etc.

5. Location: State location in specific terms, e.g. Soils Laboratory, Motor Pool, Farm Machinery Warehouse, Project Headquarters, House Number __, Logistics Office, etc. If some items listed are at different locations, enter "see location column" and follow instructions in para 15 below.

6. Inventory Date: Cite date this inventory initially taken and insert initials of person taking the inventory.

7. Seq. No.: This preprinted sequence number is related to the numbered line only for ease in transmitting line item information.

8. Item No.: This is the line item number from the specific procurement document by which the item was acquired, e.g., the P.O., or a document transferring or issuing an item to the project. It relates the item to its source.

9. Proc Doc., Type-Number: Cite the document on which the items were procured or acquired. Use this column if more than one document must be cited, otherwise see para 2 above.

10. Brief Description: Specifications are not desired, but a short descriptive identification is needed, e.g., "Truck, 2 1/2 ton, Dump, G.M." Full specifications are found in the PO or other procurement document.

11. Identification Number: Here cite the vehicle serial number, part number or any other identification number found on a machine or piece of equipment, etc.

12. Date Received: Obtain date from the pertinent Receiving Report or other procurement document reflecting the date item was received at the Project Site.

13. Source: This information is of importance for (1) new procurement of similar commodities and replacement or other actions required by condition of equipment when received, and (2) to identify the agency or activity from which an item was transferred, issued, or loaned where no procurement document evidences purchase.

14. Initial Inventory: Show quantity and unit of items when originally received by the custodian.

15. Location: Use this column if items are located at separate places but under the custody of the same person and there are but very few line items.

16. This Date-Quantity/Unit: Indicate quantity and unit on hand the date of this inventory.

17. Condition: Record the condition of items at the time of receipt by the location being inventoried. If condition has changed subsequent to previous inventory the present condition is noted in the remarks column and explained.

18. Remarks: Use this column as necessary to record any additional information of pertinence to the inventory.

19. Initials of Custodian: Obtain the initials of the person who has custody or responsibility for the use and protection of the commodities inventoried.

20. End of Inventory: A heavy indelible line is drawn across the inventory page following the last recorded item of any inventory. It is identified at its center by the words "Last Item".

[illegible] CONTROL SHEET	ICS	Form [illegible]	If all items on some procurement doc. document, cite Type, No. and Date: Type _____ # _____ Date _____	Page ___ of ___

ON _____

Inventory Date _____

EXPENDABLE COMMODITIES

Indicate Class:

Project Title _____
Project Number _____
Project Location _____

[illegible]	Item No.	Brief Description	Identification No. (Serial, etc.)	Date Rcd	Source	Initial Inv Qty	Unit	Location (if var ied)	Periodic Levels J	F	M	A	M	J	J	A	S	O	N	D	Reorder Level	Remarks

If other than Excellent for any items, indicate in Remarks.

Attachment III

INSTRUCTIONS

INVENTORY CONTROL SHEET EXPENDABLE COMMODITIES

A. GENERAL

This Inventory Control Sheet (ICS) is the form on which an accurate record can be maintained, at all times, reflecting the quantity, location and condition of expendable property in the custody of the Project Field Team where consumption is not an immediate aspect. The form is of critical importance in providing timely information essential to maintaining adequate stock levels and to forwarn of the need for replacements of such items as spare parts, laboratory chemical, etc. It provides safety level and reorder point data based on usage experience, lead times and other factors. Maintaining inventory control data on a current basis also facilitates use of other management controls and reporting and reduces significantly the time needed to complete the annual inventory. Periodic inspections on a predetermined schedule are made by the Logistician to assure that timely entries are made. This ICS is initiated simultaneously with issuance of a Receiving Report and is updated on a periodic basis as determined by the Project Chief of Party.

B. INSTRUCTIONS FOR PREPARATION OF THE ICS-EXPENDABLE COMMODITIES

1. Separate ICS forms are used for recording Project and Administrative Support commodities and, normally, different classes of commodities are also entered on separate sheets, e.g., Spare Parts for Farm Machinery, Spare Parts for Transportation Equipment, Laboratory Chemicals, etc. However, where a small facility exists with only a few items in each class, these may be recorded on the same ICS form but separated by a heavy line and identified under appropriate class headings. Files must then be cross referenced to reflect classes under proper file headings. The Logistician prepares the ICS form with the assistance of the appropriate end-user or custodian (Technician, etc.) in an original and two copies. Logistician retains the original, custodian receives copy two and the first copy is sent to the Chief of Party.

2. In the form heading indicate procurement document type (e.g. P.O.), number and date, if all items were purchased on the same procurement document. If more than one procurement document was used, indicate document and number in "Proc Doc" column, see para 9 below.

3. Project Identification: Insert Project title, number and location.

4. Site Commodity Class: e.g., Spare Parts-Farm Machinery, Spare Parts-Transportation Equipment, Laboratory Chemicals, etc.

5. Site Location in specific terms, e.g. Soils Laboratory, Garage Warehouse, etc.

6. Initial Inventory Date: Cite date inventory first taken during current annual period.

7. Seq. No.: This prearranged Sequence Number is related to the numbered line only for ease in transmitting line item information.

8. Item No.: This is the line item number from the specific procurement document by which the item was acquired, e.g., the P.O., or a document transferring, or issuing an item to the project. It relates the item to its source.

9. Proc Doc. Type/Number: Cite the document on which the item was procurred or otherwise acquired. Use this column if more than one document must be cited, otherwise see para 2 above.

10. Brief Description: Complete specifications are not desired, but a short descriptive identification is needed, e.g., Acid, Sulphuric, 30%; Pressure Plate, Clutch, etc. Full specifications are found in the P.O. or other procurement document.

11. Identification Number: Cite the specific part number or serial number for spare parts. This item applies to Chemicals only if an identification number appears on the container.

12. Date Received: Obtain date from the pertinent Receiving Report or other procurement document reflecting the date item was received at the Project Site.

13. Source: This information is of importance for: (1) new procurement of like items and replacement or other actions necessitated by condition of the item, and (2) to identify the agency or activity from which an item was transferred or issued where no procurement document evidences its purchase source.

14. Location: Use this column if items are located in separate places but under the custody of the same person and there are but very few line items. If all items are located in the same place, see para 5 above.

15. Periodic Levels: Here cite quantities on hand at time of each periodic inspection or recording under the appropriate month.

16. Reorder Level: Enter the quantity at which a replacement order is required, considering usage experience, lead time and other factors. Replacement action is required when any inspection level reaches the same quantity as cited in the reorder level column.

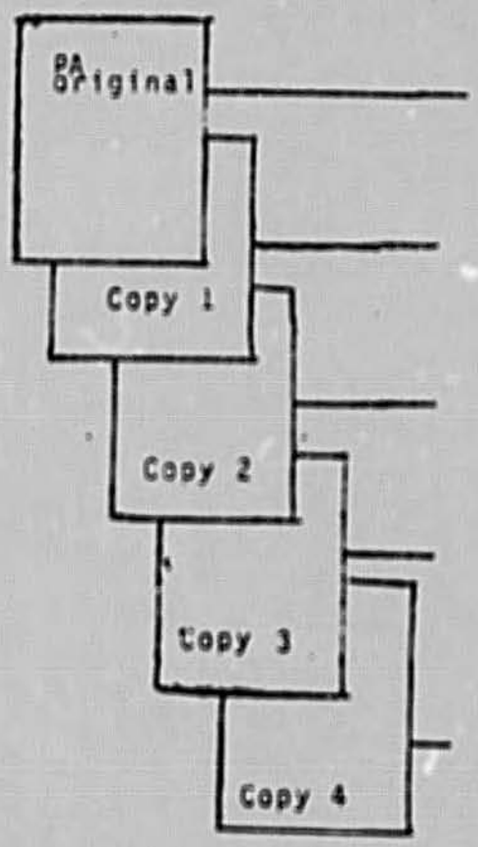
LOGISTICS MANAGEMENT

FLOW CHART

Distribution of Documents

A. Documents Originated by Field Team (FT):

1. Procurement Action Request (PA). Original and 4 copies. Initiated by Requestor; reviewed, processed by Logistician.



To home office: HQ Procurement action. If required, thru USAID or other intermediary for approval.

FT Logistics: Suspense until receipt of goods. Then match with P.O., inspect goods, issue Receiving Report.

To USAID or other intermediary for approval, if required, or for information.

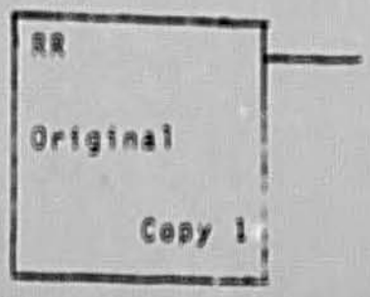
FT Logistics: Follow-up copy. Suspense for appropriate come-up to follow/expedite procurement.

FT Requestor: Suspense for follow-up and to match requirements with Receiving Report when goods received.

2. Local Procurement Request (LPR). Original and 1 copies. Initiated by Requestor (Technicians or other). Original and copies 1, 2, 3 submitted to FT Logistics.

LPR ——— FT Log issues P.O. and executes.

PO



FT Log suspense w/P.O. Match with P.O. and goods received. [illegible] reports w/ Requestor issue RR.

MEMORADUM OF UNDERSTANDING

The purpose of this Memorandum is to specify procedures for the procurement, receipt, inventory, control, issuance and end use check of AID-financed property for the Rural Health Delivery Project 649-0102.

Procedures:

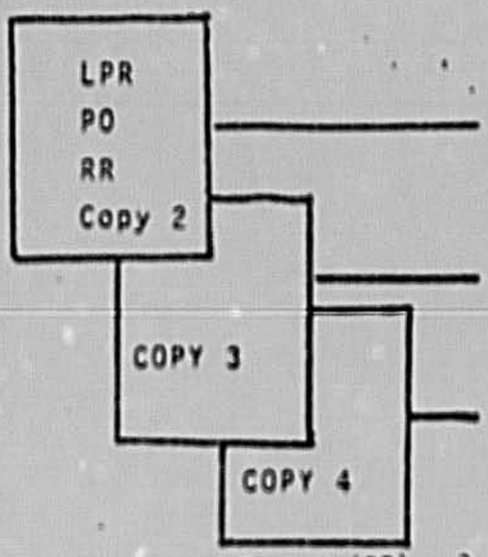
1. Under the terms of their contract, Commodities will be ordered by Medical Service Consultants, Inc. with approval of MOH and USAID.
2. Receipt of the property and port clearances will be the joint responsibility of MOH and MSCI, each having an official representative participating in the process.
3. An inventory will be made of property as it is received and property records maintained in the logistics center. MSCI and MOH will share responsibility for the maintenance of these records.
4. Issuance and control will be maintained in accordance with the plan developed by MSCI and described in the attached memorandum by Philip Warren dated November 30, 1983. Forms used will bear the signatures of the MSCI logistics specialist and his counterpart.
5. End use checks (e.g inventories and/or review of records) may be conducted jointly or solely by MSCI, USAID or MOH as required in the performance of their duties. All parties agree to cooperate with each other in the conduct of inventories and end use checks.
6. Changes in the procedures outlined above maybe agreed to at anytime with such changes documented by letters or memoranda signed by MSCI, MOH, and USAID.

Dr. Kasim Aden Ejal
Director, Primary Health Care
Ministry of Health

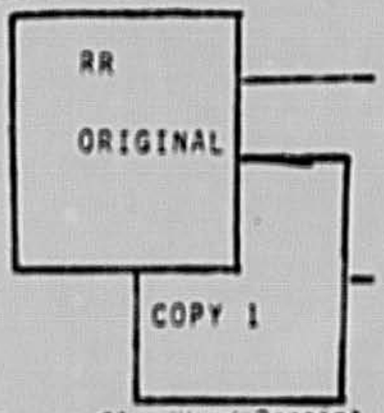
Dr. Robert Adams
Chief-of-Party, MSCI

12/11/83

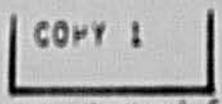
John C. Rose
Health Officer
USAID/SOMALIA



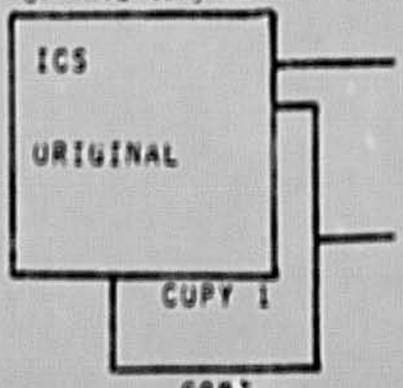
3. Receiving Report (RR). D
issued. If shipment is sp
identifies discrepancies



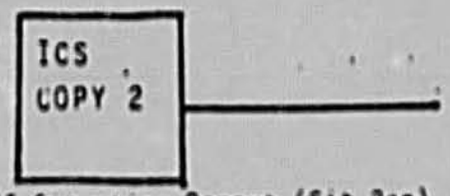
4. Issues Slip/Hand Receipt
by Logistician for purpos
hold furnishings, support



5. Inventory Control Sheet
of inventory control. O

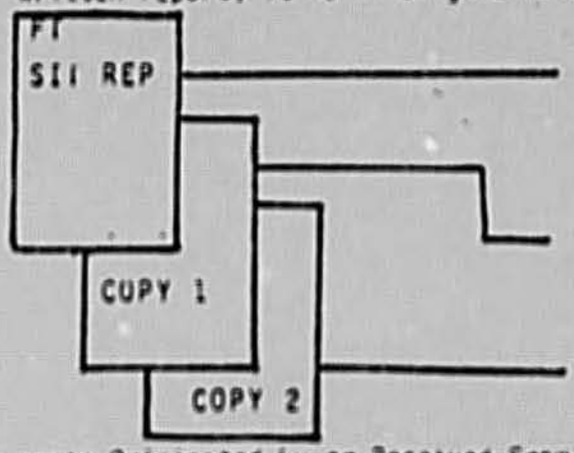


CONT.



To: Custodian of property as appropriate.

6. FT Situation Report (Sit Rep). Original and 2 copies. Used for spot reporting procurement status or other pertinent information related to the procurement cycle. Usually by electrical transmission. If written report, it is in original and 2 copies.



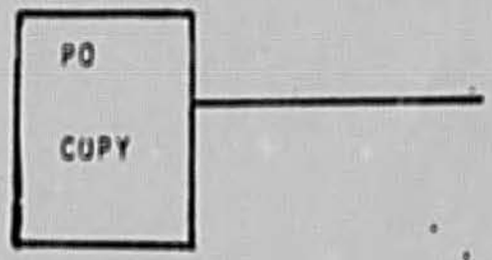
FT Logistician prepares data and transmits to HQ. Records data on FT Procurement Status Report (para C. below).

To FT Chief of Party for review, information and file.

Logistics file after any required actions are taken.

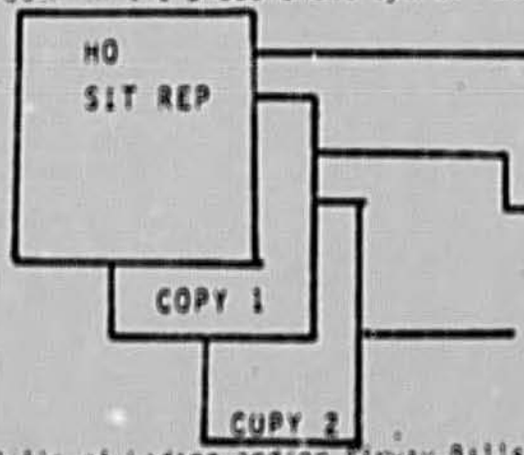
B. Documents Originated by or Received From Home Office and/or Other Sources.

1. Purchase Order (P.O.) or (other purchase document). (Usually original receive copy - only).



FT Logistician matches with PA, files in suspense for follow-up and expediting. When goods received, inspects, issues Receiving Report and transfers goods to using activity. Files in appropriate procurement file.

2. Home Office Situation Report (Sit Rep). Original and 2 copies. Used for spot reporting procurement or other pertinent information related to the procurement cycle. Usually by electrical transmission.



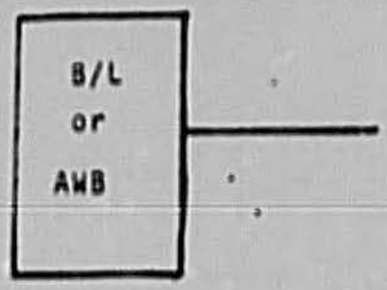
Logistician compares data with Logistics records, enters status on Procurement Status Report.

To FT Chief of Party for review, information and file.

HQ Procurement Officer enters status on Procurement Status Report, files.

3. Bills of Lading and/or Airway Bills. Shipping source alerts FT Logistician to impending arrival of goods. If B/L, an original and several copies. If AWB, usually one copy.

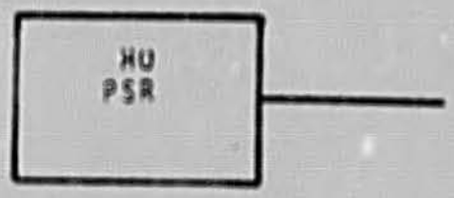
27



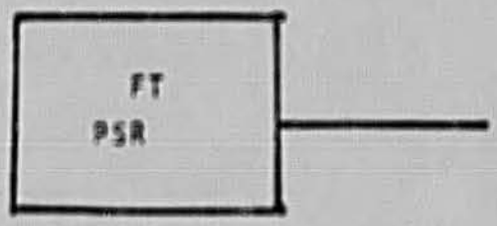
Logistician compares information with P.O. and PA, suspends pending arrival of goods. Enters status data in Procurement Status Report. Clears commodities, upon arrival, thru customs. Issues Sit Rep. Executes Receiving Report.

C. Documents Originated and/or Maintained by Both Home Office and Field Team.

Procurement Status Report (PSR). The Procurement Status Report is initiated by either HO or FT, whichever office originates a Procurement Request or action. The form, maintained in both offices, is activated by any entry based on information communicated by either. Data is recorded in appropriate blocks and columns reflecting the pertinent procurement document or action by date and data. By merely referring to a lettered or numbered block or column, data is easily transmitted by telex, cable, telephone or radio with minimum verbage. When kept current the PSR provides a running account of the entire procurement cycle.



HO originates when it initiates a procurement action or receives a Procurement Action Request. Form is retained in HO and entries made as data is generated or received. HO Chief of Procurement reviews PSR on a frequent periodic basis. HO Project Leader and HO Logistician review periodically.



FT Logistician originates PSR when a Procurement Action Request is initiated or he is advised by HO that a procurement action has been initiated. The PSR is also used to follow local procurement actions where high value and/or long lead times are a factor. PSR is reviewed by FT Logistician on a frequent periodic basis and by the FT Chief of Party periodically.

LOGISTICS MANAGEMENT OFFICE

FILING SYSTEM
(suggested)

A. PROJECT COMMODITIES
   1. Non-expendable Commodities
      a. Transportation Equipment
      b. Machinery, Equipment
      c. Maintenance Equipment, Machinery and Tools
      d. Laboratory Equipment
      e. Other Project Equipment
      f. Inventory Control

   2. Expendable Commodities
      a. Laboratory Chemicals
      b. Laboratory Supplies
      c. Field Chemicals
      d. Field Supplies
      e. Office Supplies
      f. Inventory Control

   3. Spare Parts
      a. Spare Parts for Transportation Equipment
      b. Spare Parts for Machinery, Equipment
      c. Miscellaneous Spare Parts
      d. Inventory Control

B. SUPPORT COMMODITIES
   1. Non-expendable Commodities
      a. Transportation Equipment
      b. Office Machines
      c. Office Furniture
      d. Furnishings
      e. Maintenance Equipment
      f. Communications Equipment
      g. Other Support Equipment
      h. Inventory Control

   2. Expendable Supplies and Parts
      a. Office Supplies
      b. Maintenance Supplies
      c. Miscellaneous Supplies
      d. Spare Parts for Transportation Equipment
      e. Spare Parts for Household Furnishings, etc.
      f. Inventory Control

C. SUPPORT SERVICES
   1. Housing
   2. Transportation
   3. Building Maintenance
      a. Electrical
      b. Plumbing
      c. Cleaning
      d. Miscellaneous
   4. Medical
   5. Miscellaneous
   6. Accounting Controls

Attachment I

PROCUREMENT STATUS REPORT

PROCUREMENT STATUS REPORT
(PSR)

FROM

FROM

PO/C NUMBER
PO/C DATE
PO/C RECEIVED DATE

PAGE OF

A MESSAGE OR PSR		B PROCUREMENT STATUS							C SHIPPING STATUS				D RECEIVING STATUS					E REMARKS
DATE	NUMBER	TENDER ISSUE DATE	TENDER NUMBER	TENDER OPENING DATE	AWARD RECEIVED NO BIDS DATE	APPROVAL RECEIVED DATE	CONTRACT ISSUED DATE	CONTRACT NUMBER	ETA MARSH BILLING DATE	B/L DATE	B/L NUMBER	ETA PORT OF DISCHARGE DATE	ARRIVAL PORT OF DATE	REC DATE CONSIGNEE	REC NUMBER	REC DOCUMENTATION YES	NO	

November 30, 1983

TO: John Rose, Project Officer, AID

FROM: Philip Warren, Logistics Officer, MSCI

THRU: Robert Adams, Chief of Party, MSCI

SUBJECT: Logistics Commodity Control Program

Within the Logistic Center's activities, there are three basic types of commodities which require careful control: drugs, supplies, and vehicle parts. To accomplish this, a system or simple, but comprehensive, forms have been set up which can be used for all three commodity types.

All commodities, when received in-country, are immediately inventoried and registered on the receival form (LV-1 attached) of which copies are sent to the PHC Director and the MSCI Chief of Party. This serves as a basic commodity receipt and also as a cross-reference with original purchase orders.

Once this has been done, the supplies are split into different categories, as noted above: for their respective storage locations. These goods are then added to the store's stock cards (LV-7) which provide a continually up-dated record of stocking levels. At the PHCU level, the stock will be kept on a minimum-maximum stocking level basis, thus making resupply a far simpler process.

Periodic stock checks are taken with each store to compare the record tally with stock. The completedinventory is put on an inventory form (LV-3).

When goods are to be transported to the regions, a packing list (LV-6) is prepared by the Logistic's Center for transmission to the regional store, i.e. training center. One copy is kept at the Dispatch Point, while two are sent with the vehicle. Upon arrival of the goods, a check is made and the packing lists signed as verification of destination receipt. One signed copy remains at the regional store and one is returned to the Logistics Center as receipt for arrival of the goods.

The goods delivered were originally ordered by use of a requistion form (LV-2) which is completed and sent to the store concerned at the Logistic's Center for regional requests or the train-center (regional store) for PHCU requests.

Whenever an excess of supplies is found or goods are later determined not to be needed, the delivered goods are returned to stock by use of a stock return form (LV-4).

The above set of forms deal with the requisitioning, stock control, and storage of all the commodities received by the project, and the same forms are used at all levels of materiel storage; Logistic's Center through PHCU.

A second set of forms have been developed for the vehicle and equipment maintenance component of the logistic program. Each vehicle upon arrival in Somalia is assigned a file and history record form (V-1). This includes such information as serial numbers, key numbers, model, make, year, etc. and serves thereafter as a vehicle history record on which all major repairs are recorded. This form is also used as a means of determining the point at which a vehicle is no longer economically functional.

Each vehicle or piece of equipment undergoes scheduled maintenance which is recorded by type of repair on form V-4. One copy is retained with the vehicle's file and a second with the regional mechanic as proof of repair.

Once a month, all repairs are recorded on the monthly vehicle status form (V-5) for rapid access to concerned parties.

When a piece of equipment requires unscheduled repairs, a request is prepared on form V-2.

Further, all drivers are obliged to fill in a daily vehicle usage form (V-3) which records the various uses to which it is put, and petrol, oil, and lubricant consumption. This also serves as a check for misuse of project vehicles.

When parts and supplies need to be ordered from the US, their specifications are recorded on either forms P1 or P2. They must then gain both AID and MOH approval before being submitted to MECI-Washington for purchasing.

At the present time, all the above-mentioned forms have been in use since June 1983. During this period, they have undergone continuous assessment leading to minor alterations prior to submission to AID and MOH for official approval and subsequent printing.

Sample Routing Order

ROUTING ORDER

MINISTRY OF HEALTH

Department of Medical Supply

Driver _____

Vehicle/Model/Number _____

Warehouse _____

Departure Date _____

Estimated Return _____

Estimated Total Mileage _____

Deliveries will be made in the following order unless road or weather conditions necessitate changes.

1. _____ 6. _____
2. _____ 7. _____
3. _____ 8. _____
4. _____ 9. _____
5. _____ 10. _____

PROGRESS REPORT

Date	Depart	Time	Mileage	Arrive	Time	Mileage

Special Instructions

_____

Dispatcher

USAID/Somalia Comments on the Recurrent Cost Study by the

John Snow Health Group, Inc., April 2004

The John Snow report contains a number of good recommendations which the Mission has already adopted or will act on depending on availability of funds and GOS concurrence in taking the necessary changes. However, the report contains a number of statements and recommendations which are based on misunderstandings. For this reason, the Mission is attaching this response to those statements which we consider to be the most serious or which will lead to further misinformation about the project.

The Report contains no page numbers. Our response below is directed to selected section. Several of the statements and recommendations are found in more than one place in the report.

Title Page

The JSI team was commended to determine whether or not the GSDR would be able to sustain the project and to make recommendations for making the project more cost effective. The scope-of-work included tasks of an evaluative nature. However, had the Mission contracted for a project evaluation, the scope-of-work would have been different as would the composition of the consultant team.

Section 1. Summary

a. Management

The report states "everyone with whom we spoke believes that the project commodities include full drugs and medical supplies for PHC units, and, "none of the project contracts includes these items". The original project design assumed that only an initial tranche of drugs and supplies would be provided by USAID. The Project Agreement provides....."that the Grantee take steps necessary to ensure drugs and other supplies and equipment will be supplied on a continuing and timely basis". Also, the amount in the PP budget for drugs was estimated in 1978. It is not surprising therefore, that the cost of supplying drugs today costs more. The decision to purchase the drugs mentioned in the report was made jointly by

MOH, USAID and MSCI. It became clear that an adequate supply of drugs was required for those persons who had been trained. This section of the report gives the impression that this was a hasty decision. It was not. Further, the Mission has been discussing the drug requirements for MOH with WHO and UNICEF. It is expected that agreement be reached with all parties that the drugs be purchased through the WHO/UNICEF Action Program for Essential Drugs. The report further states that there is confusion about the commodity budget. The MSCI contract contains an equipment and supply line item of $1.3 million. This is included on the controller's report and the PROAG budget and is mentioned in Section 1 of the JSI Report. The MSCI vouchers and receipts clearly verify expenditures for commodities. Also, purchases are only made with USAID and MOH approval. It is true that there is no list of specific items to be purchased under the contract. The draft implementation plan submitted by MSCI includes a list by general category.

The Financial and Management Recommendations at the end of the summary contains specific items which are not feasible nor desirable.

1. "Use an overhead formula for giving CIPL funds to MOH.....".

   Comment: CIPL funds are not USAID funds but GSDR funds. The use of these funds is agreed upon by USAID and the GSDR. Secondly, the use of an overhead formula would be inconsistent with the Mission objectives of improving management and fiscal responsibility of the GSDR. The procedures agreed to by the Ministry of Finance and USAID were established to protect the integrity of funds and guarantee accountability.

2. "Cease funding project commodities out of the CIPL and refund CIPL for commodities purchased with CIPL funds".

   Comment: CIPL funds are used by Agreement for development projects. The study assumes that CIPL is for recurrent costs only. This is not true. Where CIPL funding is available for project costs, it should be used for local purchase. Wherever possible, funding is moved from AID contribution ($) to GSDR Contribution (So. Sh.). Further, it does not make sense to change dollars to shillings

when shillings are available. This is particularly true where a project extension is required and foreign exchange must be conserved for technical assistance costs.

3. The report recommends audits of CIPL and MSCI.

Comment: The CIPL Unit has two auditors and and audit of the PHC accounts will be requested. An Audit of MSCI has already been included in the FY 85 Audit Plan.

4. "Abandon the search for ways to justify private drug purchase".

Comment: It is a part of our policy dialogue and CDSS to strengthen the private sector. The JSI Reports correctly states that the sale of drugs and/or fee for service would not reduce the foreign exchange costs of the program. However, it may significancly reduce the shilling cost to the MOH

5. "Do not extend MSCI's contract beyond September 1985". While the Mission has not been particularly pleased with MSCI, we do not intend to use the JSI Report as the basis of our contracting decisions. We do not believe that it was their prerogative to make this recommendation.

6. The report recommends that MOH "Should eliminate donor control over PHC policies and practices". The Mission does not believe that any donor organization has control over PHC policies and practices. The statement is unwarranted.

Section I Finance and Management

Chapter 2 Management

Many of the problems referred to in this section, lack of management tools, etc. are the result of not having a comprehensive project implementation plan. MSCI has been working on the plan for the last two months and has submitted a third draft to the Mission. While the plan will require revisions to reflect changes that the Mission wants to make in the project, it will serve still as basic management tool for the project.

The report states that USAID has requested MOH to formally

take over the training center compound buildings and recommends that this be delayed because of the poor condition of the buildings.

The buildings, like other project commodities are provided to the Grantee in accordance with standard PROAG provisions. There are problems with the buildings resulting from poor construction. However, routine maintenance is required and this has been lacking or done haphazardly. The problems with maintenance are no different than those encountered in other housing in Somalia. USAID has contracted an engineering firm to survey the Burao Compound and will have most serious defects corrected on an emergency basis. At the same time, we have asked MOH to provide a maintenance plan for the compounds as it is a part of the Project Agreement that the MOH maintain the facilities provided. We will, where required be able to provide maintenance assistance to them through the Field Support Unit which will be jointly funded by all AID funded projects. The Management Section of the report also makes reference to "Many appliances missing from Somali tutors houses". This is unfortunately another misconception which continues to surface. Appliances were ordered for the expatriate housing. The project did not order appliances for the Somali staff.

The report also recommends that items found to be missing during the inventory conducted in response to the Audit be replaced but not from project or CIPL funds. Also, the replacement of any items will be based on need and not simply because they were once a part of the project.

Section I, Chapter 2b (7) Controller's Accounts. The report states that a payment of $227,000 was made to AAPC under the Construction Category but that no one knew what it was for. The Controller took time to explain to JSI that the payment was made against a valid Advice of Charge (AOC) containing all the proper fiscal data. There were a number of charges made against PIO/Cs related to the construction. Tracing this particular disbursement would have been time consuming and was not necessary for the JSI to perform a cost-analysis.

Section I, Chapter 5 c. This section contains a statement attributed to the PHC Director that MOH had submitted a low-cost design for the Primary Health Care Units but that the USAID Engineer had rejected them in favor of more costly units. This is not correct. USAID/Engineers advised changes which reduced the cost.