

AGENCY FOR INTERNATIONAL DEVELOPMENT PROJECT DATA SHEET		1. TRANSACTION CODE <input checked="" type="checkbox"/> A = Add C = Change D = Delete	Amendment Number _____	DOCUMENT CODE 3
2. COUNTRY/ENTITY Kenya		3. PROJECT NUMBER 615-0206		
BUREAU/OFFICE AFR		5. PROJECT TITLE (maximum 40 characters) Kitui Rural Health		
6. PROJECT ASSISTANCE COMPLETION DATE (PACD) MM DD YY 09 3 08 7		7. ESTIMATED DATE OF OBLIGATION (Under 'B.' below, enter 1, 2, 3, or 4) A. Initial FY 81 B. Quarter 4 C. Final FY 82		

8. COSTS (\$000 OR EQUIVALENT \$1 =)						
A. FUNDING SOURCE	FIRST FY 81			LIFE OF PROJECT		
	B. FX	C. L/C	D. Total	E. FX	F. L/C	G. Total
AID Appropriated Total	434	4,196	4,630	3,649	5,731	9,380
(Grant)	(0)	(0)	(0)	(3,215)	(1,535)	(4,750)
(Loan)	(434)	(4,196)	(4,630)	(434)	(4,196)	(4,630)
Other U.S.	1.					
	2.					
Host Country	0	557	557	0	3,315	3,315
Other Donor(s)						
TOTALS	434	4,753	5,187	3,649	9,046	12,695

9. SCHEDULE OF AID FUNDING (\$000)									
A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE		D. OBLIGATIONS TO DATE		E. AMOUNT APPROVED THIS ACTION		F. LIFE OF PROJECT	
		1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan
(1) FH	533	510	510	0	0	4,750	4,630	4,750	4,630
(2)									
(3)									
(4)									
TOTALS				0	0	4,750	4,630	4,750	4,630

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each)						11. SECONDARY PURPOSE CODES	
530	562	580	540	520		580	
12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)							
A. Code	BR	DEL	INTR	NUTR	TNG		
B. Amount	2,300	2,300	2,300	2,000	480		

13. PROJECT PURPOSE (maximum 480 characters)

To institutionalize an effective and low cost community-based primary health care system in Kitui District suitable for replication elsewhere in Kenya.

14. SCHEDULED EVALUATIONS				15. SOURCE/ORIGIN OF GOODS AND SERVICES			
Interim	MM YY	MM YY	Final	MM YY	<input checked="" type="checkbox"/> 000	<input checked="" type="checkbox"/> 941	<input checked="" type="checkbox"/> Local <input checked="" type="checkbox"/> Other (Specify) 935
	10 8 4			0 6 87			

16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a _____ page PP Amendment.)

17. APPROVED BY	Signature 	Date Signed MM DD YY 0 9 2 5 81	18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION MM DD YY
	Title Allison B. Herrick Mission Director, USAID/Kenya		

ABBREVIATIONS USED

A & E	Architectural and Engineering
AMOH	Assistant Medical Officer of Health, MOH
CDF	Community Development Fund
CHW	Community Health Worker
CN	Community Nurse, (Same as ECN) MOH
CO	Clinical Officer, MOH
CODEL	Coordination for Development, NGO
DANIDA	Danish International Development Agency
EN	Enrolled Nurse, MOH
FHFE	Family Health Field Educator, MOH
FP	Family Planning
GA	General Attendant, MOH
GOK	Government of Kenya
HC	Health Center
HC/H	Health Center/Hedquarters (Same as Rural Health Unit Headquarters (RHU/H))
HPIP	USAID/Kenya Health Planning and Information Project
HUT	Rural Health Unit Team, MOH
IEE	Initial Environmental Examination
INTRAH	University of North Carolina's International Training in Health Program
IRH/FP	Integrated Rural Health and Family Planning Program, MOH

MCH/FP	Maternal and Child Health and Family Planning
MOSSC	Ministry of Social Services and Culture
MOF	Ministry of Financé
MOH	Ministry Of Health
MOP	Ministry of Planning
MOW	Ministry of Works
MPH	Masters Degree in Public Health
NFWC	National Family Welfare Center, MOH
NGO	Non-Government Organization
OPEX	Operational Expert
OPG	Operational Program Grant
PA	Patient Attendant, MOH
PCV	Peace Corps Volunteer
PHO	Public Health Officer, MOH
PHT	Public Health Technician, MOH
RHF	Rural Health Facility
RHMT	Rural Health Management Team, MOH
RHTC	Rural Health Training Center, MOH
RHU	Rural Health Unit
RHU/H	Rural Health Unit/Headquarters (Same as Health Center/Headquarters (HC/H))
SCO	Second Clinical Officer, MOH
TBA	Traditional Birth Attendant
WHO	World Health Organization

OUTLINE

KITUI RURAL HEALTH PROJECT PAPER

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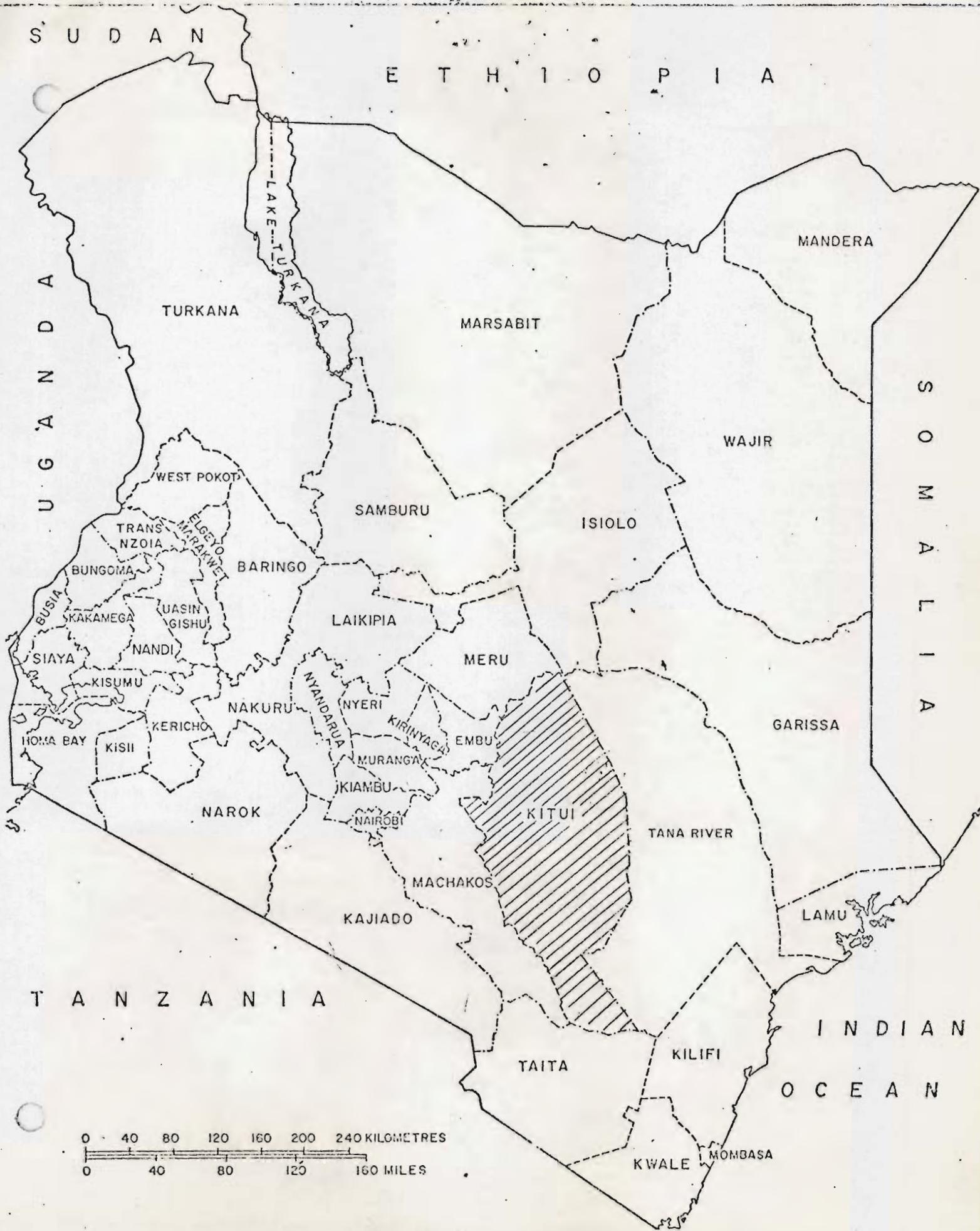
I. SUMMARY AND RECOMMENDATIONS

A. Project Summary

Kitui District, the site of this project, is located within Eastern Province, in Kenya. The district is subdivided administratively into five divisions. Kitui Town, the district headquarters is approximately 170 kilometers east of Nairobi, the nation's capital and largest city. (See shaded areas of Map I-1.) The population of Kitui District according to the 1979 census was 463,512 in a land area of 29,787 sq. km., giving an average population density of 16 persons per square kilometer. In the decade since the 1969 census, the population increased 36.4 percent, which represents an average annual rate of growth of 3.2 percent.

Kitui District falls entirely within the two ecological zoning classifications of arid and semi-arid lands, classifications denoting areas of low rainfall and hot, dry climate that are marginally suitable for crop farming and livestock grazing. The district is overwhelmingly rural and agricultural. In spite of the relatively poor physical environment for productive economic activities, over the past 5 years the area has been experiencing a significant immigration of people from adjacent, overpopulated high potential agricultural areas. This has pushed population growth rates up to an estimated 5 percent annually. Kitui District is representative of the conditions presented by Kenya's arid and semi-arid areas: scattered population over a large land area; small, isolated communities; inadequate road networks; a fragile physical environment and limited natural resource base; very poor access to health care; and widespread, grinding poverty.

In order to help address these problems, Kitui District has been chosen jointly by the Government of Kenya and USAID for mounting an innovative low-cost primary health care delivery project which could be replicated in other areas of Kenya, especially arid and semi-arid zones.



S U D A N

E T H I O P I A

U G A N D A

TURKANA

MARSABIT

MANDERA

WEST POKOT

SAMBURU

WAJIR

TRANS NZOIA

ELGEYO MARRAKWET

BARINGO

ISILOLO

BUNGOMA

BARINGO

LAIKIPIA

MERU

KAKAMEGA

UASIN GISHU

NANDI

NAKURU

NYANDARUA

NYERI

KIRINYAGA

EMBU

GARISSA

SIAYA

KISUMU

NAKURU

NYANDARUA

NYERI

KIRINYAGA

EMBU

HOMA BAY

KISII

KERICHU

NAKURU

NYANDARUA

NYERI

KIRINYAGA

EMBU

KIAMBU

KAJIADO

KITUI

TANA RIVER

LAMU

NAROK

MACHAKOS

TAITA

KILIFI

INDIAN OCEAN

T A N Z A N I A

0 40 80 120 160 200 240 KILOMETRES

0 40 80 120 160 MILES

KWALE MOMBASA

The proposed project will establish an expanded district-level institutional capability to plan, manage and implement a decentralized rural health services delivery system. Through an appropriate mix of static facilities, community-based and mobile services, the project will strengthen the facilities infrastructure needed to support primary health care services, and then gradually develop and support community-based health activities through a cadre of Community Health Workers (CHWs) and mobilization of community resources. Construction of new health facilities is minimized; the use of existing facilities and personnel in Kitui is emphasized. If the project is successful, a much greater proportion of the population of Kitui than is presently reached will have access to promotive and preventive as well as curative health services at a reasonable cost to both individuals and the Government of Kenya.

The CHWs will be supported by their communities and will provide basic primary health care, nutrition and family planning services, make referrals to static health facilities for serious illness and undertake individual promotive and preventive health activities. Community will initiate and sustain community public health activities that will be continuously supported (technically and organizationally) by MOH rural health staff. The Project will involve a major effort from the Ministry of Health at both the district and headquarters levels to ensure proper training and continuous supervision of the CHWs and steady supply of basic drugs and medical supplies to static facilities and CHWs through improvement of the drug distribution system.

Full implementation of the expanded Kitui District rural health service system will take place over a period of 10 years. USAID assistance through this project will last for six years. By the end of this six-year period the community-based health system will be in place in three of the five divisions and the necessary infrastructure established in the entire District so that the Ministry of Health on its own can extend CHW and community support services throughout the remaining two divisions in the following four years.

In furtherance of the above approach, the project includes the following:

Facility Upgrading and Construction, Equipment and Vehicles

A CHW health system standing alone would be inadequate. For curative services, referral, community support and CHW training, the existing static facilities must be expanded and new ones established. The project will upgrade 18 rural health facilities and construct two new facilities as well as a district drug store, garage/workshop, office building and staff housing. Project funding includes provision for equipping these facilities and 15 vehicles for

project supervision and outreach. Key static facilities will be linked by 2-way radios to facilitate such activities as ordering medical supplies, referring patients and receiving medical advice.

Technical Assistance

Fifteen person years of long-term technical assistance and 40 person months of short-term consultancies will be provided to assist the Ministry of Health in implementing the project. Areas of long-term technical assistance expertise will include rural health planning, community mobilization, training, management, procurement and engineering. Short-term consultants will conduct special studies and provide expert advice in areas such as logistics, health information and evaluation, patient referral, community mobilization and training curricula.

Community Development Fund

The project provides \$435,000 to establish a MOH Community Development Fund which will be used to develop the capability in communities to undertake and sustain preventive and promotive health development activities, such as simple water supply systems and pit latrines.

Training and Support of CHWs

CHWs will receive pre-service and in-service training in preventive, promotive and curative primary health care. Training will include a family planning component in which Traditional Birth Attendants will be trained. Family planning services will cover stimulation for demand, dispensing of condoms and referral services for other methods of family planning including natural family planning. Sensitization Teams will stimulate participation of communities in the CHW program and will work with Enrolled Nurses and Public Health Technicians to assist communities to organize themselves to support and sustain CHW and community health development activities. Participating communities will be expected to pay CHWs a reasonable periodic stipend in cash or kind or to support voluntary service. The Ministry of Health will provide basic medical supplies without charge to the CHWs.

Improved Drug Distribution System

The Ministry of Health is completing a pilot test of an improved system for management and delivery of drugs and other medical supplies to rural health facilities. The Ministry will implement this system in Kitui District, and the project will adapt the system to supply CHWs as well. Linkages with the private sector drug distribution network will be encouraged to complement the Government system and increase supplies in rural areas.

Participant Training

Over the six-year life of project, 4 Ministry of Health officers involved in project implementation or replication will be trained in the U.S. to the Master of Public Health level. This training will serve to strengthen rural health management capabilities. Another 24 person months of short-term observational training in other developing countries is included to learn from their experiences with primary health care delivery systems.

B. Project Issues

A number of important issues will affect the successful implementation of the project:

Community Participation and Support

Project viability hinges on the willingness and ability of communities to support CHWs. The project's community-based approach has not been widely tested in Kenya and there is some uncertainty regarding the nature and degree to which communities will be prepared to accept responsibility for CHW support. However, there is a long tradition of cooperative self-help groups in Kitui District which non-government organizations have been able to tap for implementing similar community-based health and other development activities.

Even though incomes in the project area are low, surveys indicate that households in Kitui District have sufficient funds to support CHWs and that communities will participate if they can perceive long-term benefits as a result of their involvement. To encourage community participation, sensitization teams will explain the benefits of the program such as assured basic drug supply, training and support of CHWs, Community Development Fund and priority patient referral at static facilities. In addition, Enrolled Nurses and Public Health Technicians will provide continuous technical and community organization support in the field.

Drug Management and Distribution

To date, management and supply of drugs to rural health facilities throughout Kenya has been a major problem area. The provision of basic medical supplies and drugs for CHWs as well as for static facilities is critical to project success. However, it is important that CHWs not be seen principally as suppliers of drugs since their promotive health role is much broader and more important in the long term.

The Ministry of Health distributes drugs free of charge, as stated above, since this is viewed in Kenya as a proper social overhead cost, indeed as being mandated by law. USAID would in principle prefer to see communities and individuals pay cash for drugs. However, it should be realized that the communities are shouldering a significant cost burden by supporting CHWs and community health development activities and this tends to more than balance out any subsidy element contained in the provision of drugs without charge.

Although the improved drug management and distribution system has been pilot-tested with some success in two districts in Kenya, the ability of the Ministry of Health to supply needed drugs reliably and on a timely basis is still to be proven. Also, the improved system has not been adapted and tested to include supplies to CHWs. Nevertheless, the Ministry and USAID believe that the improved system design addresses the major problems (e.g., malprescribing, syphoning of drugs from health centers and dispensaries to hospitals) that have led to the inefficient management and supply of drugs. Project technicians and consultants will work closely with the Ministry and district health personnel to adapt the system to ensure drug supplies to CHWs.

It should also be noted that private commercial distribution of drugs in rural areas though widespread does not supply many of the basic drugs needed by people. Project personnel will explore ways of increasing availability of drugs through the private sector to reduce reliance on Government drug supplies to rural areas.

Since CHWs have not previously dispensed Government-supplied pharmaceuticals, the Ministry is revising its regulations to permit this. The Project Agreement has a condition precedent that requires this revision to be completed and the improved drug system to be established in Kitui District prior to disbursement of project funds for technical assistance or construction activities.

Family Planning

Given Kenya's four percent per annum population growth, any AID-funded project in the health sector must review carefully all family planning opportunities. The project CHWs will be actively involved in the stimulation of demand through educational efforts and the distribution of condoms. The project will also train rural health staff so that there is at least one qualified person at each static facility in the district who can provide a full range of family planning services.

Services such as the prescription of oral contraceptives will be available through mobile units and static facilities, with MOH personnel working closely with the CHWs. USAID considers these improved linkages for family planning services through the CHW framework as an important advance. Ideally, USAID would like to see CHWs able to prescribe, dispense and resupply a broader range of contraceptives and devices in the future and will undertake operational research to pursue these possibilities.

Ministry of Health Staffing

The project will require an increased number of qualified personnel at the district and sub-district level. The Project Agreement will contain a covenant in this regard and the Ministry of health has made a full commitment to staffing for the project. However, close project monitoring will be important in view of the Ministry's current staffing problems, future recurrent cost constraints and competing priorities. Sixty-six additional Ministry personnel will be required to staff the upgraded static facilities at a minimally adequate level. A further 21 personnel will be required to provide support to CHWs. Of these 87 additional positions, 40 are paraprofessionals, one is an Assistant Medical Officer of Health, one a Vehicle Mechanic and one an Equipment Technician. Ninety (90) percent of these 87 incremental personnel will be in positions that directly support CHW and community activities. These numbers represent a significant increase over current staff level of 106 personnel. The project has been designed taking into account that the MOH is thinly staffed and staffing requirements have been kept to a minimum.

Of particular importance in establishing the critical management capability in Kitui District for this primary health care system is the posting of one Assistant Medical Officer of Health at the district level and three Second Clinical Officers at Health Center/Headquarters. These individuals will be counterparts to the Technical Assistance Team and will be responsible for the day-to-day project coordination and management that is necessary to ensure successful project implementation. The Project Agreement will include a condition precedent requiring the Ministry to assign these officers to Kitui District prior to disbursement of funds for technical assistance or construction activities.

Recurrent Costs

The staffing needs, expanded drug distribution network and the upgraded rural facility network will impose increased recurrent costs on the Ministry. The proportional increase in population served will be much greater at a lower per unit cost, but the absolute rather than relative level of recurrent costs is of greater concern to the Ministry.

However, the project design is based on a "least cost" method of delivering primary health care services, both in terms of development and recurrent costs. The economic and financial analyses indicate that the Ministry will be able to meet the required increase in recurrent costs both for the project activity and for replication.

C. Summary Findings

The analyses done as part of the project paper conclude that the proposed design is technically, financially, economically and socially feasible, and is also environmentally sound. The Government of Kenya has demonstrated its strong interest in implementing this project by its direct input into the design of the project and formal commitments to the project. The written request for assistance for expanding rural health services is found in Annex N.

USAID believes that the project is fully consistent with AID policy and program objectives and that it meets the design criteria outlined in the original Project Identification Document (PID) and subsequent PID review even though the project design has been modified somewhat from the PID submission. In particular, construction of four training facilities outlined in the PID are not part of the final design and CHW coverage has been scaled down realistically to three divisions instead of five. The final project paper design expands the upgrading of dispensary-level facilities beyond levels proposed in the PID.

As indicated above, difficult project issues do exist and the success of the innovative community-based system cannot be assured; however, the importance of testing this decentralized community-based primary health care system justifies the risk. If successful and proved replicable, the project will be of major importance in expanding the delivery of rural primary health care services in Kenya and in improving the health standards of the rural population.

Implementation arrangements are adequate and appropriate, but close USAID monitoring will be required. Host country contracting will be used for construction and related services and technical assistance.

The Project meets all statutory criteria.

D. Recommendations

That the AA/AFR authorize the Kitui Rural Health Project for a six-year period at a level of \$9.38 million, composed of:

1. a grant of \$4.75 million;
2. a loan of \$4.63 million repayable over 40 years with interest at 3% per annum, and a 10-year principal repayment grace period with interest at 2% per annum during the grace period (see Annex R for the draft project authorization); and
3. a source/origin waiver from AID Geographic Code 000 (United States) to Code 935 (Special Free World) for 16 vehicles (approximate value \$255,000) and ocean freight (approximate value \$30,000) (see Annex P).

II. BACKGROUND

A. Kenya Health Sector

1. Selective History

Prior to 1970 local authorities were responsible for the development and management of primary health care services in Kenya covering about 90 percent of the population. However, the local Government units had insufficient funds and technical resources to provide adequate basic health services. Therefore, in 1970 the Government of Kenya (GOK) shifted responsibility for the provision of primary health services in the rural areas to the Ministry of Health (MOH). At the same time the Kenya constitution was amended to obligate the Government to provide basic public health services without charge.

Recognizing the severe strain placed on the national health system by this added responsibility, the MOH and the Ministry of Finance (MOF) in cooperation with the World Health Organization (WHO) and the Ministry of Culture and Social Services (MOCSS), undertook a major assessment of Kenya's health sector. Their recommended strategy for the development and expansion of rural primary health care was adopted in 1972.

2. The Health Care Delivery System

The GOK health care delivery system is pyramidal consisting of roughly 1200 rural static health facilities (health centers and dispensaries), 60 district hospitals and seven provincial hospitals. At the top of the pyramid is Kenyatta National Hospital which serves as the principal site of physician education. The Government system is augmented by a network of missionary-supported health facilities. (Figure II - 1). The private medical sector is important and growing but serves mainly urban centers. In the rural areas mission hospitals supply roughly 30 percent of the hospital beds. Missions also support approximately 375 health posts (dispensaries and primary health facilities) in rural areas. The current ratio of hospital beds (Government and mission hospitals) to population is 1.4 per thousand. Over the past ten years the bulk of the health sector has been allocated to hospitals, which have absorbed between 60 and 70 percent of the recurrent cost budget and between 40 and 50 percent of development expenditures.

The Government health care system is administered from MOH Headquarters in Nairobi working through six Provincial Medical Offices and 41 District Medical Offices.

Personnel and financial resources are concentrated in the cities and in secondary and tertiary health facilities, i.e., Kenyatta National Hospital and provincial and district hospitals. One of the factors reinforcing this concentration was the tendency until 1972 to train health professionals and paraprofessionals at the Medical Training Center and at Kenyatta National Hospital, both of which are in Nairobi. Training in sophisticated, high technology settings tended to focus on advanced and esoteric illnesses and treatment utilizing technology and support generally not available in rural areas. Health officers trained under such conditions were reluctant to accept postings in rural areas and found it difficult to function effectively in such settings.

3. Rural Health Services Expansion Strategy

The rural health expansion strategy adopted by the GOK in 1972 attempts to remedy many of the problems associated with the health care delivery. The strategy is to plan and implement expanded health services to the rural population, including the deployment of mobile units as extensions of static health facilities.

a. The Rural Health Unit Concept

The expansion strategy divides the country geographically into 254 Rural Health Units (RHUs). Most RHUs correspond to the boundaries of Administrative Divisions. The concept calls for each RHU to have a headquarters, usually located at a hospital or health center, but in some cases at a dispensary. Each RHU is to include four to six dispensaries, depending on the population to be served. In addition mobile health units based at RHU/Headquarters (RHU/H) are to operate beyond the catchment areas of static facilities and to provide maternal child health and family planning (MCH/FP) services at selected dispensaries which do not have staff trained in the delivery of such services. The mobile units are also to provide logistical and technical support to dispensaries within the boundaries of the unit. Generally, the services to be expanded in rural areas are to address communicable diseases, health problems related to environmental conditions, nutrition problems, and MCH/FP, which are to be integrated with other primary health services as a matter of policy.

Each RHU, on the average, is to serve a population of 50,000 to 70,000 people although a unit may serve as few as 10,000 in a sparsely populated area or as many as 90,000 in a densely populated area. In addition, each RHU is to serve 30-40 schools and about the same number of day care centers. The delineation of RHUs and the location of static facilities has been completed in collaboration with district and provincial development committees taking into consideration the population to be covered, existing health conditions, transportation and communication infrastructure, and other socio-economic factors.

b. MOH Programs since 1973

The MOH has taken in several program interventions since 1973 to address problems concerning the expansion and improvement of its rural health delivery system. Briefly, these are presented below.

1) In 1973 the MOH began implementing a program for improving rural health services that involved the construction of 6 Rural Health Training Centers (RHTCs) for training rural Health Unit Teams (HUTs) to strengthen rural health management. To date the 6 RHTCs have been constructed and 130 HUTs trained (each with 10 persons) in 3 month training programs. Emphasis in this training is on facilitating a team approach to providing curative, preventive and promotive health services, effective management of rural health resources and coordination of health activities with the community, local officials and other technical ministry personnel.

The World Bank, SIDA, DANIDA, NORAD and other donors (not including USAID) have financed the construction of Rural Health Training Centers and facilities and assisted in planning and implementation efforts consistent with Kenya's rural health expansion strategy. By 1978 the program had accomplished the following:

- division of Kenya into 254 RHUs and stratification of the country into six ecological zones;
- specification of an appropriate RHU staffing to support a basic configuration of static rural health facilities consisting of one health center and four to six dispensaries, supplemented by mobile units to provide outreach capabilities. Future facility needs are projected for the year 2000, taking into account population growth and migration patterns.

2) From 1975 to 1980 the MOH implemented the interministerial and multi-donor supported Maternal Child Health/Family Planning Program. The purpose of this program is to reduce population growth and morbidity and mortality among mothers and children under 5. The construction element included upgrading 3 existing and building 5 new nursing schools to expand training facilities for Enrolled Nurses (the backbone of the rural health care system). It also included constructing 27 demonstration health centers to provide adequate rural exposure for rural health unit staff during training. The program established 4 new divisions in the MOH Headquarters, one of which is the Information and Education Division. Donors supporting this program included USAID, World Bank, SIDA, CIDA and NORAD.

3) By 1977 the MOH recognized the need to train and support managers of the HUTs, i.e., provincial and district level health staff. At this time DANIDA began supporting the establishment of the Administrative Support Unit (ASU) at MOH/Headquarters. The USAID Health Planning and Information Project (No. 615-0187) is providing technical assistance to this activity under a contract with the Drew Postgraduate School of Medicine. Among its present functions, the ASU is responsible for developing systems for project management and conducting seminars in health planning and implementation.

4) In 1978 the MOH began focusing its efforts on the following constraints to delivery of rural health services.

- management of hospital outpatient services;
- medical supplies (including drugs) for rural health facilities;
- transportation;
- training in health management.

Initiatives on the first two constraints are under way. The status of the drug supply system is discussed

in Annex I. Strengthening transport and training in health management are important components in the proposed Integrated Rural Health/Family Planning (IRH/FP) Program. Presently the MOH plans to start training managers of HUTs in October 1981 at the Kenya Institute of Administration.

5) By 1979, the MOH recognized that rural health services could be extended further by developing community-based delivery systems which use community health workers. For some years various non-government organizations (NGOs) and donor agencies, notably UNICEF, have conducted innovative pilot or experimental mobile clinic and community-based health delivery projects in some 15 locations in Kenya. It is only recently, however that the MOH has seriously considered community-based delivery as an added dimension to its program of expanded rural health services.

6) The MOH views the IRH/FP Program as the next step in the strengthening and expanding its rural health care system. The MOH has worked with World Bank officials and consultants from six donor agencies (including USAID) to plan the expansion of health services through the proposed multi-donor, \$120 million IRH/FP Program. Under this program a gradual decentralization of authority from MOH Headquarters to provincial and district level is scheduled. Drug acquisition and distribution will be streamlined through adoption of standard lists of drugs distributed to rural health facilities in prepackaged consignments reflecting rates of utilization and epidemiological factors.

c. Shortcomings and Problems in the Health System

Major shortcomings in the GOK health delivery system include too few rural health facilities, inadequate equipment, lack of qualified personnel, especially paramedical staff, and unsatisfactory standards of service for staff in general. The result is poor accessibility to rural health services and lack of emphasis on preventive and promotive health services.

The MOH has not yet successfully implemented its rural health expansion program. The system is reaching less than 30 percent of the rural population. Drug supplies are erratic, forcing many facilities to close until supplies are replenished. Facilities are seriously understaffed, at less than 50 percent in many cases. Equipment is poorly maintained, if available. The mobile unit system is unreliable because of poor maintenance and shortage of vehicles.

Overall, the MOH had serious problems. During the past national development plan period (1974-1979), the MOH was able to spend only 50 percent of its development budget because of various managerial, administrative and physical constraints in MOH/Headquarters and in other ministries, notably the Ministry of Works (MOW).

Although a high priority for rural health services has been stated in various health plans and other documents, actual programs, policies, and resources have favored the delivery of urban curative services. Health professionals trained at public cost have been lost to the rapidly expanding private medical sector serving an urban elite. This was the case in spite of the fact that most illness occurs among the rural population where the private medical sector is absent or too costly and where the majority (up to 80%) of the illnesses could be prevented. Moreover, if previously approved hospital expansion had been carried out, the future recurrent costs would have been so high as to preclude adequate public support for an expanded rural delivery system.

d. GOK Response

MOH officials have acted decisively to redress the urban-rural imbalance. In accordance with the 1979-83 health sector plan the following took place:

- Construction of 10 hospitals was deleted.
- Licenses for private practice were restricted in the major cities of Nairobi and Mombasa.
- Government doctors have been compelled to choose between full-time private practice or exclusive Government service.
- All Government trained physicians have been required to render three years rural service prior to entering specialty training programs.
- Greater numbers of rural health facilities have been slated for construction than in the original plan.
- An increasing proportion of current account funds has been budgeted to support recurrent costs for the operation of rural health facilities.
- The construction of rural health facilities has been assigned the highest priority by the MOW during the current national development plan period (1979-83).

In spite of this progress, the GOK has requested assistance to implement an expanded program in a field setting. USAID has responded with the Kitui Rural Health Service Project.

B. USAID'S Health Sector Approach

1. General Country Development Strategy Statement Focus

The USAID/Kenya Country Development Strategy Statement notes that adequate health, nutrition, water, and shelter are essential to the development process. However, provision of these needs tends to be both capital and recurrent cost intensive. Consequently, Government can meet the needs for relatively few in the population.

The USAID strategy is to look for opportunities to assist the GOK in strengthening its planning capability, to participate in the process of planning for the efficient allocation of Government resources, and to demonstrate innovative, low-cost approaches for delivery of basic social services.

The Kitui Rural Health Project is consistent with the CDSS as it will: 1) integrate into the MOH planning process new approaches for health delivery, especially community-based and multi-sectoral activities; and 2) demonstrate new approaches in delivering health services to rural dwellers through, inter alia, the integration of Government and non-government health services. The aim of the Kitui project is to minimize the per capita cost of health service delivery to the public so that already scarce resources can be allocated more productively.

2. Perspective on AID's Involvement in Health

a. How USAID's Health Strategy Evolved

(1) Earlier Strategy

The USAID health strategy through 1978 called for assistance in rural health facilities construction, the training of health professionals and paraprofessionals, the expansion of communicable disease control and surveillance programs, and support for information systems. It was expected that a DANIDA health project would bring about substantial improvement in MOH planning, management, administration and overall absorptive capacity, and that the GOK would be able to allocate the recurrent funds required to support and expand the rural health system in the future.

USAID's primary activity in the health sector was support for the MOH multi-donor Maternal Child Health/Family Planning Program, particularly its five-year \$3.5 million Family Planning Project (615-0161) which began in December 1974. USAID provided advisors, training in MCH/FP, audio-visual equipment, FP clinical equipment contraceptives, and operational costs.

In April 1976 a USAID staff paper entitled "Rural Health: Maternal and Child Health/Family Planning" reviewed the first evaluation of the USAID Family Planning Project and considered what approaches USAID assistance might take. This paper recommended that USAID should broaden its involvement in rural health beyond MCH/FP activities. Dr. M. Alfred Haynes and Regonald F. Gipson, in their "Consultants Technical Report on the Kenya Rural Health Program" (March 1977), urged that USAID provide technical advisors to the MOH to identify possible projects and analyze constraints on the MOH rural health program. In 1978 a Participating Agency Services Agreement (PASA) with the Department Health Education and Welfare was signed and Dr. James R. Jeffers, a health economist, arrived for 18 months to work in MOH Headquarters. Dr. Jeffers tour was extended to a total of 27.5 months at the specific request of the MOH.

The reports cited above, analyses by the health economist and a Family Health Care Institute study, "A Working Paper on Health Services Development in Kenya" (May 1978), made it clear that two key assumptions of the USAID strategy (DANIDA success in improving health planning and GOK ability to meet recurrent expenditures for health services) were untenable.

The DANIDA project was unable to significantly strengthen the planning and management capacity of the MOH headquarters. Analyses of current policies and expenditure trends, particularly of recurrent account expenditure, revealed that health system policies and expenditure trends were inconsistent with the ability of the GOK to support an expanded rural health delivery system in either the medium or long-run.

The report made several recommendations for USAID's short and long-term involvement in the health sector in Kenya. These recommendations were refined in a "Discussion Paper: Rural Health Project" (May 1978), a "Critique of the Kenya Health Sector Plan" (August 1978) and a "Health Sector Assessment" (September 1979).

These analyses identified two major factors that must be considered in the development of U.S. initiatives in health programs:

- MOH absorptive capacity, and
- the future recurrent cost burden stemming from development expenditures.

USAID recognized that new initiatives should impose the least possible strain on the MOH's already constrained staff (medical, scientific and managerial) and minimize recurrent cost burdens.

(2) Present Strategy

The present AID health sector strategy is to help the MOH revise its priorities away from favoring expansion of curative hospital services towards favoring health programs for rural dwellers.

In late 1979 and early 1980, USAID made several policy recommendations to senior health officers and the Minister of Health. Foremost were recommendations to create an MOH division of planning and to reduce MOH investment in the curative hospital sector. In 1979 it became clear that the Director of Medical Services (DMS) and the Minister had been successful in making major health policy revisions in these areas.

Over the next two to seven years, USAID/Kenya plans to focus its projects in three areas:

- health planning, management and administration through the on-going Health Planning and Information Project (615-0187);
- decentralization of health planning to the district and rural health unit levels and establishing GOK community-based health systems through the Kitui project;
- rural health management training support through medium-term technical assistance under the Health Planning and Information Project and possibly longer-term technical assistance under a separate project.

This three prong approach could significantly assist the MOH to develop the necessary infrastructure to support a rural health delivery system that will have greater coverage, be more efficient and cost effective, and involve minimal additional recurrent expenditures and personnel.

The Kitui project has become increasingly important because of its relationship to the IRH/FP program. By supporting planning and development of district health delivery services. It will provide valuable field experience in: provincial and district level planning and administration; interministerial coordination and intergration of services; coordination of Government and private sector health services; support by static health facilities to community health workers; and development of effective family planning and nutrition interventions in a primary health care system.

b. Linkage of Kitui Rural Health Project to the MOH Integrated Rural Health/Family Planning (IRH/FP) Program

In the course of project development, AID has closely followed the IRH/FP proposal. Besides the Kitui projet, USAID intends to participate in any resulting IRH/FP project in the area of family planning and has requested \$8.0 million for its Family Planning II project (615-0193) for this purpose.

The Kitui project is a subset of the broader effort proposed in the IHR/FP proposal. However, this project offers some significant advantages both in terms of timing and in terms of project activities that warrant its initial implementation somewhat independently of IRH/FP activities. However, once the IRH/FP activity is underway, the Kitui project would be subsumed as a component of that broader program.

The GOK will gain from the Kitui project operational experience in implementing the concept of coordinated Government and non-government sponsored community-based health services in a field setting. The IRH/FP program itself permits only modest efforts in actual community-based health services, as it allocates only 1.6 percent of the total budget for this activity. However, the program does provide for an MOH Headquarters team to devleop policies, procedures and practices for the expansion of community-based health services delivery. The Kitui Project offers the Government the opportunity to acquire operational experience with policies and procedures which will be fed into the national planning and policy formulation activities.

c. Other Project Activities Related to Kitui Rural Health Project

Three on-going PVO health projects,* each using a different strategy for providing primary health care at the community level, have been providing the MOH and USAID with valuable experiences and insights into community-based health activities. These projects involve mobile units, the use of community health workers, a role for health committees, and the need for a primary health care system to support community-based projects. (See Annex S for more details on these three projects.)

Five ongoing or proposed USAID projects will have a direct or indirect impact on the Kitui Rural Health Project.

(1) The ongoing Arid and Semi-Arid Lands (ASAL) Development Project (615-0172) in Kitui District focusses on soil and water conservation and improved dryland farming techniques. The ASAL Interministerial Development committee will monitor the Kitui health activities to ensure total intergration of ASAL development activities in Kenya. Also, to the extent this project favorably affects agricultural income, it will have a direct economic impact on Kitui residents, thereby providing the potential for these people to allocate more resources for health services.

(2) The ongoing Rural Planning II Project (615-0190) will increase the capability of the Ministry of Economic Planning and Development to involve people at the district and sub-district levels in planning implementations of rural development activities. This project will reinforce the Kitui project, i.e., increase community responsibility for its primary health care.

(3) The ongoing Small Town and Community Development Housing guaranty (615-HG-006), which will include Kitui Town, will finance expansion of community services in the district headquarters.

* (1) Coordination for Development (CODEL) Kitui Primary Health Care (615-0185);
(2) African Medical and Research Foundation (AMREF) Kibwezi Primary Health Care (615-0179); and
(3) International Eye Foundation (IEF) Rural Blindness Prevention Project (615-0203).

(4) The proposed Arid and Semi-Arid Lands Roads Network Project (615-0191), planned for FY 82 and 83 will be designed to provide isolated rural areas in Kitui with production outlets and easier access to agricultural, social and health services. This project would increase the accessibility of Kitui residents to static facilities as well as facilitate mobile services and staff support and monitoring of CHW activities in Kitui.

(5) The proposed Community Water Project (615-0177) planned for FY 82 or 83 will establish the capability for communities in Kitui to provide potable water and health information and maintain their community water systems. As potable water becomes more readily available, illnesses such as infant diarrhea, gastro-enteritis, skin infections and conjunctivitis will be reduced.

(6) The ongoing Kenya Photovoltaic Project will establish two demonstration photovoltaic medical units at the AMREF/MOH Health Center in Kibwezi (Machakos District) and at the MOH Health Center in Ikutha (Kitui District). The units will provide basic electricity needs for lighting, autoclaves, 2-way radios, refrigerator-freezers and other health related equipment and provide the MOH and USAID with the opportunity to evaluate the use of the new energy source for future rural health projects.

3. Selection of Kitui District

Since 1974 the GOK has been placing emphasis on conservation and development of the arid and semi-arid lands (ASAL) in Kenya. In 1977 and 1978 AID sponsored the Kenya Marginal Semi-Arid Lands Pre-Investment Inventory undertaken by the Consortium for International Development. A multi-disciplinary team of Kenyans and Americans analyzed ASAL problems in Kitui, Machakos and Baringo districts and recommended a wide range of interventions that could be financed by the GOK and donors. Interventions included soil and water conservation, community water, rural health services, education, horticulture and livestock.

After review of the ASAL study, several donors indicated an interest in supporting development of ASALs throughout Kenya. The GOK established an interministerial coordination committee and assigned ASAL regions to specific donors. Kitui District was assigned to USAID/Kenya.

In 1978 when the ASAL Development Project (615-0172) was being designed in coordination with GOK, the MOH asked USAID to include a Kitui District health project. The MOH recognized, as did the ASAL study, that a healthy population would increase the overall impact on the ASAL development efforts in Kitui and that a strengthened rural health system should be part of the GOK-USAID development effort in Kitui. It was also evident that a conventional static-based system would not meet the needs of a dispersed population in a district where road communications are unreliable, transport expensive and people poor. The MOH, therefore, proposed a primary health care system that would incorporate community-based health workers, mobil health units and strengthened static facilities. (See GOK requeste proposal in Annex .)

C. Primary Health Care in Kitui

1. Profile of Disease

Kitui District, like the rest of Kenya, does not have a vital statistics registration system nor a comprehensive disease surveillance system. thus it is difficult to estimate accuratley disease incidence and prevalence rates. Some general inferences can be made, however, from the overalls national patern of mortality by age, and from reports submitted to the Ministry of Health by hospitals and health units in Kitui.

Currently Kenya has an estimated crude death rate of 14 per 1000, and an infant mortality rate of 85-90 per 1000 live births. Overall, about one-half of all deaths in Kenya occur among children under age five, and at least 95% of the causes are preventable.

Some indication of the relative importance of specific infectious diseases as causes of morbidity and mortality can be gleaned from statistical returns from hospitals and clinics in Kitui. These data are severely biased because they represent a small segment of the population with access to these facilities. Also, specific diagnoses are often in error, particularly those reported by outpatient departments.

Inpatient returns for Kitui in 1977 reveal the following:**

	ADMISSIONS		DEATHS	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
Total (excluding maternity related)	5856	100.0	337	100.0
<u>Specific Causes</u>				
Acute Respiratory Disease	773	13.2	64	19.0
Malaria	1074	18.2	27	8.0
Diarrhea	404	6.9	24	7.1
Measles	375	6.4	22	6.5
Tuberculosis	336	5.7	15	4.5
Whooping Cough	46	0.8	5	1.5
Other Parasitic	86	1.5	3	0.9
Nutritional Deficiency	181	3.1	33	9.8
Anemia (Secondary to Malaria/Hookworm)	293	5.0	12	3.6

*Kitui Feasibility Study Report, August 1980 USAID, Nairobi, Kenya, pp. 43-44.

**Kitui Feasibility Study Report, August 1980 USAID, Nairobi, Kenya, p. 52.

From an examination of the profile of illnesses in Kitui, it is clear that the bulk of illness can be either prevented or treated effectively with simple medical interventions.

2. Health Delivery System

The problems of delivering primary health care in Kitui District are not dissimilar from the general problems constraining the expansion of health services to rural areas throughout Kenya. People are scattered in small isolated communities. Poor road communications make it difficult to deliver health services or to travel to health facilities. Since transport is expensive and people are poor, even though Government health services are "free", people tend to use them only for serious illness, disease or injury and at considerable cost in both money for transportation and time for travel and waiting for services.

The present MOH rural health system in Kitui District consists of a district hospital in Kitui town and six rural health units. (Figure II - 2.) Each RHU is supposed to have a Health Center/Headquarters and four to six dispensaries serving a population between 50,000 to 70,000. This planned network of static facilities and staff is inadequate. However, even if the full complement of facilities were built and fully staffed as planned under the rural health services expansion strategy, health coverage for the districts population would only be minimally extended. In Kitui district when all the existing facilities are upgraded or improved and one new HC/H established and two new dispensaries constructed and staffed, it is estimated that only 30 percent of the population would have reasonable access to primary health care compared to an estimated 25 percent at present.

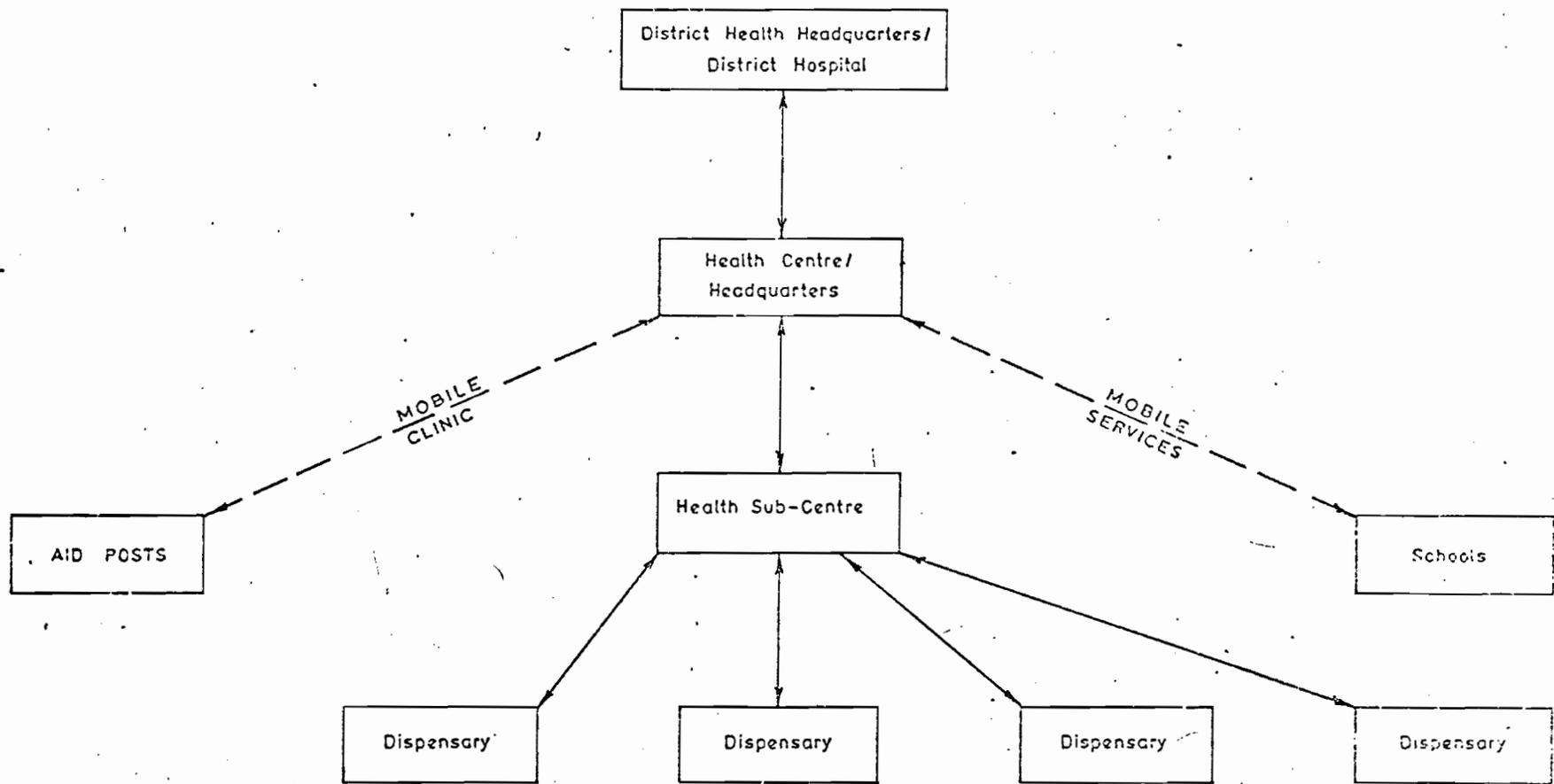
3. Lack of Access

There is not and will not be for the foreseeable future a sufficient number of trained personnel or adequate financial resources in Kenya to expand the delivery of curative health services solely through static facilities. To reach the total population of Kitui would require a massive expansion of facilities and staff which the GOK cannot afford. The MOH realizes this and has indicated its willingness to try a new approach such as the integration of community-based health systems into its present health program.

PRESENT ORGANISATION OF KITUI HEALTH DELIVERY SYSTEM

DISTRICT

RURAL HEALTH UNIT



- - - - - Services not presently being provided.
 ————— Services provided

4. Lack of Emphasis on Prevention of Illness

All available facilities and personnel from the district hospital to the dispensary level are almost fully occupied with curative treatment. Only minimal preventive and promotive health services are provided at static facilities and almost none at the community level. This is due to part to lack of vehicles for transport and insufficient funds for transport costs and per diem for staff, but mainly to the lack of a well-developed primary health care outreach program. Consequently, illnesses and injuries that could have been prevented or treated inexpensively at earlier stages at a dispensary eventually require expensive curative treatment at a health center or at the district hospital.

5. General Lack of Coordination

There is a general lack of coordination in health activities between the MOH and various ministries (e.g., non-government organizations at the district and RHU levels. This is due to the lack of personnel and health management skills among district and RHU health staff and to overly centralized planning and implementation. However, given that ministries are providing resources that can directly impact on the health status of the people, and NGOs have a network of health facilities that provide a significant portion of health services in Kitui District, integration of these activities into an overall rural health delivery system would both upgrade and extend primary health care coverage. At the same time, decentralization of functions will be necessary from the Ministry of the district and RHU levels to ensure that local health personnel have sufficient authority and resources to do this job effectively.

6. Proposed Solution

The project will address these constraints by establishing a district-level institutional capability to plan, manage and implement a decentralized rural health delivery system. This will be done through an appropriate mix of static, community-based and mobile services. Construction of new health facilities is minimized and the use of existing facilities and personnel in Kitui emphasized. A significantly larger proportion of the population of Kitui than is presently being reached will have access to health, nutrition and family planning services at a cost that the GOK and communities can afford.

III. PROJECT DESCRIPTION

A. Project Goal and Purpose

The program goal of the Kitui Rural Health Project is to improve the general welfare of the rural people of Kenya through improved health. Accomplishment of this goal will be indicated by increased access to and utilization of primary health care services and improved morbidity and mortality trends.

The project's purpose is to establish a more effective primary health care delivery system which meets the preventive, promotive and curative health care needs of up to 70 percent of the population in the project area of Kitui District. The project is designed to be an initial step in the Government's expanded rural health program.

This system will fully incorporate Government and non-government rural health care activities within the project area. There will be an appropriate mix of static, mobile and community-based activities each focussing in varying degrees on curative, preventive and promotive health care. To ensure maximum impact, project activities will be coordinated and integrated with other development activities in Kitui.

B. Project Strategy

The project strategy is to institutionalize an effective, low-cost primary health care delivery system in Kitui District which can be adapted and replicated in other areas of Kenya. To accomplish this the project focusses on strengthening static facilities and developing a community-based approach to health service delivery.

The project will strengthen the existing static facilities so that they have sufficient trained personnel, physical structures, vehicles and equipment to (1) meet outpatient and inpatient health care needs and (2) support community-based and mobile activities. The innovative feature of the project is the Government initiated and supported community-based health care approach. Community health workers will be selected and maintained by communities. To encourage community participation, the project will field Sensitization Teams to increase community awareness of the need for CHWs and the role each community can play in taking responsibility for curative, preventive and promotive health care which will incorporate family planning and nutrition interventions. Once trained the CHWs will receive continuous inservice training, technical supervision and medical supplies from their designated rural health facility. Communities will receive technical supervision and community mobilization support from the same facility after the initial sensitization sessions.

C. Project Timeframe

The Kitui Rural Health Project is part of a 10 year activity which will be implemented in three phases to cover all five divisions of Kitui District. USAID involvement will cover the first two phases (project years 1-6). By the end of the sixth year, an improved primary health care delivery system will be fully established in Near North, Eastern and Southern divisions and static facilities will be upgraded in Far North Division. Health care will be provided to up to 70 percent of an estimated population of 245,000 people or about one-third the total population (463,512) of Kitui District. This will be accomplished by putting in place the necessary health facilities, staff, equipment and vehicles, and institutionalizing training at district and RHU levels, the project will strengthen the district management system to deal with drug distribution, patient referral, evaluation and information systems. This will provide the infrastructure and resources for extending the improved primary health care system throughout the rest of Kitui District (i.e. community-based activities in Far North Division and improved static facilities and community-based activities in Central Division) by the GOK in the third phase (project years 7-10). By the end of the second phase (year 6), up to 70 percent of the population of the three divisions will have access to primary health care. The various project components (patient referral, drug distribution, district and RHU management, training, information, evaluation, monitoring and implementation components) developed and implemented during the first phase will be fully tested in the second phase.

In the Far North Division a new Health Center/Headquarters will be established and three dispensaries upgraded and fully staffed in the second phase. Thus the construction and development activities in the 1979-1983 GOK plan period for Kitui District will be complete. The patient referral, drug distribution and district management components will also be in place in the Far North and in the fifth division (Central) of the district. The remaining components will be ready for implementation in the third phase. The second phase thus will provide the foundation and resources for the MOH to (1) continue to expand and support the primary health care system in the Near North, Eastern and Southern Division; (2) extend the full system into the remaining two divisions (Far North and Central) of Kitui District, and (3) determine the applicability of the primary health care system for other areas in Kenya.

The project will achieve maximum coverage by strategically deploying static, CHW and mobile services (see Figure III-1.) Each static facility (health centers and dispensaries) will provide primary health care to the population within a 6 km. radius, the maximum distance people are expected to walk for health care. CHWs will work within a radius of 6 to 25 km. from a static facility. Twenty-five kilometers is considered the farthest distance a CHW should travel using the limited locally available transportation for monthly visits to the static facility. Up to two part-time CHWs, ideally a woman and a man, will cover a population of 500 people, the approximate population of an average community. No CHW should have to travel more than 4 km. to perform his or her duties. Beyond the 25 km. radius of the static facility, mobile health units will provide health care services on a monthly or bi-weekly schedule. Figure III-2 shows how the Kitui District rural health system will be organized to incorporate CHW and mobile activities.

D. Project Components

1. Construction and Upgrading

In the first phase all the facilities in Kitui Town and RHU facilities of Near North, Eastern and Southern divisions to be constructed, upgraded or improved will be provided with requisite staff, water, equipment and vehicles. The project will upgrade four health centers and 10 dispensaries, and construct 2 new dispensaries, a garage/workshop in Kitui Town, three small garages at each HC/H, a drug warehouse, offices and two project staff houses in Kitui town. These facilities along with equipment and vehicles will provide the essential physical infrastructure from which MOH and NGO staff can begin to implement the improved primary health care system.

Second phase construction will upgrade one health center and three dispensaries in the Far North Division, thus establishing the necessary physical facilities for the MOH to extend the primary health care system throughout the Kitui District. Maps III-1 and III-2 show existing and planned static facility networks.

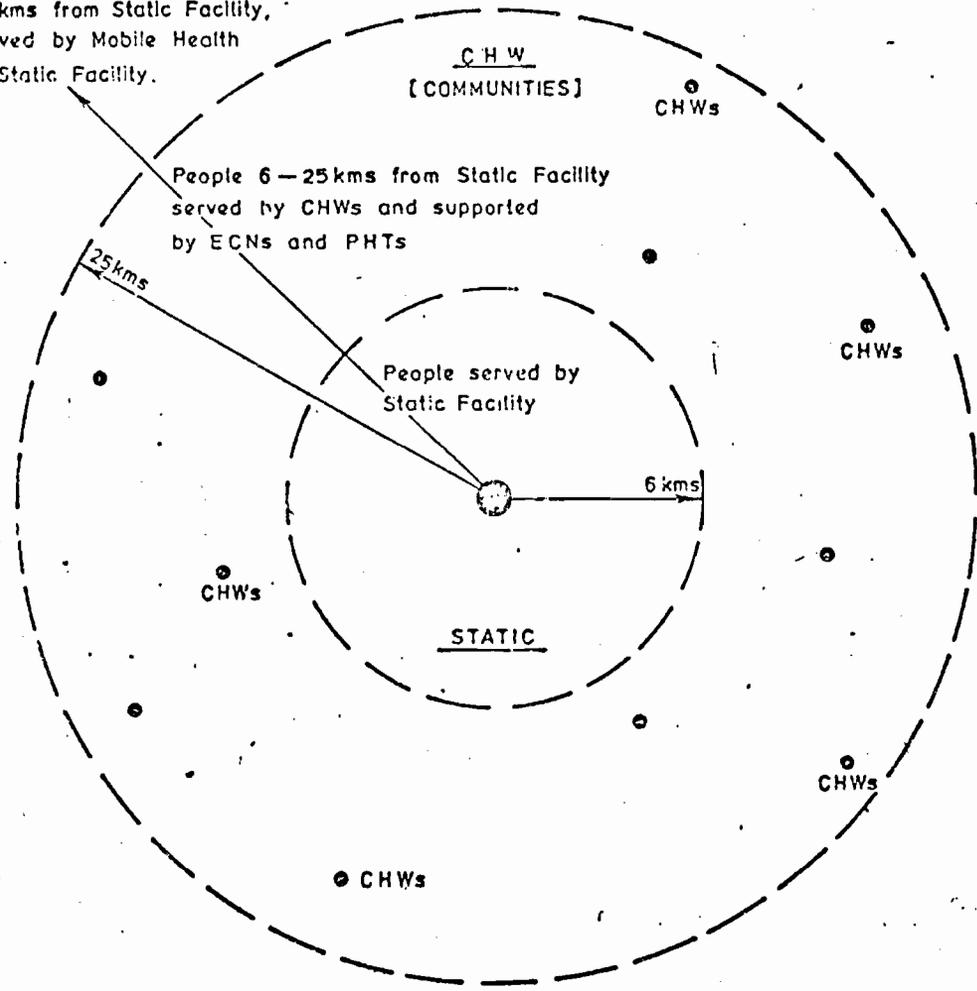
2. District and RHU Staff

District and RHU staff will be posted to provide inpatient and outpatient care at static facilities and to establish and support the community-based system.

GEOGRAPHICAL COVERAGE BY STATIC, CHW AND MOBILE MODALITIES
FOR PROVIDING PRIMARY HEALTH CARE

MOBILE

Beyond 25 kms from Static Facility,
 People served by Mobile Health
 Unit from Static Facility.



- Dispensary or Health Centre
- CHWs in Community

FIGURE III-1

PROPOSED ORGANISATION OF KITUI HEALTH DELIVERY SYSTEM UNDER THE PROJECT

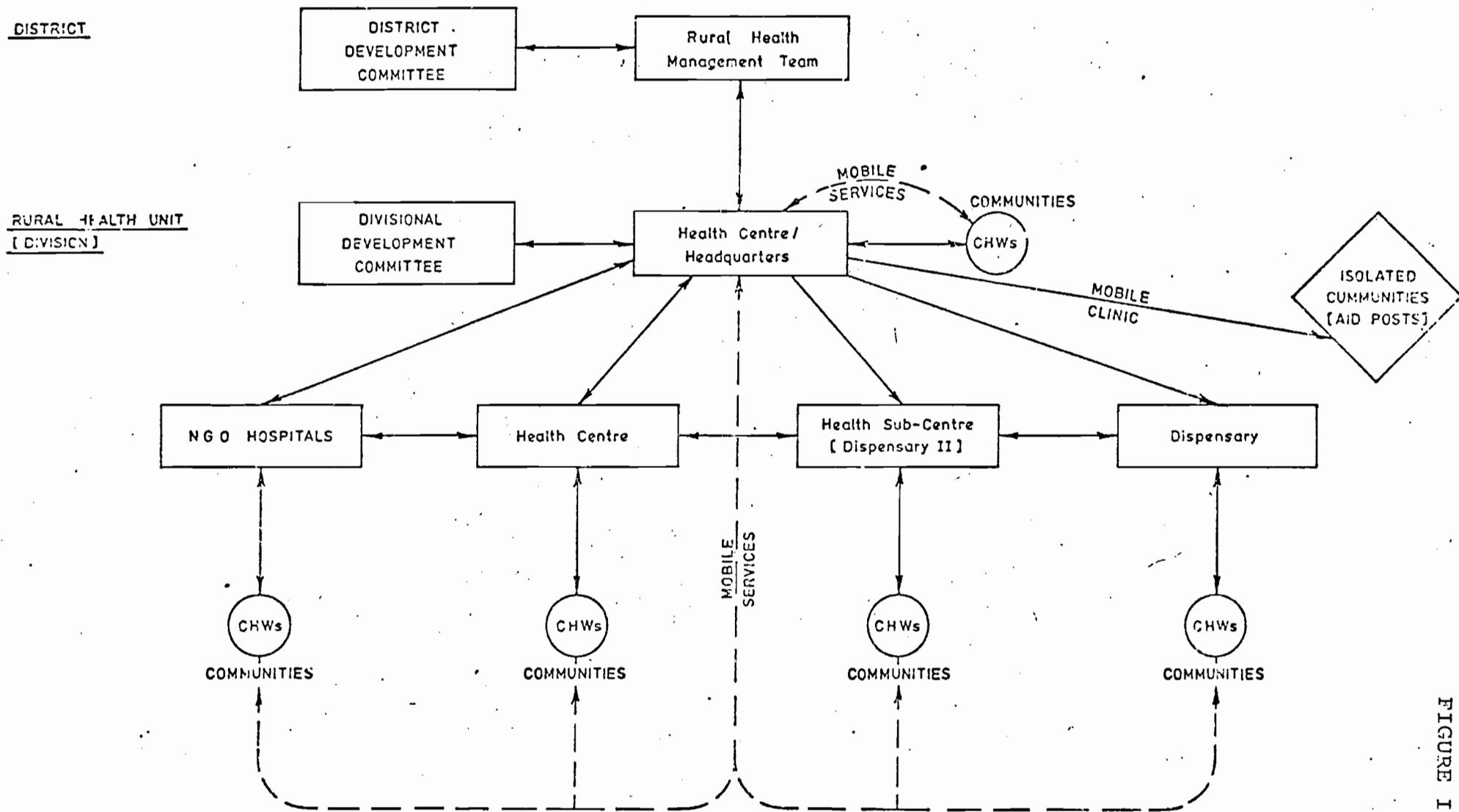
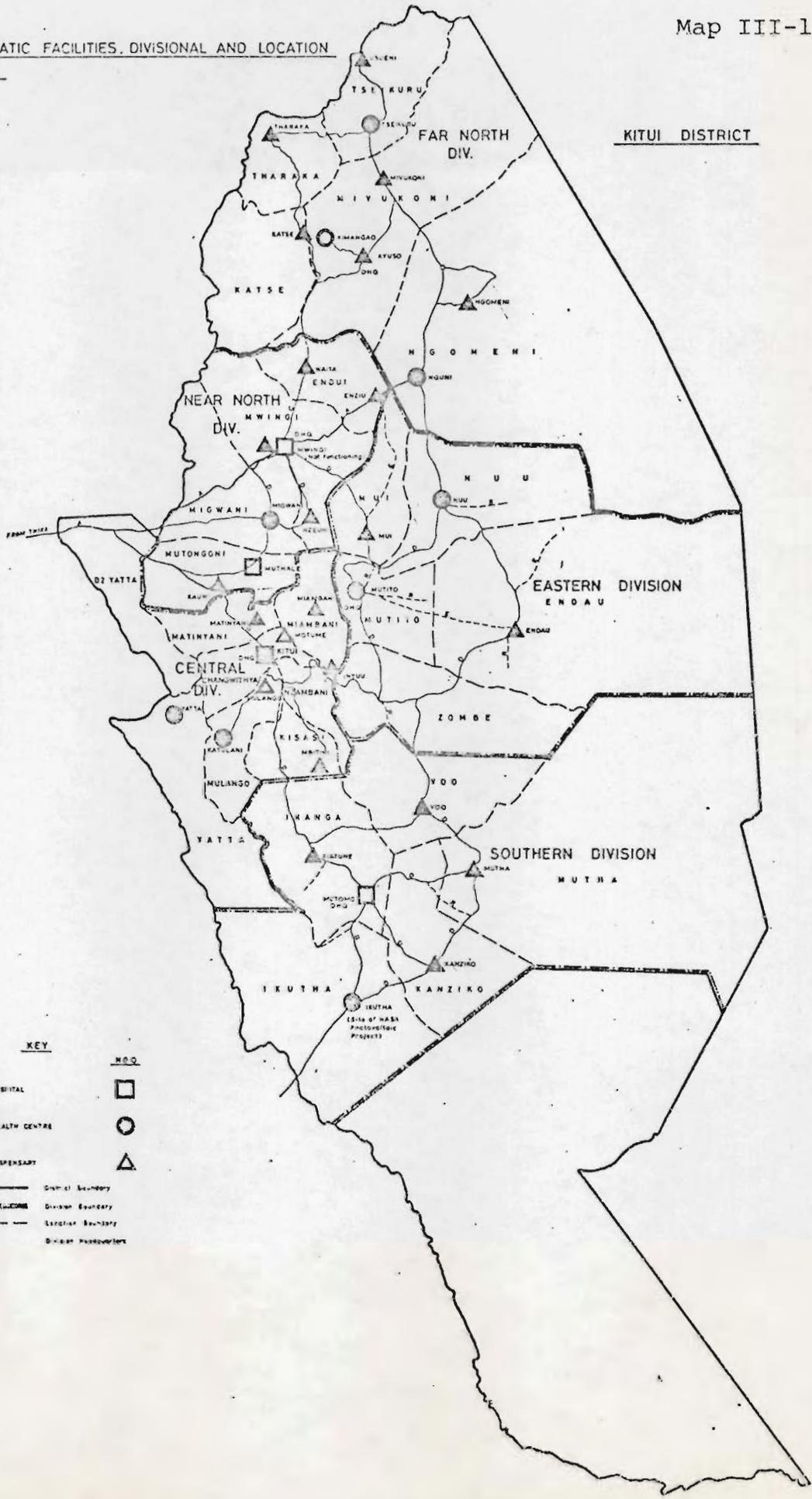


FIGURE III-2

Map III-1

EXISTING STATIC FACILITIES, DIVISIONAL AND LOCATION BOUNDARIES

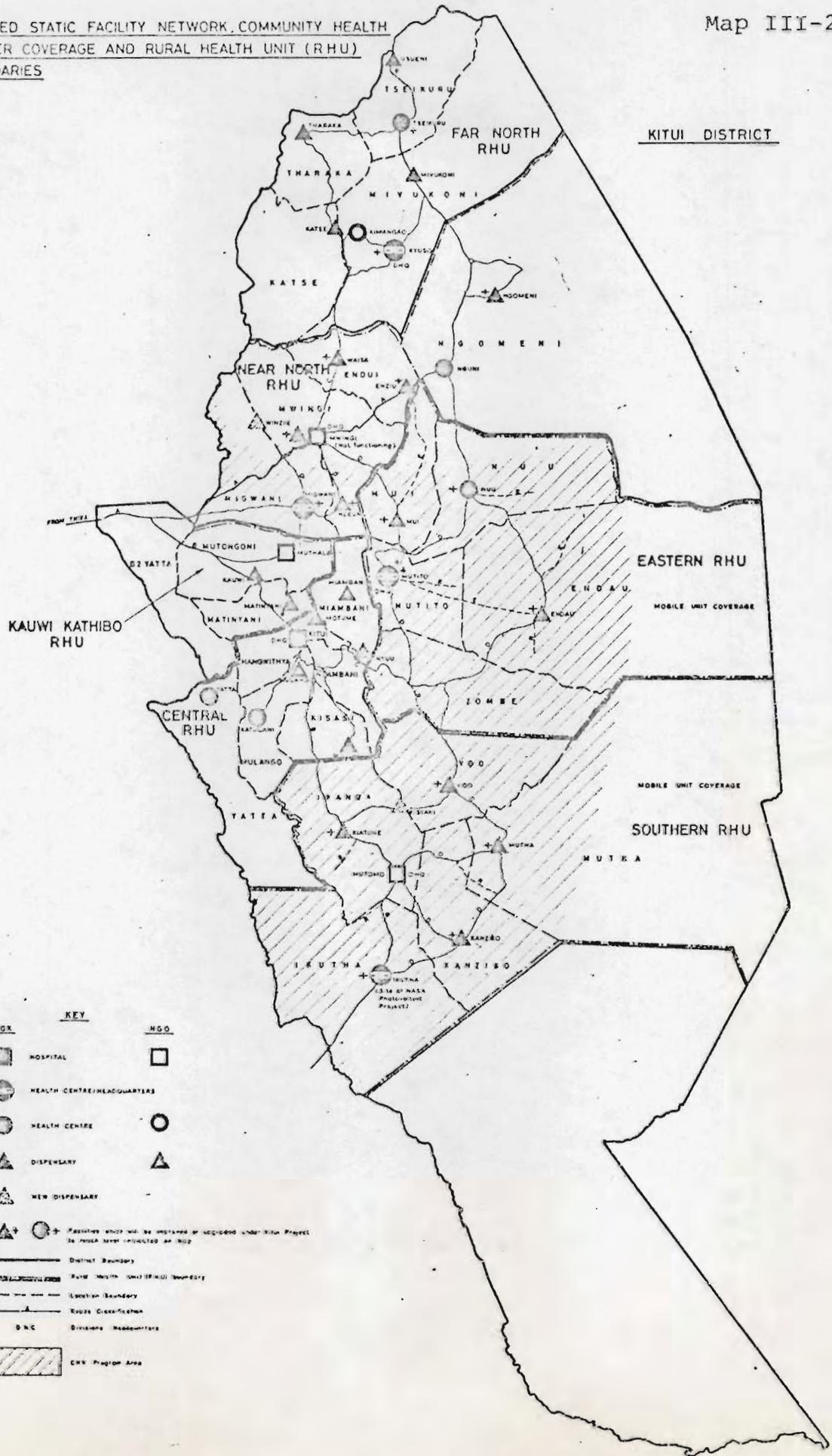
KITUI DISTRICT



KEY	
□	HOSPITAL
○	HEALTH CENTRE
△	DISPENSARY
—	District Boundary
---	Division Boundary
---	Location Boundary
○	District Headquarters

PLANNED STATIC FACILITY NETWORK, COMMUNITY HEALTH
WORKER COVERAGE AND RURAL HEALTH UNIT (RHU)
BOUNDARIES

Map III-2



Key new positions which the MOH will establish in this project are:

- Assistant Medical Officer of Health (AMOH) at the district headquarters; and
- Second Clinical Officers, (SCOs) at each HC/H.

The AMOH and SCOs are essential to planning, implementing and coordinating the activities of this project. The AMOH will be a counterpart to the technical assistance team. Although the AMOH must have training and experience in rural health planning and management, he need not be a medical doctor.

Presently there are 106 paraprofessional and ungraded staff at the static facilities in the project area of concentration. To operate the increased static facility capability, this number will have to be increased to 172. To implement the CHW outreach program, 21 additional staff will be needed, 13 of which would be paraprofessionals (1 AMOH, 3 Clinical Officers, and 9 Community Nurses). This staffing will provide the necessary skills for carrying out static and outreach health care, family planning and nutrition activities.

3. Community Sensitization

Up to five Sensitization Teams (each consisting of 1 SCO and 2 Community Nurses (CNs)) will be fielded under this project. These teams will work from their Health Center/Headquarters. To ensure community involvement one of the CNHs will be from the RHF nearest the community. Where possible the local Community Development Assistant from the Ministry of Social Services and Culture will be included on this team.

In consultation with divisional officers, chiefs, sub-chiefs and local leaders, the Sensitization Team will identify clusters of communities that have the following characteristics:

- established for a period of at least 15 years
- strong leadership
- active self-help groups
- history of adopting innovations
- location more than 6km. from nearest RHF

The cluster that ranks the highest will be selected first for sensitization and training of CHWS. The Sensitization Team will then work with the remaining clusters.

The Sensitization Team's tasks will include:

- conducting a community health assessment covering the role and effectiveness of traditional practitioners and collection of baseline data;
- helping communities identify desired health activities;
- creating awareness of the CHW program and the importance for communities to assume responsibility for health needs;
- facilitating the community decision as to whether or not it wishes to have CHW services;
- assisting the community to establish a CHW selection process;
- jointly identifying CHW training needs;
- ensuring that the community fully understands that any remuneration (whether in kind or cash) and day-to-day supervision is the full responsibility of community;
- assisting the community to establish a committee to coordinate and support CHW and community health activities, including identification of one person on this committee who will have primary responsibility for organizing, supervising and managing CHW and community rural or health activities;
- jointly identifying the type of drugs and equipment needed by CHWs;
- jointly identifying a central location within the cluster of communities for CHW training.

Sensitization will be carried out over a period of two months. Three or more visits are planned to each community which should provide sufficient information to decide the nature of their involvement and make the necessary arrangements to support the community-based activities.

One member of the Sensitization Team, a PHT or CN excelling in community organization and motivation skills, will join the HC/H in-service CHW Training Team (PHT, EN) on its

monthly visits to communities. This person will be responsible for supporting community organizations and community efforts to organize and manage CHW activities and community public health activities and assisting the development of Community Development Fund sub-project proposals.

Each HC/H will have two vehicles for these activities.

4. Community Health Workers

The Community Health Worker (CHW) is critical for effectively extending curative health services and technically supporting preventive and promotive health development projects initiated by the community. CHWs will work with all members of the community including Traditional Birth Attendants and health practitioners. CHWs will organize and carry out their activities in collaboration with the community committee that has the responsibility for managing the work of the CHWs. CHWs may work voluntarily or for remuneration in cash or kind as arranged by the community and CHW and will be the responsibility of the community to maintain. The GOK and AID will not provide funds to maintain CHWs.

CHWs will work full or part-time. Some communities will opt for one part-time CHW, others for one full-time and some will want 2 CHWs and a part-time basis. CHWs will visit all households in their community to learn the health, nutrition and family planning status of each family. While doing this they will begin recording basic mortality and morbidity data. Basic curative health care will be provided at the homes of patients or at the CHW's home. CHWs will be able to identify and treat such illnesses as malaria, parasite infections, diarrhea, conjunctivitis and skin infections. They will also make preliminary diagnoses or identify symptoms and refer patients. They will give patients priority referral cards which will allow the patients to receive more expeditious health care at health facilities since the CHWs will have screened them and prepared preliminary symptomatology. CHWs will be trained to know when they are not qualified to treat a patient and where to refer the patient.

The CHWs will be primary contact persons in their community for any maternal child health development activities. CHWs will maintain continuous contact with community leaders (Chief, Sub-chief, Village Manager), divisional and locational technical officers from various ministries (e.g. Water, Agriculture, Education, Livestock), administrative

officers (Divisional Development Committee, District Officer) and concerned non-government organization representatives to ensure that resources are available for health development activities. The CHWs will work with the community committee to plan, implement and manage health development projects funded from the Community Development Fund. CHWs will spend an increasingly larger portion of their time on promotive and preventive health activities such as measles and polio immunization campaigns, child age-weight records and malaria suppression.

CHWs will receive technical supervision and support from the local RHF staff. CHWs will meet with RHF staff monthly. During these meetings, CHWs will receive monthly medical supplies (pharmaceuticals, dressings and non-prescription contraceptives), submit records for medical supplies used, discuss their past month's work, and receive technical advice on any specific problems identified on health development activities.

5. Support and Mobilization of Community Resources

Communities in Kitui District have many institutional, human and material resources which have been the foundation of their rural socio-economic life. Besides numerous self-help groups there are clan and family organizations, traditional healers and birth attendants, schools, development and administrative structures, labor, supplies and funds that can be mobilized and strengthened to organize and sustain community health activities. In the proposed project CHW areas people have had only limited access to static facility health care, and have had to depend on several of these resources for maintaining community and individual health. This project is geared toward tapping these resources, developing new resources (CHW), improving existing traditional resources (Traditional Birth Attendants and Healers), and mobilizing and supporting other community resources to help communities sustain CHW and public health activities. (See Figure IV - 1 below.)

At the community level this is a major task that requires a division of labor. The CHW will be responsible for basic curative and individual preventive and promotive health care. Responsibility for community prevention and promotive health development activities will be the community's responsibility, through the designated community committee established for this purpose. The CHW will serve as a technical resource to the committee but the key link is between the local rural health facility (EN and PHT) and the community.

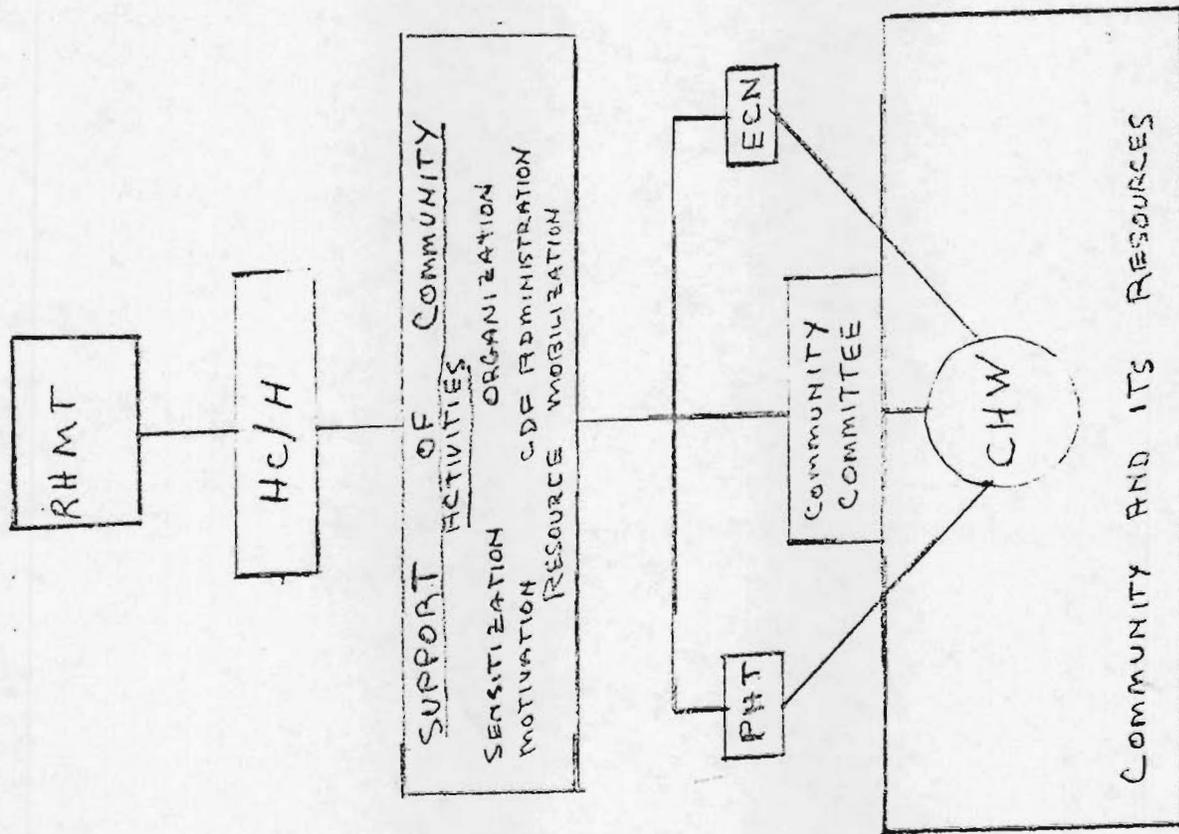


FIGURE IV - 1 - SUPPORT OF MOBILIZATION OF COMMUNITY RESOURCES

In order for the community to meet more of its own health needs, two constraints must be addressed. First, both the MOH staff and the community are not presently oriented to community-based health care. Training of MOH staff (described below and in Annex K) is needed to reorient RHU staff to the tasks of supporting and mobilizing community resources for community-based health care. In turn the RHU staff must be able to guide and support communities to identify health problems, their solutions and resources and technologies are available to address these problems.

Second, the Government has limited resources. This means that community funds, supplies, labor, and organizational capacities must be tapped and strengthened in order to provide the necessary resources, i.e., actual community support of CHW and health development activities. It also means that the Government must provide continuous technical and organizational support to communities within a minimally strengthened static network of facilities and rural health staff. The support and mobilization tasks described below in this section and the project components described elsewhere are directed to this end as well as meeting the referral, communication, pharmaceutical, management, planning and evaluation needs of the Kitui PHC system.

One important component for strengthening the capabilities of the community to identify and solve its own problems is the Community Development Fund (discussed below in subsection 18 and IV.F. (ii)). While many communities will be able to undertake the support of CHWs and health development activities without external resources, some communities will be too poor to do so. This fund can be utilized by these communities to develop that capability through self-sustaining and/or income-generating health development activities that will let them fully participate within the community-based component of this project.

As noted, RHF staff technical community organizational support is essential to the mobilization of community resources. Tasks of key personnel are described below. (Also refer to Figure IV-1.)

At the outermost periphery of the static facility system two key cadres of personnel will support community outreach activities on a regular basis. These cadres consist of the PHT and the EN, respectively. Both of these

cadres will be trained in community mobilization and support. Support services each of these cadres will provide to the village committee, CHWs, and to the community-at-large are described below.

a. PHT

The PHT will provide the following services to the village committee:

- assessment of the status of community environmental conditions and technical direction concerning how collective community activity could bring about needed improvements.
- information concerning how vertical health and health-related development programs originating at higher levels will impact on local environmental conditions.
- assist in organizing and otherwise mobilizing community resources to undertake community health development activities.
- assist in the preparation of proposals for assistance from the Community Development Fund to support community development activities.
- assist in the evaluation of community health development programs and activities and provide recommendations as to how these can be provided.
- assist in the evaluation of CHW's roles in providing support to community health development programs and activities.

CHWs:

The PHT will provide the following services to

- pre-service training in public health and community motivation.
- continued in-service training in public health and community motivation.

- technical support concerning specific community initiated and supported health development programs.
- assessments as to the proximate sources of environmentally caused illnesses manifest in the community.
- assistance in defining the role of the CHW in supporting community initiated and sponsored health development programs.

The PHT will provide the following services directly to the community-at-large consisting of individuals, schools, cooperatives, and various other organizational groupings including self-help groups:

- sensitization as to the environmental causes of illnesses and what steps individuals and the community can take to improve its local environment.
- public health education emphasizing preventive and promotive health programs and practices.
- advice and direction as to how community organizations can mobilize their resources to undertake community health development projects.
- assist the community in becoming aware of the availability of external resources and how these can be combined with local resources resulting in effective community health development projects.
- facilitating the application of external resources to supporting community health development projects.
- provide continuous reinforcement and support concerning the necessity of community assumption of responsibility for improvements in health status.
- provide continuous motivation to communities to organize, initiate, and sustain health development projects and to support the activities of CHWs.

The EN will provide the following services to the village committee:

- assessment of the health status of the community with emphasis on illnesses related to MCH, nutrition, family planning, and immunization.
- evaluation of community health attitudes and practices as these relate to disease and illness.
- evaluation of the impact of community health projects on reducing disease and illness.
- provide information concerning how vertical health and health related development programs originating at higher levels will impact on illness and disease in the community.
- evaluation of the curative activities of CHWs.

The EN will provide the following services to CHWs and to TBAs, when appropriate:

- pre-service training in MCH, nutrition, family planning and immunization (CHWs and TBAs)
- continued in-service training in MCH, nutrition, family planning and immunization. (CHWs and TBAs.)
- clinical supervision and monitoring of drug dispensing and referral practices.
- technical support concerning illness prevention and health promotion and education activities.
- drug resupply.
- technical support to TBAs in connection with complicated deliveries.
- direction of the role of CHW in preventive and promotive health programs.

The EN will provide the following services directly to the community-at-large consisting of individuals, schools, cooperatives, and various other organizational groupings including self-help groups:

- sensitization as to causes of illness and disease and what steps individuals and communities can take to alleviate and prevent illness.
- provide preventive and promotive health education with emphasis on changing individual and collective attitudes and practices that impede illness prevention or contribute to unwarranted vulnerability to disease.
- advice and direction as to how communities can organize to undertake illness prevention and health promotion activities emphasizing immunization, family planning, nutrition, and MCH.
- assist the community in becoming aware of the availability of external resources and services and how these can be integrated with local resources and services to strengthen illness prevention and health promotion activities.
- facilitate the application of external resources to supporting community health development projects and programs.
- provide continued reinforcement and support concerning the necessity of community assumption of responsibility for improvements in health status.
- provide continuous motivation to communities to organize, initiate and sustain health development projects and to support the activities of CHWs.

The discussion above describes the tasks and functions of static facility staff which will be most directly and regularly involved in community support activities. The project calls for an increase of a total of 87 staff positions in rural health facilities. The design of the project specifies the involvement of over 50 percent of all RHU staff and 90 percent

of all the incremental staff in playing a direct supportive role in community-based health activities. This staff involvement is in addition to that which may occur as a result of increased attendance at static facilities due to referrals from CHWs. A conservative estimate of the total incremental staff time directly devoted to the support of community-based activities consists of 12.3 person years per year (See Annex K).

6. Training

Training carried out under the project will be in the areas of 1) district and RHU health planning and management; 2) drug distribution management; 3) sensitization of communities; and 4) training of CHWs, TBAs, and RHU staff.

Present staff at all levels must be trained to plan and implement a decentralized primary health care system with a major CHW component. The network of staffed static facilities will not be sufficient to ensure that the objectives of this project are realized. Training will be required to reorient present health services from the static curative approach to a community-oriented curative, preventive and promotive approach.

The Rural Health Management Team (RHMT) will be trained by the provincial management training team in accordance with the training protocols set forth in the IRH/FP Program. This training will focus on the management, implementation and evaluation of rural health services. MOH staff will also train the RHMT and district rural health staff in the management of the MOH's improved pre-packaged drug distribution program. Supplemental training specifically keyed to the Kitui project with special emphasis on development and supporting community-based activities will be conducted jointly by the project staff and MOH headquarters senior staff.

The RHMT will conduct two one-day seminars per year for the District and Divisional Development Committees ensure understanding, participation and cooperation in the implementation of project activities.

Health Center/Headquarters (HC/H) teams will receive at least four weeks of training to become community facilitators and trainers of CHWs and RHU staff. From each HC/H, 1 Clinical Officer, 3 Enrolled or Community Nurses, 1 Public Health Officer, and 1 Public Health Technician will be trained.

One Enrolled Nurse and one Public Health Technician from each rural health facility in the RHU will also receive this training to ensure that trained personnel are available to supervise community and CHW activities. In addition the SCO, who will be the coordinator for all HC/H outreach activities, will receive on-the-job training in planning, management and evaluation from the project staff. Training will be conducted at the Rural Health Training Center (RHTC) in Kararuma, Embu District and in the field. The HC/H teams will then be responsible for training all remaining RHU staff through two-day workshops at training facilities in Kitui District. These workshops will explain the goals and objectives of the project and the specific roles and functions of paraprofessional personnel in each RHU. HC/H teams and RHU staff will receive in-service training annually or, if possible, every six months.

CHWs will be trained by HC/H teams in groups of 6 to 12 at a central location (school, church, community structure). Two months of preservice and inservice training during the first year will be given in three stages. The first stage will concentrate on basic health and nutrition skills which CHWs can immediately practice. Simple community health surveys and record keeping will also be covered. In the curative areas CHWs will learn to recognize malaria, skin disease, parasite infection, diarrhea, respiratory infections, conjunctivitis and minor injuries. CHWs will also learn when they should refer cases to static facilities.

Second stage training will focus on strengthening recently learned skills, learning midwifery and family planning, and identification of one or two health development projects, e.g., maintenance of community water systems and construction of latrines. TBAs who are not CHWs will be included in this training stage to expand the community's knowledge and skills in midwifery and family planning.

The third stage of training will focus on health, nutrition and family planning problems related to preventive and promotive health care and intersectoral activities identified by CHWs. The Public Health Office and technicians as well as other divisional level staff from other ministries will conduct much of this training and begin to establish long-term relationships with community organizations and leaders.

During the first three years of the project, HC/H teams will sensitize 72 communities and train about 144 CHWs. During the second phase HC/H teams will sensitize an additional 210 communities and train 420 CHWs. Figuring a 30% attrition rate*, approximately 70% or 195 communities out of an estimated total of 281 in the CHW-targetted communities will be reached by trained CHWs.

The MOH National Family Welfare Center (NFWC) or other institutions will give in-service training to Clinical Officers and Enrolled Nurses so that there is at least one qualified staff member at each static facility to provide FP services. This will be accomplished by the third year of the project.

To ensure continuity of the project and provide additional trained health planners/managers of district-level primary health care system, four MOH officers slated for Assistant Medical Officer of Health (rural) positions will be selected for Masters in Public Health training in the U.S. Training will be phased so two officers will return from training in the third year of the project and the other two in the sixth year. It is expected that the two of these officers will be assigned to Kitui District and the other two will initiate similar community-based activities in other districts.

There will also be about 24 person months of short-term observational training for district and MOH/Headquarters staff in Africa and other third countries to share experiences in developing community-based health care.

7. Mobile Service and Health Units

Mobile health units will be utilized for RHU sensitization, training and CHW support activities.

The use of mobile health units to deliver health care service is still being tested and evaluated for its cost effectiveness under the Coordination for Development (CODEL) Primary Health Care project. Mobile health units will be utilized in the early stages of implementation of the Kitui District expanded primary health care system to serve communities

*Attrition in this context applies to CHWs who drop out of the program for personal reasons or because of lack of community support.

not covered by RHF's and CHWs. In the long-run however, the MOH will have to decide if mobile units or a combination of static and community-based services will most efficiently meet the health needs of the remote areas.

During the first phase it is planned that CODEL will continue its regular mobile health program presently funded by a USAID Operational Program Grant from Muthale and Kimangao hospitals. Two mobile units will concentrate on providing primary health care services on a monthly basis in areas of Central and Far North divisions not otherwise served by CHWs. CODEL will transfer its other mobile unit operations to the Mutitu HC/H in Eastern Division and to Ikutha HC/H in the Southern division. CODEL will then train MOH HC/H staff at Mutitu and Ikutha to operate these units in areas not served by resident CHWs, i.e., eastern Zombe, Mutha and Endau locations. (See Map III-2.)

During the second phase, CODEL will transfer the Kimangao operations to the proposed new Kyuso HC/H in Far North Division and the Muthale unit to Kauwi-Kathibo HC/H in Central Division. CODEL will then train the MOH HC/H staff at Kauwi and Kyuso.

An additional \$400,000 has been included in the USAID/Kenya FY 83 budget for Kenya for mobile health unit operations, training and pharmaceuticals to support CODEL operations. Vehicles have also been provided under the Kitui Project to facilitate MOH assumption of mobile health activities. Once these activities have been taken over by the MOH, the MOH will pay for all operating costs and pharmaceuticals and ensure that the mobile health activities are integrated into the Kitui primary health care system.

8. Improved Drug Distribution System

An improved drug distribution system will be implemented under the project to meet the need of both static and community-based activities.

The MOH is presently pilot-testing a prepackaged drug distribution system in two districts. This system was developed to avoid inappropriate prescription and waste of drugs and to ensure a continuous supply of drugs to all rural health facilities. The pilot system is considered relatively successful so far, but it does not include a component to provide drugs to CHWs. The design of the new system is well thought out and sound, but greater on-the-ground attention to its implementation is necessary for full success. Addition of the CHW component will increase the need for management of drugs and their distribution. (For more details see Annex I.)

With assistance from the project's technicians, the MOH will adapt the present improved drug system to incorporate the supply of drugs to CHWs. The MOH will provide the following basic drugs and medical supplies to CHWs.

- anti-malaria drugs
- skin ointment
- worm medicine
- oral rehydration packets (CHWs will also be taught to make these locally.)
- aspirine or panadol
- tetracycline eye ointment
- gentian violet
- dressings

A first aid kit and a weighing scale will also be provided. The system incorporating CHW needs will be in place by the eighteenth month of the project.

9. Developing and Implementing Referral Protocols

At the heart of an effective referral system are disciplined, consistent, and correct diagnostic, treatment and referral judgements. This requires uniform selection, training and supervision of personnel involved in these activities. Referral manuals and protocols for health personnel, including CHWs, will be developed under the guidance of the Rural Health Management Team with assistance of contract personnel and the Faculty of Medicine, University of Nairobi. The resulting manuals and protocols will be completed, field tested and evaluated by the end of the first project phase. They will be continuously evaluated and revised during the project. Their use will be extended to Far North and Central Division in the last three years of the project.

10. Rural Health Management Team (RHMT)

The Rural Health Management Team (RHMT) will consist of:

- Assistant Medical Officer of Health
- Public Health Nurse (Community Nurse with MCH/FP training)
- Public Health Officer
- Health Education Officer
- District Clinical Officer
- Nutrition Officer
- Statistician
- NGO Representative

This team will have day-to-day project management responsibility and will report to the District Medical Officer of Health, the Provincial Medical Officer and MOH Headquarters. Responsibilities of this team are as follows:

a. Plan and direct the development and institutionalizing of the Kitui primary health care system. Develop curricula for the training of trainers, and for RHU personnel in the utilization and supervision of CHWs and TBAs.

b. Develop curricula for the trainers of community sensitization teams, CHWs and TBAs.

c. Develop of manuals and protocols for diagnostic treatment and referral activities of all health personnel, CHWs and TBAs.

d. Provide policy guidance to Cecond Clinical Officials (rural) and others responsible for the Kitui primary health care system.

e. Oversee and expedite facility construction, upgrading and improvement; equipment and supply acquisition, including drugs; and appropriate staff postings.

f. Monitor community sensitization to support CHWs and initiate preventive and promotive health activities.

g. Maintain, and evaluate the health information collected at RHU levels and insure as clinical and management tools.

h. Coordinate Government and NGO primary health activities.

i. Assist District and Divisional Coordinating Committees and SCOs to integrate health activities with complementary development activities.

11. Technical Assistance*

The project will fund 15 person years of long-term and 40 person months of short-term technical assistance to implement this project.**

The major task of the contractor providing this technical assistance will be to assist the RHMT to institutionalize the Kitui district primary health care system. This will be done by:

*See Annex G for detailed scope of work and job descriptions.

**This has been increased to 18 person years of long-term and 43 person months of short-term technical assistance to include community development apecialist assistance (Kenyan and U.S.).

- developing procedures and practices for training; supervision and monitoring of personnel; patient referral; logistical systems (including drug supply) and vehicle and equipment maintenance.
- institutionalizing procedures for coordinating activities of Government and NGO health activities; and
- developing cooperative relationships among divisional and district level committees to coordinate the delivery of primary health services with other social and economic development activities.

a. Long-Term Technical Assistance

Four long-term technicians, a Senior Health Planner, a Senior Health Training Specialist, a Civil Engineer and an Administration and Procurement Specialist, will be provided under this project.

Senior Health Planner (5 years)

This person will possess an M.D. with a Masters in Public Health and will have substantial field experience. He or she will have a broad understanding of health care organizations, primary health services delivery, community organization and health planning.

This person will be the Chief of Party for the Technical Assistance Team and will coordinate forty person months of consultant services. This person will report directly to the Senior Deputy Director of Medical Services at the Ministry of Health Headquarters and the Medical Officer of Health, Kitui District. This person will also serve as counterpart to the Assistant Medical Officer of Health, Kitui District.

The Senior Health Planner will have primary responsibility for the overall direction of the project including the delegation of responsibility to the other members of the Technical Assistance Team and consultants.

Senior Health Training Specialist (3 years)

This person will have a Ph.D. in health administration, public health, or possibly health occupation education and will have substantial field experience. She or he will have substantial experience with health care organizations and professional and paraprofessional health workers in a developing country context.

This person will be the Deputy Chief of Party and will report to the Chief of Party and AMOH. He or she will have principal responsibility in training, curriculum design, and training evaluation.

Civil Engineer (4 years)

This person will be a Kenyan resident possessing a degree in civil engineering with a minimum of three (3) years work experience including at least one year in design or construction supervision of rural water supply or sanitation projects in Kenya. The Civil Engineer will report to the Chief of Party and will receive technical and managerial direction from Ministry of Health Officers. He or she will be primarily responsible for the implementation of the Community Development Fund projects described below. This person also periodically supervises construction activities at various health facilities in Kitui District.

Administration and Procurement Specialist (3 years)

The Administrative and Procurement Specialist will possess at least a bachelor's degree in engineering, planning, or business administration and a minimum of five years experience in administration, procurement, and construction management.

This person will work in a line position in the MOH Planning and Implementation Unit. This officer will report directly to the Senior Deputy Director of Medical Services or designee and will coordinate all job activities with the Chief of Party. He or she will carry out responsibilities in accordance with Government of Kenya's and Ministry of Health's Code of Conduct for employees in similar positions. This person will be the primary contact in the Ministry of Health for all matters relating to design and construction of health facilities, the procurement and distribution of equipment and supplies, and services required by the Technical Assistance Team.

b. Short-Term Technical Assistance

The project calls for 40 person months of consultant services. It is planned that ten months of the will be procured locally, while the remaining thirty will be obtained from the U.S. Consultants shall work under the general direction of the Chief of Party or designee.

Categories and estimated time requirements for consultant services are as follows:

Category	Time Requirements
(1) Design and implementation of curricula and training programs	8 months
(2) Development of referral network	8 months
(3) Adaptation of logistics systems (medical supplies, drugs, etc.)	4 months
(4) Decentralization of rural health management and administration	6 months
(5) Establishment of health information and evaluation system	4 months
(6) Design of special project activities (e.g., Community Development Fund)	10 months
Total	<hr/> 40 months

12. Peace Corps Involvement

USAID has explored with Peace Corps/Kenya and will explore with the MOH possibilities of involvement of Peace Corps Volunteers (PCVs) in this project. One possibility is for PCVs to assist in the design and implementation of projects identified for funding under the Community Development Fund. Another possibility is following-up community sensitization and CHW training activities, especially in the initial stages, to facilitate continuous contact with communities and CHWs.

Details regarding any specific Peace Corps involvement will be negotiated with GOK and Peace Corps/Kenya representatives after project approval.

13. Health Information and Evaluation

This complex project requires an information and evaluation component that continuously collects data and assesses development processes and outcomes. This component will be useful for managing the primary health care

system in Kitui. It will be incorporated in the MOH Health Information Service Unit that will collect, analyze and report primary health care system characteristics.

During the first year of the project, collection of baseline data will begin; collection should be completed by the end of the second year of the project. During the third year, a health information system will be institutionalized in Kitui. It will be incorporated in the MOH Health Information Service Unit that will collect, analyze and report primary health care system characteristics.

Throughout the course of the project, special in-depth studies will be conducted. Quantitative information, which will be coupled with qualitative expert judgements and opinions, will lead to recommendations for changes, revisions, and improvements in project activities. Periodic appraisals, and in-depth evaluations will be conducted jointly by the MOH, RHMT, U.S. technical assistance personnel, members of the Medical Faculty from the University of Nairobi and USAID/Kenya. These data gathering and analysis activities will provide a basis for substantive dialogue with government concerning the potential need to change policies and procedures throughout the health care delivery system.

Below is an illustrative list of health information that will be required:

(1) Baseline Survey

- facilities
- population characteristics
- health status
- health practices and knowledge
- environmental condition
- economic circumstances
- utilization
- health practices and knowledge
- environmental condition
- economic circumstances
- utilization patterns and costs

(2) Ongoing Health Information

- clinical service management
- administrative service management
- monitoring of costs
- trends in morbidity and mortality

(3) Periodic Studies and Surveys

- training
- delivery of services and supervision
- community health attitudes and practices
- coordination
- management
- outcomes and effectiveness of the primary health care system
- effectiveness of drug supply system
- role of traditional practitioners
- PVO and other private sector projects to provide data base for policy dialogues
- cost effective use of mobile units

See Annex J for elaboration on the health data to be collected.

14. Family Planning

There are currently only thirteen full-time maternal child health/family planning (MCH/FP) service delivery points within Kitui district. All are in MOH health facilities: the hospital, eight health centres and four dispensaries. They are serving less than the national average of 5% of women of child-bearing age. In the Near North, Eastern and Southern divisions of Kitui District, where most of the Kitui Rural Health Project will be concentrated, there are only four designated MCH/FP service delivery points and the availability of family planning services is extremely limited. None of these MCH/FP service delivery points, located in health centers, has a single person trained to deliver family planning information and services. However, four dispensaries are visited by mobile FP clinics once or twice a month. Also two Catholic missionary hospitals provide (when requested) instruction in natural family planning methods acceptable to the Catholic Church.

In order to extend MCH/FP coverage, each MOH rural health facility within this project which is not presently designated as a MCH/FP service delivery point will become one as soon as possible. Additional staffing, in-service family planning training (including natural family planning methods), procurement of MCH/FP equipment and, in certain cases, construction of additional clinic space will be provided. The community Nurse or Enrolled Nurse with midwifery training are the principal providers of family planning services. All CNs and ENs must attend an in-service FP course before the MOH recognizes their competency in family planning. ENs and CNs are expected to insert IUDs and prescribe and supply oral contraceptives, condoms, foams and jellies upon completion of in-service FP training. The MOH has decided that Clinical Officers who have never previously played a role in FP delivery will receive

in-service training to qualify them to prescribe oral contraceptives and to supervise more effectively the FP services rendered by CHs and ENs. Patient Attendants, CHs, ENs and Family Health Field Educators who have not attended training will receive on-the-job training from district health staff to qualify for resupplying oral contraceptives. To comply with the full MOH staffing norms each health center should have one clinical officer and five ECNs and each dispensary should have two ECNs. For each static facility to be a FP service delivery point, there must be at least one graded staff member with FP training. The goal is to have Clinical Officers, Enrolled Nurses and Community Nurses in Kitui District who are qualified to deliver FP services. At present no clinical officer and only seven ENs have received the necessary training. The first step in the project, therefore, is to ensure that at least one EN at each of the twelve dispensaries and at the one health center which currently lack such qualified staff will have FP training. This will be accomplished by providing in-service training to ENs currently assigned, transferring trained ENs, or by a combination thereof. The second step will be to ensure that a second EN with training in family planning is assigned to each of the twelve dispensaries and the three health centers which have less than two ENs with such training. Again this will be done by transfer, in-service family planning training or a combination thereof. The third step will be to train the remaining ENs and Clinical Officers assigned to the health centers.

The MOH's National Family Welfare center (NFWC) conducts in-service family planning training. Kitui District personnel will be scheduled to attend the NFWC's regular courses or alternatively, courses will be scheduled in Kitui District. USAID will finance MCH/FP equipment to ensure that each health center and dispensary in the project area has the MOH standard MCH/FP equipment.

The dissemination of FP information and education will be an important component of this project. The in-service FP curriculum for CNs, ENs and Clinical Officers emphasizes communications skills and FP motivation. Clinical staff will concentrate on the motivation of women visiting clinics for MCH purposes. CHWs will be trained in FP motivation techniques and will be expected to carry information and education into the community as a major focus of their health education efforts. The messages will concentrate on the health and welfare of families. They will be integrated into

discussions of other MCH concerns. Materials developed under the Government proposed Integagency Information and Education Program will be utilized by both clinical and community extension staff as they become available.

USAID has proposed that the MOH allow CHWs to distribute contraceptives as well as to provide FP motivation. In USAID's view, there is no advantage to dichotomizing motivation and service efforts. The MOH has not fully accepted our recommendations and is still hesitant to approve the non-clinical distribution of contraceptives. This hesitancy appears to be based on fears of an adverse political reaction rather than on medical grounds. The CHWs will only be allowed to distribute condoms. Family Health Field Educators (FHFES) distribute condoms, foams and jellies. However, there are only eight FHFES in the project area and there are unlikely to be more in the near future because the MOH has frozen their recruitment. USAID will attempt to persuade the MOH to implement operations research activities within the area to test alternative approaches to combined delivery of health and FP services on a non-clinical basis under carefully controlled conditions. We are confident that the MOH will be willing to introduce FP service and information and education innovations as political support for FP continues to grow in Kenya.

14. Vehicles

This project will provide 16 vehicles and 40 bicycles to extend outreach activities from the HC/Hs, HCs and dispensaries in the project area.

Four vehicles will be assigned to the District Headquarters, 1 for the RHMT's general use and 3 for the Technical Assistance Team's specific use. Mutitu HC/H and Ikutha HC/H will each receive 4 vehicles, and for mobile health unit activities to be phased over from the CODEL project. The other will be used by the HC/H Team for community sensitization, CHW training and follow-up technical support and supervision of CHWs and community health development activities. Migwani HC/H will receive 3 vehicles for the same activities but none for mobile health activities.

The forty bicycles will be distributed with 2 going to each rural health static facility in the project area. These will be used by staff to extend preventive and promotive health activities within the 6 km. catchment area of the static facilities.

16. Repair and Maintenance of Vehicles, and Equipment

One of the major bottlenecks in extending outreach programs in rural areas has been the lack of maintenance and repair of vehicles. At any given time a high proportion of MOH vehicles are either under repair or unuseable because they are not properly maintained in the first place.

Another serious problem experienced at almost all rural health facilities is health equipment (e.g., kerosene refrigerators, autoclaves, lighting fixtures) not being used for want of minor repair.

The IRH/FP program recognizes these problems and incorporates in its activities the development of a MOH capability to repair and maintain its own equipment and vehicles, especially in the rural areas. The Kitui project incorporates such a program.

One major garage/workshop in Kitui town and three minor garage/workshops at each HC/H in the project area will be constructed and equipped by AID and staffed by the MOH. Staffing at Kitui Town will include a Mechanic and an Equipment Technician.

17. Two-way Radio Network

To facilitate general communications and distribution of medical supplies, 2-way radios (VHF SSB transceiver with a power output in range 25-100 watts PEP) will be provided at the following places:

- Kitui Town - District Headquarters (project funded)
- Ikutha HC/H (provided under NASA Photovoltaic project)
- Mutitu HC/H (project funded)
- Migwani HC/H (project funded)
- Mutha Dispensary (project funded)
- Endau Dispensary (project funded)
- Mutomo Hospital (already in place)

The three HC/H units will be linked with Kitui Town. The Mutha unit will be linked with Mutomo Hospital and Ikutha HC/H. The Endau unit will be linked with Mutitu.

Two-way radio communication will give these health facilities the capacity to exchange ideas and information on a routine and emergency basis, obviate or lessen need to transport messages by vehicle, consult on patient problems, alert facilities of referrals, follow-up patients' progress, and request emergency supplies, equipment and services. Mutha and Endau dispensaries have been included because they are particularly isolated due to lack of public transport. As vehicles will not be provided to dispensaries, the 2-way radio link will permit these two isolated dispensaries to call on their respective HC/Hs for emergency transport of patients when the need arises.

The need for 2-way radio communications in Kitui was identified and described in the Kitui Feasibility Study (p. 177-178). On the basis of a follow-up study by the African Medical and Research Foundation entitled "Design for a Two-way Radio Communications System for Static and Mobile Health Facilities in Kitui District" (March 1981) and discussions with the Ministry of Health, the above 2-way radio network was incorporated into the project.

18. Community Development Fund

The purpose of the Community Development Fund is to provide funds to communities with limited resources to develop a capability to initiate self-sustaining health development activities. This fund will supplement funds, labor and materials provided by the communities to implement projects that will have a community-wide public health or nutritional impact. In very poor communities this fund will also serve as a source for "seed" money for health development subprojects (e.g., kitchen gardens, poultry units) that would generate income for the community to support CHWs.

Subprojects will include protection of water supplies, development of water sources and village cleanup campaigns such as proper placement of pit latrines and compost heaps. Subprojects could also be private or cooperatively run small animal production units (e.g., poultry, goats, rabbits) and kitchen gardens that would increase the availability of nutritious foods and generate funds for maintaining CHWs. Preference in the allocation of these funds will be given to communities that have been supporting the CHW program, that have organized themselves effectively and that are willing to take on significant responsibilities for their own health care, including the provision of community labor, funds and supplies.

The Rural Health Management Team (RHMT) will have overall coordination and implementation responsibilities for processing and selecting sub-project for funding. AID funds for the Community Development Fund will be allotted directly by the Ministry of Health to the District Medical Officer of Health in Kitui District along with a delegation of authority to disburse these funds. The RHMT with assistance from the Technical Assistance Team will be responsible for ensuring that the criteria and procedure for reviewing, approving and funding activities are followed (see Section IV.F. (ii) for description of procedures).

The total Community Development Fund will be \$435,000, of which \$185,000 is for the first phase and \$250,000 is for the second phase. Since there are an estimated 282 communities in the project's three targetted divisions, the Community Development Fund will provide an average of about \$1500 or Kshs 13,000 (US\$1.00 = Kshs 8.50) per community.

18. Incentive Structure for Community Involvement

Crucial to the success of this project is an incentive structure that will promote community involvement. The basic incentive incorporated in the project design for motivating communities to support the activities of CHWs and to launch preventive and promotie health projects is as follows: If a community establishes an appropriate committee to provide general management and support (including cash payment if necessary) for the CHW and agrees to undertake and maintain at least one major health development activity annually, the Government will:

- train CHWs selected from the community according to resonable criteria;
- provide technical supervision of CHWs at no cost;
- supply certain drugs to the community through the CHW at no cost;
- provide access to the project's Community Development Fund for limited amounts of materials and money, if necessary, on a "one for one" or "two for one" matching basis to undertake health development projects;

- allow CHWs to issue priority referral chits to community members and grant priority for service at secondary and tertiary static facilities (health center, district hospital).

The basic principle underlying the project's incentives is that communities will accept recurrent responsibility if they believe the benefits are worthy of such a commitment. The principal benefit accruing to the community will be perceived as convenient access to drugs. Preventive and promotive efforts of CHWs, which are important over the long term, will not be readily perceived as beneficial by the communities.

E. End of Project Status, Project Outputs and Inputs

The conditions this project is designed to achieve by the end of the project are shown in Annex A, Logical Framework, along with project outputs and inputs. The use of end-of-project conditions and outputs in evaluating the progress of the project are discussed in Annex J, Information Systems and Evaluation.

IV. PROJECT ANALYSES

A. Technical Feasibility

1. Kitui Feasibility Study

In August 1979 the GOK initially asked USAID to develop an innovative health services delivery project in Kitui District involving the utilization of CHWs. USAID, after conferring with officials from the Ministries of Health, Planning, and Finance and district officers in Kitui, assembled and funded a team to assess the feasibility of a project. The Kitui feasibility study team was comprised of four Kenyans and five Americans and was headed by Dr. Dennis Carlson, Associate Professor, Department of International Health, Johns Hopkins University. The team worked in Kenya from June 3 to July 19, 1980 and spend 3-1/2 consecutive weeks in Kitui District. The team visited 25 health facilities in Kitui District, numerous schools, markets, Government offices and community residences, and attended two open town meetings. Four meetings were held with the Kitui District Development Committee.

Since the feasibility team printed its report (Kitui Feasibility Study Report, USAID/Kenya, Nairobi, Kenya, August 1980), USAID and MOH officials have met with the Kitui District Development Committee on three occasions to discuss various aspects of the project. In addition, USAID and MOH Headquarters officials and the Provincial Medical Officer have met on at least five occasions to review project elements. This project is based on the feasibility report and the numerous discussions and meetings held with Kitui District, provincial, and MOH Headquarters officers.

2. Innovation - Community-Based Health Care System

The innovation feature of the project is the institutionalization of a community-based primary health care system supported by strengthened rural health static facilities. The technical feasibility analysis indicates this is the appropriate technology to introduce into the Kenya health care delivery system for several reasons.

First, given the high rate of population growth (4 percent per annum) and existing limitations on the rate of static facility construction, expansion of the rural health care system with reliance on static facilities, even though supplemented with mobile clinic outreach activities, is not likely to increase appreciably access to primary health care

services for the rural poor. With an accelerated expansion, the rural health care system could only reach 50 percent of the rural population in the absence of population increase. Given the rapid rate of population growth, that percentage falls to less than 30 percent over the next decade.

Second, in view of GOK difficulties in constructing new health facilities and providing adequate staff AID sees the necessity for the MOH to "gear down" to a health delivery technology that is more consistent with GOK implementation capacities. The principal construction effort in this project consists of upgrading and improving existing static health facilities, rather than creating new ones (except for two dispensaries). Also, efforts are focussed on bringing facilities up to staffing, equipment and medical supply levels that will allow them to operate effectively both as health service delivery points and as support units for CHWs. The project emphasis is on strengthening static infrastructure only as a prerequisite to expanding health services delivery using CHWs and mobilizing community resources.

Third, the resulting CHW system will be easier to maintain than the static facility approach the MOH has been taking in recent years. The CHW system does place more strain on the drug supply system and initially on district level staffing and management than the static facility approach. However, in the long run less strain is placed on staffing, supply, and management once static facility staff and district management are able to adopt appropriate policies for utilizing CHWs as the primary delivery mechanism. CHWs will be trained for comparatively short periods in local communities; thus, the only additional strain on existing training institutions will be for the training of a relatively few CHW trainers. Communities will take responsibility for general supervision and administration of the activities of CHWs thus relieving the MOH of these burdens.

Fourth, economic analysis reveals that CHW health delivery provides services at lower costs per beneficiary than the static facility approach. Thus the CHW approach is more feasible in terms of recurrent cost requirements.

Fifth, this project fills a serious gap in the widespread implementation of expanded rural health services. The GOK has not yet attempted implementation of community-based health care delivery in a field setting. There are currently about 15 community-oriented primary health care programs in Kenya. While some of these are nominally sponsored by the Government, they are in fact projects that are directed and administered by NGOs, donors and university organizations. All

have merit, but all are small scale and operate within a unique set of institutional circumstances outside the Government health care system. These projects are important experiments to study for insights in the design and implementation of a Government supported community-based system and have been studied by both USAID and the GOK for these purposes.

It is important that the GOK attempt to implement the expansion of rural health services with a community-based component on a significant but manageable scale to gain operational experience for eventual nationwide expansion of rural health services. The advantage of this project is that it is Government-initiated, directed and administered; covers a significantly large area and population; and encompasses both NGO and Government health resources. Yet by focusing primarily on a single district the project constitutes manageable undertaking.

In summary, USAID sees no feasible cost effective alternative to this project approach. During the past four years, with the help of consultants, AID has analyzed the Kenya health sector in depth, and along with other donors, has made recommendations to the GOK concerning changes needed in national health policies. The GOK has responded to the analyses, technical assistance and recommendations in a very positive way. GOK involvement in the development of the philosophy and specific content of this project is evidence of this response.

3. Construction and Equipment

a. Construction: Section 611 (a)

The construction component of this project consists of improving or upgrading 12 dispensaries and 6 health centers, and constructing two new dispensaries in four divisions of Kitui District and an office building, drug store, two staff houses for the contract technicians and one garage/workshop in Kitui Town. Annex D, Engineering Analysis, contains details of health facilities planned for improvement, upgrading and

facilities in three divisions (Near North, Eastern and S where the project will be initially implemented and four health facilities in Far North Division included in the Government's five year development plan were conducted by MOH planning officials and USAID and REDSO engineers. The planned construction program

will allow static facilities to operate effectively both as health service delivery points and as support units for CHWs.

MOW standard designs, with minor modifications for some locations, will be used for all physical facilities. The construction will basically consist of concrete or stone walls, steel windows, wooden doors, concrete floors, corrugated galvanized iron roofs with timber trusses and hard-board ceilings. All facilities will include roof gutters to collect rainwater in water tanks. Water borne sanitation with septic tanks will be provided where dependable water supply exists. In all other cases, pit latrines will be provided. No facility will be provided with electrical power.

The MOW is in the process of preparing final design for ten sites. The design for the remaining sites will be prepared under the project by private consultants to avoid delays.

In addition, two senior staff houses will be constructed in Kitui Town for two U.S. technicians. The houses will be sited on the land owned by the Better Living Institute which is operated jointly by the Ministries of Health and Agriculture. The houses will be of the same type as the nine houses under construction for the ASAL project. The construction consists of cement concrete block walls, steel windows, wooden doors, concrete floors overlaid with PVC tiles, asbestos cement sheeting roofs with timber trusses and hard board ceilings. Potable water and electricity will be provided from the town's supply and the waste water will be treated in septic tanks.

Detailed cost estimates for the construction of buildings and services at each health facility are included in Annex B. The estimates are prepared on the basis of average bids received by the MOW and modified to allow for the remoteness of the sites. The estimates also include an inflation factor of 12 percent per annum and a contingency of 10 percent.

The MOW's standard designs and specifications and the cost estimate have been reviewed by the USAID/Kenya General Engineering Advisor and have been found sufficient to ensure that cost estimates are reasonably firm as required under Section 611(a) of the Foreign Assistance Act of 1961, as amended.

b. Equipment

The project will finance with loan funds the following equipment:

(i) Standard health center and dispensary equipment will be provided. During the site visits by USAID and Ministry of Health officers, it was noted in general, that dispensaries would not have sufficient equipment or that the existing equipment was old and would have to be replaced in a year or two. However, all existing health centers were generally well equipped. Existing and new health facilities which are included in the construction program will be provided with the necessary equipment in accordance with the Ministry of Health's standard list. (See Annex H.) The equipment list is based on functions of each room in a health facility. The project will finance the cost of replacement equipment and additional equipment for dispensaries, health centers and Health Center/Headquarters so that all facilities are fully equipped for the intended services. Some dispensaries which do not have easy access to petroleum products, in particular Endau and Mutha will be provided with photovoltaic refrigerators for storing drugs. Others will be provided with kerosene refrigerators.

(ii) 15 vehicles, (5 with engine capacity of approximately 1600 c.c. and 10 approximately 1000 c.c.) will be provided for the supervision of CHWs and mobile clinics, and for use by the RHMT and project technicians.

(iii) Up to 390 Community Health Workers kits (including weighting scales) and 300 Traditional Birth Attendant kits will be provided.

(iv) MOH's Community Development Fund will finance tools and equipment for community health projects.

(v) Radio communication facilities will be provided to connect three Health Center/Headquarters (Migwani, Mutitu and Ikutha) to Kitui District Hospital, Mutha Dispensary to Mutomo Hospital and Ikutha HC/H, and Endau Dispensary to Mutito HC/H.

B. Economic Analysis

The economic analysis for this project is rather extensive. Issues concerning the possibility of undertaking a full cost/benefit analysis, comparability of this project with available alternatives and the Government's ability to sustain and expand this project's approach to health care are examined along with other issues in Annex E. The major findings of the analysis are summarized below.

The main alternative to this project is to assist the MOH to expand static facilities and mobile unit activities in rural areas at levels which would offer primary health services to a maximum of 50 percent of the current rural population. This alternative was rejected because of the reasonable probability that this project could expand coverage to up to 70 percent of the population at a lower annualized per unit cost. The project will provide primary health care services at an annualized cost of about \$4.25 less per beneficiary than a static facility/mobile unit alternative. MOH recurrent costs range from \$3.73 to \$5.23 per beneficiary, depending on whether the project is successful in providing services to 70 to 50 percent of the target population.

Determination of project replicability requires consideration of areas in Kenya which would qualify as potential project sites. It is estimated that by the year 2000 only 60 percent of the Kenya population would reside in rural areas suitable for project replication. Subtracting populations that would be receiving service from static facilities leaves 35 percent of the population in the year 2000 as potential beneficiaries of project replication.

Incremental recurrent costs of the CHW project range from \$5.23 to \$3.73 per beneficiary depending on the level of population coverage ranging from 50 to 70 percent. Estimates of costs of extending the model to cover 35 percent of the existing rural population reveals that replication would cost an amount equal to 21 percent of the MOH recurrent budget for 1982-83. This means that in order for the MOH to accomplish replication of the project to all suitable population sites by the year 2000, the recurrent budget would have to grow at a real simple annual rate of approximately 1.1 percent above the rate of population growth. The GOK projects real growth in GNP at 4 to 5 percent compounded annually, a constant proportion of Government expenditures to GNP, and no decrease in the MOH share of Government expenditures from the current 6.2 percent by FY 1983-84. Even if GOK projections are on the high side, it is clear that the GOK could afford to gradually replicate this project over time if it chooses to do so.

To implement the program successfully, substantial private investment is required by the community involving outlays of resources, effort, and perhaps money. The question exists whether th

The best way to demonstrate the fact that private returns on investment in the project are positive is to calculate costs and benefits to an individual member of the community. The annual maintenance costs of up to two part-time CHWs for a community of 500 people is estimated at between Ksh 9.60 and 19.20 per member of the community.

The MOH estimates that the incremental cost of drugs for each member of the community at around 3 Ksh. Assuming that on the average each individual saves two trips to a static facility annually, savings of transport costs are conservatively estimated at Ksh 10 per individual. Assuming that each member of the population save 4 hours* annually in waiting and travel time valued at 2 Ksh/hour, private benefits increase by Ksh 8 per individual annually. Additional time saved from tending the ill, say two hours annually valued at Ksh 2/hour yields another Ksh 4 of private benefit annually per individual. Private benefits, therefore will have an annual value of Kshs .25 per individual compared to cost of up to Kshs. 19.20 per individual, yielding a positive rate of return on investment.

C. Social Soundness Analysis Summary

1. Socio-Cultural Feasibility

A community-based health care program focusing on curative as well as preventive and promotive health services is needed in Kitui District and residents have expressed the desire for improved health services. Crucial to the success of the project are communities' willingness and ability to financially support CHWs as well as preventive and promotive health measures. The initial contact with communities will be decisive in determining their involvement in the program.

Initial contact with communities regarding the possibility of participation in the program will be by Sensitization Teams. Since the teams' work requires particular skills and a non-authoritarian orientation towards rural communities, one member of each team will be required to have training in community development work. The teams will allow the communities ample time for reflection and internal discussions. It is extremely important that community leaders do not decide on behalf of the community. If the majority of a community's

* 8 hours is considered a more realistic figure. However, since 50 percent of the people would be school children whose travel time value is practically nil, the 8 hours are reduced to 4 hours.

members show little or no interest in participating in the program during the second visit, the Sensitization Team will cease working with that community, but may subsequently renew contact.

Studies conducted in some Kitui communities show that families are willing to pay for curative health services. Moreover, they are willing to undertake preventive health activities focused on improved domestic water supplies. Their ability to pay is more difficult to assess, since Kitui District has a limited agricultural base due to poor soils and unreliable rainfall. Nevertheless, most families show a willingness to use part of their meager income to pay for health services. If those who initially decide to participate in the program believe the perceived benefits will be realized, they are most likely to continue to support the program and actual receipt of benefits will encourage other communities to participate. The CHWs must be able to deliver promised services and medicines. The CHWs' ability to diagnose and treat simple ailments and injuries is crucial to maintaining a community's commitment. Thus, the initial training of these workers must focus carefully on a few basic curative treatments, so the worker can deliver adequate services. Equally important will be the continued and timely replenishment of drugs and medical items to facilitate the CHWs' performance.

Other anticipated benefits will stem from inoculation services in the community. There will also be the potential of receiving tools and equipment from the Community Development Fund. Since the major "felt need" in most communities is access to clean water, care must be taken not to raise expectations. In most cases an improved water supply requires a significant input of outside technical expertise. Some funds will be available for building, where feasible, shallow wells and sub-surface dams. Since data on Kitui reveals that most households do not own simple hand tools such as picks and shovels, which are essential for building pit latrines and refuse pits, some tools will be made available to communities for preventive health activities. It is only by this method of providing some outside funds that the project can expect significant community level preventive health care action. Many of these actions will require cooperation and coordination within the MOH and other Government ministries.

70 to 100 households per CHW is considered maximum both in terms of coverage and reasonable in terms of community financial obligation. The project criteria for selection of CHWs are that the person be able to read and write Swahili, be 25

years or older, be married or have children, and not have full-time off-farm employment. Also the CHWs are to be selected by popular participation. The minimum criteria are based on similar NGO programs and the results of Kitui household interviews. The criteria are considered necessary to provide a framework for the selection process. The literacy requirement is essential since the CHWs will be expected to keep simple records and use printed guides on health care. Caution should be exercised in not demanding too much record keeping from the workers since their level of literacy may not be very high. Communities will decide the sex of the CHW. Ideally each community would have a male and a female worker, but due to the cost to the community to maintain two CHWs, this may not be feasible.

2. Spread Effect

A spread effect is expected to occur within the three main project divisions. As communities participating in the program receive benefits, other communities are likely to want to participate. Another spread effect may be the CHWs showing patients how to perform simple first aid procedures, such as treatment of wounds and making oral rehydration fluid.

The project is designed to test the feasibility of a community-based model. Implementation may reveal weaknesses in the model which will then require modification. If a successful model has been developed by project completion, it would be extended to other divisions of Kitui District. It is also likely to spread to other districts, with the assistance of GOK and other donor agents. The design of the project ensures that various steps are replicable with regard to financial costs and personnel requirements.

3. Social Consequences and Benefit Incidence

Approximately 98,500 persons (or 14,000 households) in three divisions of Kitui District are expected to benefit through participation in the CHW component of the project. Benefits will be in the form of continuously available treatment of simple injuries and illnesses, free medicines, improved services or traditional midwives, inoculation of children, and community level preventive and promotive health activities. Indirect benefits will accrue particularly to women through a reduction of time spent attending static facilities and going to shopkeepers for simple cures. A further 98,500 persons or 560 households in the Far North, Near North, Eastern and Southern divisions of Kitui District will benefit through

strengthening and expansion of static health facilities which will result in improved health care. Within the project area, over the long term, there should be a reduction in mortality and morbidity due to an increased availability of health services.

The most direct beneficiaries will be up to 560 persons trained by CHWs. At least 60 percent of these are expected to be females. They will benefit through the creating of part-time jobs and an increased skill base as a result of the training. Up to another 300 women, who are traditional midwives, will benefit from training received under the project in pre and post-natal care and more hygienic methods of delivery. Approximately 150 MOH staff and officers will also receive training.

The project is anticipated to impact on up to 70 percent of the population receiving CHW services of Kitui District through creating a greater awareness of the causes of diseases and preventive measures. The focus on preventive and promotive health care is also expected to affect the orientation of current medical staff and to mobilize local leaders and Government officers assisting the effort.

D. Administrative Feasibility

1. MOH Management Capacity

Management capacity has been weak in Kenya's health system largely due to the shortage of medical doctors with management training. This weakness also stems from the high degree of centralization that is characteristic of many LDC health systems, particularly in Africa. This project attempts to deal with these management problems in a direct way.

First, the project is geared to district level delivery of health services that focus on local communities. Management policies and procedure will be developed upward from the rural health unit to provincial and MOH headquarters levels to ensure that the health priorities at all these levels are fully incorporated.

Second, the project will be managed by the Health Management Team, augmented by an Assistant Medical Officer of Health who will be the counterpart to the Chief-of-Party of the Technical Assistance Team. By interfacing the project with the existing district management structure, project activities will be an integral part of district and MOH programs.

The project provides overseas health management and planning training for four medical officers and thus contributes to alleviating management constraints in the rural health services system.

Third, the provincial and district level leadership have been closely involved in the design of the project. The District Commissioner is an able administrator and is supportive of the project. The Provincial Medical Officer is also highly regarded, holds an MPH from a U.S. university, and was one of the members of the USAID sponsored tour of rural health delivery systems in South Korea, Thailand and the Peoples Republic of China conducted in April, 1980. The Director of Medical Service have accompanied USAID officials on trips to the field and have participated in the project design process since its inception. Finally, the Member of Parliament from Kitui Town, who also is the Minister of Labor, has pledged his support of the project and has on numerous occasions requested briefings concerning the progress of project development.

In summary, management interest and capacity has been addressed directly by the USAID in the course of project design. Care has been taken in the design of the project to avoid or alleviate management weaknesses. District, provincial and MOH Headquarters interest is keen and key senior officers from these offices will be instrumental in implementing the project.

2. MOH Staffing

USAID in consultation with the MOH determined minimum staffing requirements for this project by analysing the present levels, functions and roles of actual staff in the project area and estimating staff needs for the duration of the project. The determination was made recognizing the Ministry's limited capacity to train and assign additional staff, especially in the paraprofessional categories.

The table below shows actual RHU staff in Near North, Eastern, Southern and Far North divisions of Kitui District and the incremental staff required to implement the project.

Position	Actual Staff in Kitui	Incremental needs to upgrade Static Facilities	Incremental needs to add CHW Component	Total Increase
<u>Paraprofessional Staff</u>				
Assistant Medical Officer of Health	0	0	1	1
Clinical Officer	4	1	3	4
Public Health Officer	0	4	0	4
Public Health Technician	8	12	0	12
Community Nurse/ Enrolled Nurse	29	8	9	17
Nutritionist	2	0	0	0
Family Health Field Educator	11	0	0	0
Lab Technician	0	3	0	3
<u>Ungrade Staff</u>				
Clerk	0	6	1	7
Patient Attendant	21	6	0	6
General Attendant	26	14	0	14
Driver	5	6	7	13
Cooks	0	4	0	4
Vehicle Mechanic	0	1	0	1
Equipment Technician	0	1	0	1
Totals	106	66	21	87

Although this increase in staffing will be difficult, the MOH recognizes it is necessary for implementing effective primary health system with a substantial CHW component in the Kitui District. Negotiations with the MOH have resulted in a firm commitment to provide the recommended staff. It is USAID/Kenya's judgment that this commitment and the level of staffing proposed is adequate for successful implementation of the project.

3. Construction and Equipment

The MOH's Rural Health Planning Implementation Unit, staffed by a Kenyan and two DANIDA funded technicians, is responsible for administering the construction of health facilities throughout Kenya. To strengthen the capability of this unit, the project will finance an administration and Procurement Specialist. The major responsibility of this specialist will be to administer the construction and equipment component of this project. The MOH Rural Health Planning Implementation Unit co-ordinates all MOH's construction activities with the Ministry of Works, which is the GOK's executing agency for construction and maintenance of building. The MOW has been instructed to give high priority to the MOH's construction program. However, the MOW also faces staff constraints. To avoid overburdening the MOW it is proposed that the MOW continue with the design of ten proposed health facilities for which the MOW began preliminary design work a year ago. The remaining ten proposed health facilities will be designed by a private architectural and engineering firm (A&E) using the MOW's standard plans. The construction of all buildings, including those facilities designed by the MOW, will be supervised by the A&E firm.

4. Mechanism for Coordination

Historically, mechanisms for coordination of NGO and Government health delivery activities have been weak. Mission groups have operated in Kenya since the end of the 19th century. Mission hospitals have continued to play a large role in the health delivery system since independence. However, as Government resources in recent years have increased and mission resources have remained constant or in some case dwindled, the Government has exercised more leadership in coordinating voluntary and public activities. Since 1973 Government has provided subsidies to mission hospitals. This action evidences Government's realization of the importance of voluntary activities to the health delivery system and demonstrates its perception of the opportunity to integrate voluntary activities more thoroughly with the public health delivery system.

In Kitui District, mission hospitals and other voluntary agency representatives are members of the district Development Committee which is chaired by the District Commissioner. The Medical Health Officer of Health is also a member of that body. USAID is funding the NGO CODEL project which is the principal community outreach program in Kitui District. Thus, both leverage and mechanisms exist for coordinating voluntary and public health services delivery in Kitui.

The project design features the District and Divisional Development Committees as the major bodies for coordinating the activities of public and private sector rural health delivery. One of the major tasks of the Technical Assistance Team will be to advise the RHMT on improved procedures and policies for effective coordination of private and public health service activities.

5. Community Development Fund

This fund will be a significant incentive to motivate communities to support the activities of CHWs and to initiate and maintain preventive and promotive health activities. The project provides a Civil Engineer who will work with RHU staff in assisting local communities to identify their needs and resource requirements for community health activities. The RHMT with advice from the Technical Assistance Team will determine the suitability of individual project activities for funding.

6. Availability of Technical Assistance Personnel for Project Implementation

The project calls for four long-term advisors and 40 person-months of short-term consultants. The long-term advisors consist of: one Senior Health Planner, one Senior Health Training Specialist, one Civil Engineer and one Administration and Procurement Specialist (See Annex G for detailed scope of work for the Technical Assistance Team). Since the Administrative and Procurement Specialist will begin work soon after the Project Agreement is signed, USAID/Kenya will recruit this individual separately from the remainder of the technical assistance team. The remaining advisors will be recruited under a host country contract. The MOH intends to advertise for these services widely in the U.S. and Kenya and expects responses from a number of institutions including PVOs.

E. Financial Analysis

1. Summary Cost Estimate

The total estimated project is \$12,695,000 of which AID will finance \$9,380,000 and the GOK, \$3,315,000 in local currency (Kenya Shillings). Of the AID's share, \$4,630,000 will be in loan funds and \$4,750,000 in grant funds. The total GOK contribution is approximately 26 percent of the overall project cost and therefore the requirements of Section FAA 110 (a) is satisfied. The table below indicates the estimated project costs:

Table E-1 Summary Project Cost (\$000)

<u>Grant</u>	<u>AID</u>	<u>GOK</u>	<u>TOTAL</u>
(a) Technical Assistance	2,767	65	2,832
(b) Incremental Staff Salaries and Training	-	1,154	1,154
(c) Participant Training	486	219	705
(d) Community Development Fund	435	-	435
(e) Evaluation	630	-	630
(f) Contingencies (10%)	<u>432</u>	<u>140</u>	<u>572</u>
Subtotal	4,750	1,578	6,328
 <u>Loan</u>			
(g) Construction and Equipment	4,287	1,032	5,319
(h) Vehicles and Bicycles	248	396	644
(i) Medical Supplies (non-pharmaceutical)	25	296	321
(j) Radio Communication	<u>70</u>	<u>13</u>	<u>83</u>
Subtotal	<u>4,630</u>	<u>1,737</u>	<u>6,367</u>
Total Grant and Loan	<u>9,380</u>	<u>3,315</u>	<u>12,695</u>
	(73.9%)	(26.1%)	(100%)

The basis for the above cost estimates are fully detailed in Annex B (Detailed Financial Estimates). Approximate inflation contingency have been added to each project component cost. However, it should be noted that in the above table, an additional project contingency of 10 percent has been added for the grant portion of the AID and GOK financing to account for unforeseen costs in grant financed components. For example, the technical assistance cost could easily go up by 40 percent if a private firm's audited overhead rate is higher than the rate used in the estimates.

The AID's contribution is further broken out into foreign exchange and local currency costs as follows:

Table E-2 AID Contribution (Foreign Exchange and Local Currency, \$000)

<u>Grant</u>	<u>FX</u>	<u>Local Currency</u>	<u>Total</u>
(a) Technical Assistance 1.	2107	660	2767
(b) Participant Training	486	-	486
(c) Community Development Fund	-	435	435
(d) Evaluation	330	300	630
(e) Contingencies	<u>292</u>	<u>140</u>	<u>432</u>
Subtotal	3215	1535	4750
 <u>Loan</u>			
(f) construction and Equipment 2.	100	4187	4287
(g) Vehicles and bicycles	239	9	248
(h) Medical Supply	25	-	25
(i) Radio Communication	<u>70</u>	<u>-</u>	<u>70</u>
Subtotal	424	4196	4630

1. Technical assistance contractor will be paid in local currency for all local costs.

2. Architectural and Engineering services and construction services will be provided by Kenyan firms. As noted in the Implementation Plan, procurement of both services will be advertised in the U.S., other Code 941 countries and Kenya, but it is very likely that off-shore firms will not be able to compete with well developed Kenya's architectural and engineering firms and construction contractors. Also, practically all construction materials are locally produced. A few items such as sanitary fittings not produced locally will be procured locally under the 'Shelf Items' rule.

2. Financial Plan

a. AID Contribution

AID proposes to make its contribution in two parts: Grant \$4,750,000 and Loan \$4,630,000. For the loan, the lowest of AID's concessionary loan terms will be utilized, that is principal repayment in 40 years with a ten-year grace period, with interest at two percent per annum during the grace period and three percent during the repayment period.

The AID contribution will be disbursed as noted in Table E-3 assuming that the project is authorized in late FY 81 or early FY 82.

Table E-3 Disbursement of AID Contribution (\$000)

(1) <u>Grant</u>	FY 82	83	84	85	86	87	Total
(a) Technical Assistance	210	730	730	630	367	100	2,767
(b) Community Development Fund		50	110	120	130	25	435
(c) Participant Training	75	100	100	100	100	11	486
(d) Evaluation	105	50	160	60	60	195	630
(e) Contingencies 10%	<u>40</u>	<u>93</u>	<u>110</u>	<u>90</u>	<u>66</u>	<u>33</u>	<u>432</u>
Subtotal	430	1023	1210	1000	723	364	4,750
(2) <u>Loan</u>							
(a) Construction and Equipment	280	2723		200	1084		4,287
(b) Vehicles and Bicycles	240	8					248
(c) Medical Supplies (non-pharmaceutical)	25						25
(d) Radio Communication					<u>70</u>		<u>70</u>
Subtotal	545	2731		200	1154		4,630
<hr/>							
Total	975	3754	1210	1200	1877	364	9,380

Table E-4 Disbursement of GOK Contribution (\$000)

(1)	Item	Fiscal Year (GOK)						Total \$		
		81/82	82/83	83/84	84/85	85/86	86/87		87/88	
(1)	Technical Assistance Support		6	19	15	13	12	65		
(2)	Participant Training		20	60	60	60	19	219		
(3)	Construction and Equipment	547	-	79	159	99	116	32	1,032	
(4)	Vehicles and Bicycles		32	70	78	88	100	28	396	
(5)	Medical Supplies			31	47	89	107	22	296	
(6)	Staff Salaries		60	160	180	207	309	86	1,002	
(7)	Training of Trainers		18						18	
(8)	Training of CHW		1	3	3	3	3	1	14	
(9)	District Rural Health Management Team	10	20	20	20	20	20	10	120	
(10)	Radio Communication						10	3	13	
		557	157	442	562	579	696	182	3,175	
									Contingency	140
									Total	<u>\$3,315</u>

b. GOK Contribution

The GOK contribution to the project is estimated at \$3,315,000, and it will be disbursed as shown in Table E-4.

c. GOK Recurrent Cost Implications

The GOK contribution to the project during the life-of-project (LOP) will be financed from GOK's Development Expenditures Budget. After the Project Assistance Completion Date (6 years from the date the Project Agreement is signed), the cost of maintaining the project will be financed from GOK's Recurrent Expenditures Budget. Table E-5 below compares the

project development expenditures to the Ministry of Health's budget for 1981/81, and to budget ceilings and budget projections for 1982/82 through 1987/88. The project will not have a significant impact on the total MOH budget or on the MOH Development Budget during the initial period 1981/82 - 1986/87. Project maintenance costs and project salary expenses will continue during 1987/88 and beyond.

The annualized recurrent cost of the project during FY 1987/88 and thereafter is estimated at US \$387,000 in constant 1981/83 prices (K pounds 197,000). This represents 0.3 percent of the recurrent budget projected for 1987/88 and a somewhat smaller percentage of the larger MOH recurrent budgets which are expected in the years to follows.

Additional GOK outlays required to cover interest and amortization costs resulting from the project loan of \$4,630,000 are summarized in Table E-6. Calculations are based on project disbursements set forth in Table E-3.

Table E-5 Recurrent Cost Implications (1000 K. pounds at 1981/82 prices)

	81/82* (Budget Estimates)	82/82 (Forward Budget)	83/84 Budget	84/85 Ceiling)	85/86 (.....Projected**.....)	86/87	87/88
MOH-Total Budget	53684	57000	60700	65400	69850	74606	79682
Recurrent	42783	45500	48500	52400	56064	58984	64179
Development	10901	11500	12200	13000	13786	14619	15503
Additive GOK Project Cost***	284	72	183	209	194	210	49
Additive Cost as % of:							
MOH Total Budget	0.5	0.1	0.3	0.3	0.3	0.2	0.0
MOH Development Budget	2.6	0.6	1.5	1.6	1.4	1.4	0.3

Notes: * GOK fiscal years July 1 - June 30.

** Projections based on annualized rate of increase of Recurrent and Development Budgets 1981/82 - 1984/85.

*** Constant U.S. dollar expenditure estimates converted to K. pounds, based on commercial rates prevailing after the September 1981 devaluation of the Keyan currency.

Table E-6 Kenya: Kitui Rural Health Project, Computation of Interest and Principal Repayments
(U.S. \$1000s)

	<u>Fiscal Years</u>										
	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992-2021</u>
Loan Fund (Disbursements)	545	2731	-	200	1154	-	-	-	-	-	-
Interest on 1st Year Loan @ 2%	5	11	11	11	11	11	11	11	11	11	-
Interest on 2nd Year Loan @ 2%	-	27	5	55	55	55	55	55	55	55	-
Interest on 3rd Year Loan @ 2%	-	-	-	-	-	-	-	-	-	-	-
Interest on 4th Year Loan @ 2%	-	-	-	2	4	4	4	4	4	4	-
Interest on 5th Year Loan @ 2%	-	-	-	-	12	23	23	23	23	23	-
Interest (Grace Period)	5	38	66	68	80	93	93	93	93	93	-
Interest and Principal Repayments (Repayments Period)										76	231
TOTAL DEBT SERVICE	5	38	66	68	80	93	93	93	93	169	231

Notes:

(1) Assuming interest during grace period paid as it falls due, and loan disbursements made evenly through the year.

(2) Loan term for 40 years at 2% interest per annum during grace period of 10 years; and at 3% thereafter. Interest to be paid semi-annually on outstanding principal during grace period. Repayment of principal to begin nine and one-half years after the first interest payment is due.

F. Environmental Examination

The Initial Environmental Examination (IEE) recommending a negative determination was approved by AID/W on March 6, 1981 with clarifications noted in State 142429. The general description of the project remains the same except that (i) the scope of construction activities has changed and (ii) demonstration projects are now more clearly defined as described below:

(i) Instead of constructing four major health center headquarters with training facilities for CHWs, it is now proposed to upgrade or improve 18 existing health facilities (12 dispensaries and 6 health centers) and to construct 2 new dispensaries. The sites of all existing and proposed facilities have been inspected by REDSO and USAID engineers. Each site, which varies from one to five acres and designated by the Government or Kitui Country Council for use by the Ministry of Health, will require minimum ground clearing and has good drainage conditions.

The type of construction material will be the same as stated in the original PID, i.e., cement, concrete or stone walls, concrete floors, cement asbestos sheeting or galvanized corrugated iron sheets on timber trusses. Gutters and storage tanks to collect rainwater from roofs will be provided. Twelve facilities are provided water from sources operated and maintained by the Ministry of Water Development or county council. Funds are provided in this project for providing piped water to five facilities. The remaining three will have to depend upon the roof-catchment until appropriate sources are developed by the Government since they will have to be part of large schemes. Water borne sanitation with septic tanks will be provided where the water supply is dependable; otherwise pit latrines will be provided.

USAID/Kenya will approve final plans before the facilities are constructed. This review will assure that adequate provisions have been made to minimize environmental concerns. Since the change in the scope of construction activities does not have significant impact from an environmental point of view, the negative determination for the construction element is still valid.

(ii) Demonstration projects to be financed under the MOH's Community Development Fund (CDF) will be implemented by local communities. The CDF will receive the allocation from project grant funds to finance the cost of commodities.

This fund represents a significant incentive factor motivating communities to support the activities of Community Health Workers and to initiate and maintain preventive and promotive health programs.

(a) Community Project Selection

There will be two sets of criteria applied to selection of projects to be undertaken by the community. The first set of criteria will be applied by the community members themselves in order to select which specific health interventions they will attempt to implement in response to the priority public health problems they have identified. The second set of criteria will be applied by the Rural Health Management Team in coordination with District and Divisional Development Committees for determining whether financial support to a community health project should be granted.

Once the communities have identified their priority health problems and considered alternative ways of dealing with them, the local RHF, PHT and Sensitization Team members will continue working with the community members in applying the following criteria to decide which of the alternative interventions should be undertaken:

- (1) does the proposed intervention address the root cause of the problem or merely respond to symptoms of a more basic underlying problem?
- (2) does an appropriate technology exist for dealing with the problem in the village context?
- (3) are the resources for project implementation available to the village?
e.g.
 - material?
 - labor?
 - expertise (technical, managerial)?
- (4) is there a satisfactory plan for mobilizing and managing resources provided for the implementation and continuation of the proposed intervention?

- (5) does the project affect a significant number and type of beneficiaries?
- (6) is the project consistent with the health policies and general philosophy of the Government?
- (7) does the proposed intervention risk having a significant adverse impact on the community's natural environment?

It is expected that many of the projects selected by the communities using the above criteria will be able to be undertaken without requiring outside financial support, which is very important, given the need for the Project to enhance the self-reliance of the community and to be replicable outside the Project area. Nevertheless, it is also important that the Project be able to provide financial assistance to selected community projects when it is necessary to support the "process" development objectives of the Project. The following selection criteria will be applied to community request for financial support of their projects in order to avoid having the provision of outside funds undermine the self-reliance objectives of the Project:

- (1) Has the community done a thorough job of applying the above criteria in selecting the project?
- (2) Has the community exhausted all other possible sources of the resources needed?
- (3) Are there other priority interventions which could be undertaken by the community at this time without the use of outside financing?
- (4) Is there a significant self-help aspect to the project; is a sufficient percentage of the necessary resources being provided by the community to assure their commitment to the project?
- (5) Will the use of outside funds create a recurrent cost obligation beyond the means of the community?

- (6) Will the use of outside funds significantly undermine the establishment of a belief in self-reliance in neighboring communities?
- (7) Is the proposed intervention a technically sound response to the problem identified by the community?
- (8) What does the proposed project intervention require of the HC/H, RHMT and other district and divisional ministerial staff in terms of technical backstopping and supervision and in terms of project monitoring and project management? Are the required resources available within the project area?

(b) Subproject Proposal Preparation

The local RHF, PHT and the Sensitization Team will be responsible for guiding the Community Committees through the process of problem definition and prioritization, followed by the preparation of proposals to address selected health problems. The SCO and other concerned RHU staff team members will be aware of the criteria for subproject selection as described above and will be responsible for coordinating the preparation of proposals that meet these criteria and contain the following sections:

- (1) clear definition of the health development problem
- (2) analysis indicating why selected health development problem is top priority
- (3) identification of factors contributing to problem
- (4) clear definition of activities required to address the problem, including all required inputs
- (5) clear assignments of management and implementation responsibilities
- (6) plan for measuring project effectiveness

- (7) identification of all resources available to community for supporting project
- (8) demonstration that community will be able to maintain project

These proposals will then be submitted to the RHMT which will be reviewed and approved through normal Government channels as described below.

(c) Project Approval

The Community Committee identifies appropriate health problems and proposes a solution. This Committee and the local RHF, PHT and Sensitization Team determine the required inputs and determine what resources the community can mobilize (labor, capital, etc.), what resources are available through Government or private organizations and identifies any additional resources needed. A subproject proposal is drafted with the assistance of the local PHT and Sensitization Team (and others as required by the technical nature of the proposed intervention) in accordance with the criteria indicated in Para (a). The proposal will be reviewed by the Divisional Development Committee. With the concurrence of this body the proposal will be submitted to the Rural Health Management Team which will review and approve the proposal in coordination with the District Development Committee. Approved subprojects will be submitted to a Project Review Committee (composition: District Commissioner, District Development Officer, Medical Officer of Health, Project's Civil Engineer) which, using the criteria set forth in Para (a) above, will determine levels of funding that can be made available to support the approved proposal.

One of the objectives of the Kitui Project is to establish a process whereby communities identify major health development problems and propose appropriate solutions with the assistance of concerned public officials. The responsibilities of analysing, reviewing and approving a subproject is vest in Government as represented by district MOH and development administration structures. AID's principal concern, and consequently its responsibilities, is the development of an appropriate district-level health planning, implementation and evaluation process. In the context of the general division of responsibilities, Government will insure that appropriate subproject analysis and reviews are conducted on the financial, managerial, technical and environmental aspects of each approved subproject. AID's role will be to assure that subprojects approved for funding are developmental in nature and

will contribute to achieving the subproject purpose and to ensure that the proposed activity is not in violation of AID's regulations. AID will, however, approve the process whereby subprojects are approved for funding, will periodically evaluate the performance of this process in respect to achieving the project purpose and will retain audit rights in respect to funding for subprojects.

(d) Illustrative List of Subprojects

It is difficult at this time to specify exactly what types of project will be subproposed for implementation by individual Community Committees. Differences in the social and physical environments of communities will lead to different problems identified and perceived needs. However, there are enough similarities in the conditions of most areas of the project area to be able to predict the general categories of interventions that might be proposed. The ASAL Pre-Investment Inventory, the Kitui Rural Health Feasibility Study and AMREF baseline surveys have indicated certain areas of general concern in many communities regarding health matters. These studies note that most health problems encountered in the communities can be attributed to a combination of poverty and ignorance. Many diseases now prevalent could be prevented through increased knowledge and motivation to improve the environment. Given this knowledge and the information already available about conditions in the Kitui District, the following types of projects are likely to be identified by a number of communities in the Region.

(1) excreta disposal

- construction of latrines appropriate to soil conditions and environment
- health education to increase motivation to use latrines

(2) safe water

- protection of surface or sub-surface water sources
- rehabilitation or upgrading of existing water systems
- provision of shallow wells
- provision of small scale water systems

(3) nutrition

- setting up detection and monitoring procedures' nutrition survey to identify malnourished and high risk malnourished children, with referral and follow-up control visits
- nutrition demonstrations
- local weaning food preparation
- community consciousness raising about self-help local efforts to improve food availability

(4) immunization

- education as to importance
- provision of mobile clinics in villages or encouraging mothers to bring children to nearest MCH clinic

(5) local midwife training in areas of high neonatal death rates and training of traditional practitioners

(6) environmental improvements aimed at achieving vector control of

- flies
- rats
- mosquitos
- snails

(7) education on malaria prophylaxis and provision for malaria case treatment

(8) income-generating health development activities such as kitchen gardens and chicken farms.

There now exists the appropriate technology necessary to deal with many of the public health problems that will be identified by the communities. There is also considerable relevant experience (AMREF and other CHW projects) to be drawn upon in the training and support of community change agents--in this case the HC/H Sensitization Teams PHTs and ECNs. Furthermore, the process of community participation in problem identification, planning and subproject implementation will be adequately addressed through the appropriate training by the HC/H Sensitization Teams and the application of the criteria set out above for subproject proposal preparation and selection.

G. Evaluation Plan

Appropriate overview of the project is necessary to insure that implementation actions are contributing toward the achievement of project purpose. Evaluation will be dependant on collection and analysis of certain crucial data throughout the project period. These are noted in the Project Description (III.D.9) and described in detail in Annex J.

There are two external evaluations and two internal appraisals. The first phase evaluation is to be completed by the end of year three of project implementation, i.e., on or about October 1984. This evaluation will be conducted by a joint MOH/project contractor team. Emphasis will be on production of outputs. Recommendations will focus on mid-term project design adjustments, additions or deletions to outputs and input refinements. The team will also critique important assumptions that support the project's outputs and central hypothesis. If assumptions are found to lack substance, the team will recommend measures for the future implementation of the project. The team will also assess the performance of the parties to the Project Agreement.

The second phase evaluation is to be completed by the end of the project, i.e., year six or June 1987. This evaluation will be conducted by an external team with representatives from the MOH. The evaluation will assess achievement of outputs and delivery of inputs and attainment of the project's purpose. The evaluation will also examine the effectiveness with which the project implemented recommendations from the mid-term evaluation and project appraisals.

The two appraisals will be jointly conducted by the MOH and USAID, calling upon outside consultants as necessary. These appraisals will be scheduled during the second and fourth years of the project.

See Annex J for details of evaluations.

H. Implementation Arrangements

1. GOK Project Administration

At the MOH level an Assistant Director of Medical Services will be responsible for coordinating project activities with other concerned Ministries (e.g., Planning and Treasury) and other institutions (e.g., University of Nairobi).

Key MOH divisions or units to be involved in this project will be the proposed IRH/FP Project Management Team, the Administrative Support Unit and the Health Information Unit.

Full project management responsibility will be delegated from the MOH Headquarters to the District Medical Officer of Health. The District Medical Officer of Health, will have full administrative authority for approving and funding project activities. Day-to-day project management responsibility will be assigned to the District Assistant Medical Officer of Health/Rural who will work through the Rural Health Management Team. This authority will be based on an implementation plan and budget approved by MOH Headquarters.

The Second Clinical Officer at each RHU will have full responsibility for planning, managing and coordinating all sensitization, training and technical support activities of the communities and CHWs. This officer will review and recommend all Community Development Fund proposals generated by communities.

2. AID Project Administration

USAID/Kenya has assigned a health advisor from the Health, Nutrition and Population Division to be the project officer for this project. The officer has contributed significantly to the design of the project and has considerable experience in rural health activities. The project manager will be supported by the fully staffed USAID Mission to Kenya. The Project Division, which has two USDH engineers and a Kenyan engineer, will monitor the construction component of the project. In addition, the Projects Division will assist the project officer in implementing the project. REDSO/EA staff will assist in procurement and legal matters.

3. Implementation Plan

a. General

Project implementation will be carried out under a host country contract. Detailed implementation under schedules are in Annex C and include the following:

- (1) Overall Project Implementation
- (2) Technical Assistance Contract
- (3) Host Country Static Facility Staffing
- (4) Family Planning Training for Static Facility Staff

- (5) Information and Evaluation
- (6) Drug Distribution
- (7) Training of HC/H Teams
- (8) Community Sensitization and CHW Training
- (9) Construction

b. Host Country Contract

(1) Technical Assistance

The scope of work is contained in Annex G. It is expected that a notice in the Commerce Business Daily and a Kenyan newspaper advertising the request for proposals (except for the Administration and Procurement Specialist) will be published within 60 days after the Project Agreement is signed. Proposals will be due in Nairobi 90 days later. Evaluation of proposals will take 6 weeks and contract negotiations are expected to take another 60 days. Ideally, the contractor's project coordinator would arrive in country within 30 days after final contract execution. The Administration and Procurement Specialist will be contracted for separately and is expected to join the MOH within three months after signing of the Project Agreement.

(2) Architectural and Engineering Services

The scope of work for the architectural and engineering (A&E) services for the design of ten health facilities and construction supervision of all twenty facilities will be prepared by the MOH within 15 days after the Project Agreement has been signed. The request for proposals will be published in a Kenyan newspaper and the Commerce Business Daily 15 days after the scope of work has been finalized and approved by USAID/Kenya, with proposals due in Nairobi 60 days later. Evaluation of proposals will take about 4 weeks and contract negotiations another 30 days.

c. Construction Schedule

Annex C contains a detailed schedule for the construction component which includes improvement or upgrading of 18 existing health facilities and the construction of two new facilities at sites already identified by the MOH. During the first three years of the project six health facilities will be designed by the MOW and another ten by an A&E firm. Construction will commence about September 1, 1982 and be completed between February and June 1983. During the last three

years of the project four health facilities in Far North Division will be designed by the MOW. This construction is expected to begin July 1985 and be completed in August 1986.

d. Training

Training from the district level to the community level is required to reorient present health services from the static curative approach to a decentralized system with a major CHW component. A description of this training is contained in Annex K.

e. Staffing

Staffing has two parts. The first part deals with the recruitment, motivation and payment of the Community Health Workers. This will be the responsibility of the Sensitization Teams working in the communities. The second part is upgrading the staff of the static facilities to a level which will enable them to support a CHW program. See Annex C. for implementing details.

4. Procurement Plan

a. Technical Services

Consultants required to implement the project under the technical assistance component of the project will be procured by the Ministry of Health from an eligible source country (U.S., Kenyan or a joint-venture of U.S. and Kenyan) firm or institution. The administrative and procurement specialist will be employed by the MOH on an OPEX-type contract.

b. Training

All training outside of Kenya will be handled by the technical assistance contractor.

c. Construction

(1) Architectural and Engineering Services

The Ministry of Works is in the process of preparing final plans for the improvement to eight existing health facilities and the construction of two new health facilities located at Kanziko, Usueni, Ngomeni, Kksyani, Kyuso, Winziie, Voo, Mutito, Tseikuru and Nuu. The Ministry will

complete the final plan and bid documents. However, for the supervision of construction and any specialized architectural and engineering services, the Ministry will engage the services of an A&E firm.

The same A&E firms will prepare final plans and bid documents and provide the supervision of construction for the rest of the facilities (namely, Waita, Nzeuni, Mwingi, Migwani, Mui, Endau, Voo, Kiatune, Ikutha and Mutha).

The nationality of the A&E firm eligible to provide the services will be Code 941 or Kenyan and the services will be procured in accordance with the procedures set forth in AID Handbook 11, Chapter 1 - Country Contracting for Professional Services.

(2) Construction Services

The construction of health facilities will be carried out by construction firms which meet the AID nationality regulation for eligible firms, i.e., Code 941 or Kenyan or a joint-venture of the U.S. and Kenyan firms. Contractors will be allowed to bid for one or more sites. The contracting for construction services will be in accordance with the procedures set forth in AID Handbook 11, Chapter 2 - Country Contracting for Construction Services.

(3) Construction Materials

All materials, except for a few items such as sanitary wares, are produced in Kenya and will therefore be procured locally by construction contractors. The few items which are not produced in Kenya will be procured by construction contractors from the local market (shelf-items of unit cost not exceeding \$2,500) or from countries included in code 941.

d. Equipment

All equipment required for the health facilities will have its source and origin in Kenya or countries included in Code 941, except for motor vehicles and some equipment such as kerosene refrigerators for which a waiver is required. See Annex Q for vehicle waivers. To facilitate the procurement of equipment and spare parts from non-Kenyan sources, it is intended that the Government of Kenya will engage the services of a procurement agent in the U.S. and the cost of the agent's service fee will be funded with the loan. For equipment which requires regular maintenance service by a qualified

technician, there should be a local (Kenyan) agent capable of servicing and maintaining adequate spare parts. For other equipment which could be maintained by MOH staff, adequate spare parts will be procured and stored at Health Center Headquarters or at Kitui District Hospital.

I. Conditions, Covenant, Negotiating Status

Conditions Precedent to Disbursement

1. First Disbursement

Prior to the first disbursement or to the issuance by AID of documentation pursuant to which disbursement will be made, the Government will furnish to AID in form and substance satisfactory to AID:

a. An opinion of counsel acceptable to AID that the Agreement has been duly authorized or ratified by and executed on behalf of the Government, and that it constitutes a valid and legally binding obligation of the Government in accordance with all of its terms;

b. A statement of the name of the person(s) representing Government for purposes of the Agreement, together with a specimen signature of each person specified in such statement.

2. Additional Disbursement

Prior to disbursement, or to issuance by AID of documentation pursuant to which disbursement will be made:

a. To finance contracts for the Technical Assistance team (excluding the Administration/Procurement Advisor) and construction services, the Government will submit to AID in form and substance satisfactory to AID, evidence that (i) an Assistant Medical Officer of Health has been assigned to the Rural Health Management Team in Kitui District; (ii) Second Clinical Officers have been assigned to Health Center/Headquarters at Ikutha, Mutitu and Migwani; (iii) Community Health Workers are authorized under Government regulations to dispense pharmaceuticals considered necessary for effective community-level primary health care; and (iv) arrangements are made to establish an improved drug distribution system in Kitui District.

b. To finance contracts for technical, construction and other services to be entered into by the Government, AID will approve each such contract in writing. This requirement will be satisfied separately for each such contract.

c. To finance any activities under the Community Development Fund, the Government will submit to AID in form and substance satisfactory to AID, a report describing the activity, method of carrying out the work, cost estimates, and an environmental examination. This requirement will be satisfied separately for each activity.

Covenants

1. The Government will covenant to provide qualified personnel to the Rural Health Management Team in Kitui and to the health facilities in sufficient numbers to ensure the continuing and successful achievement of the project.

2. The Government will covenant to provide sufficient funds for recurrent costs associated with the project.

Negotiating Status

On August 12, 1981 the Senior Deputy Director of Medical Services, a Deputy Director of Medical Services, and an Assistant Director of Medical Services from the MOH expressed the GOK's agreement with and support for the project's purpose, general design and implementation plan as described in this project paper.

PROJECT APPRAISAL REPORT (PAR)

PAGE 1

1. PROJECT NO. 615-11-110-158	2. PAR FOR PERIOD: FROM 08/73 TO 10/10/75	3. COUNTRY KENYA	4. PAR SERIAL NO. 76-3
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6. PROJECT DURATION: Began FY 1971 Ends FY 1978	7. DATE LATEST PROP 2/8/71	8. DATE LATEST PIP 12/5/72	9. DATE PRIOR PAR 9/15/73
10. U.S. FUNDING	a. Cumulative Obligation Thru Prior FY: \$ 1,928,000	b. Current FY Estimated Budget: \$ 325,000	c. Estimated Budget to completion After Current FY: \$ 337,000

11. KEY ACTION AGENTS (Contractor, Participating Agency or Voluntary Agency)

a. NAME	b. CONTRACT, PASA OR VOL. AG. NO.
Colorado State University	AID/afr-790

I. NEW ACTIONS PROPOSED AND REQUESTED AS A RESULT OF THIS EVALUATION

A. ACTION (X)			B. LIST OF ACTIONS	C. PROPOSED ACTION COMPLETION DATE
USAID	AID/W	HOST		
X			1. Project Manager re-do PAR worksheets and circulate for clearance	10/24/75
X			2. Complete PAR	11/28/75
X			3. Contractor semi-annual report to include commodity status information	11/15/75
X/CSU			4. Joint commodity requirement list submitted to USAID	12/10/75
X		X	5. Forward participant nominations for January 1976 to Directorate of Personnel Management and USAID	10/17/75
X		X	6. Follow up with Dean of Faculty and IIE on potential participant entrants for Sept. 1976 taking graduate record exams in January 1975	Continuing
X		X	7. Submit eight participant nominees for Sept. 1976 university entrance of whom 5 to be selected for training	March 1976
X		X	8. Inform USAID on Kenyanizing Johnson's position as Clinical Department Head	Open
X		X	9. Initiate follow-up letter - Veterinary Faculty-USDA for filling Director of Research position with sabbatical personnel	12/10/75
X/CSU		X	10. Provide USAID with complete list of Veterinary Faculty research projects	12/01/75
X/CSU		X	11. Obtain details of Veterinary Faculty research funding sources and advise AID participants if appropriate	Continuing
X		X	12. Develop log frame; incorporating new goal and purpose statements	12/15/75
X		X	13. Prepare internal USAID staff paper on Kenyan veterinary manpower requirements	12/30/75
X		X	14. Minor PP revision	12/20/75
X		X	15. List of constructive suggestions for project improvements - CSU/Dean	Open

D. REPLANNING REQUIRES REVISED OR NEW: <input checked="" type="checkbox"/> PP <input type="checkbox"/> PIP <input type="checkbox"/> PRO AG <input type="checkbox"/> PIO/T <input type="checkbox"/> PIO/C <input type="checkbox"/> PIO/P	E. DATE OF MISSION REVIEW October 10, 1975
PROJECT MANAGER: TYPED NAME, SIGNED INITIALS AND DATE Harold M. Jones	MISSION DIRECTOR: TYPED NAME, SIGNED INITIALS AND DATE Charles J. Nelson

II. PERFORMANCE OF KEY INPUTS AND ACTION AGENTS

A. INPUT OR ACTION AGENT CONTRACTOR, PARTICIPATING AGENCY OR VOLUNTARY AGENCY	B. PERFORMANCE AGAINST PLAN							C. IMPORTANCE FOR ACHIEVING PROJECT PURPOSE (X)				
	UNSATISFACTORY		SATISFACTORY			OUT-STANDING		LOW		MEDIUM		HIGH
	1	2	3	4	5	6	7	1	2	3	4	5
1. Colorado State University					X							X
2.												
3.												

Comment on key factors determining rating - **The contractor fielded a professionally well-qualified five-man team (one remained from the previous team) in a timely and expedient manner during the rating period. They adjusted well to the situation and have been highly job-oriented in spite of a six-month university closure due to a student strike immediately after the CSU team's arrival. One team member has been appointed as a departmental head. Satisfactory progress has been made towards the project objectives, due largely to the team's dedication and participation in the areas of undergraduate studies, graduate training and research.**

4. PARTICIPANT TRAINING					X								X
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Comment on key factors determining rating - **Seven of the 10 participants sent to U.S. for training have returned as faculty members and are serving as counterparts, simultaneously teaching and doing research for post-graduate degrees. Three additional participants have been nominated and are being processed for January 1976 post-graduate entrance.**

5. COMMODITIES				X								X	
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Comment on key factors determining rating - **Commodities purchased and delivered by the contractor are being used effectively. Several pieces of laboratory equipment are inoperative due to lack of spare parts and local maintenance services. Status reporting by the contractor has been poor; this condition has been discussed with the contractor and is expected to improve.**

6. COOPERATING COUNTRY	a. PERSONNEL				X								X
	b. OTHER Local Currency Contribution and Use					X					X		

Comment on key factors determining rating **Some instances of poor communication have existed between the Dean of the Faculty and the contract team, but have not had any substantial negative effect on the project activity. Support by the host institution has been satisfactory, particularly the recycling of the accumulated funds resulting from the University's cash contribution of housing allowances and local salaries, paid into a special fund and controlled by the University to support the day-to-day operations of the project.**

The Faculty has fulfilled its commitment to returned participants to hire them as staff members and has assigned them as counterparts to the contract technicians. Indications are that the participants will honor their commitment to work as Faculty staff members for at least the required minimum of three years. General faculty receptivity to change has been very satisfactory.

7. OTHER DONORS				X									X
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(See Next Page for Comments on Other Donors)

II. 7. Continued: Comment on key factors determining rating of Other Donors

Norway, Germany, U.K. and the Rockefeller Foundation are providing a range of inputs, including buildings and facilities, faculty staff members, post-graduate scholarships and research funding, all of which are essential to the Faculty development and success of the project.

III. KEY OUTPUT INDICATORS AND TARGETS

A. QUANTITATIVE INDICATORS FOR MAJOR OUTPUTS		TARGETS (Percentage/Rate/Amount)					END OF PROJECT
		CUMU- LATIVE PRIOR FY	CURRENT FY		FY 77	FY 78	
			TO DATE	TO END			
1. Trained veterinarians graduated (cumulative), i.e. SVM degrees awarded.	PLANNED	205	205	250	360	425	425
	ACTUAL PERFORMANCE	237	237				
	REPLANNED			308	377	430	430
2. Post-graduate participants sent to U.S. universities (cumulative).	PLANNED	13	13	13	13	13	13
	ACTUAL PERFORMANCE	10	10				
	REPLANNED			13	18	18	18
3. Research projects organized (cumulative)	PLANNED	14	14	18	18	18	18
	ACTUAL PERFORMANCE	13	13				
	REPLANNED			13	18	18	18
4. Qualified Africans on Faculty (cumulative)	PLANNED	40	40	40	40	48	48
	ACTUAL PERFORMANCE	33	34				
	REPLANNED			36	40	50	50
B. QUALITATIVE INDICATORS FOR MAJOR OUTPUTS	COMMENT: The maximum projected intake of 80 undergraduates for SVM degrees has been exceeded in recent years, up as high as 89. Academic standards are being strengthened as manifested by overseas institutions' acceptance of graduates for post-graduate training.						
1. Quantity and quality of veterinarians being trained at satisfactory level.	COMMENT: All students pursuing PhD level degrees in overseas institutions are required to return to Kenya to do research in the more relevant E.A. situation. Research is being financially supported and encouraged by the University as one means of recognition for staff promotion. Graduate degrees are requiring a better balance of course work and research.						
2. Research projects growing in numbers and importance to obtaining post-graduate degrees, together with relevance to E.A. needs and promotion of staff.	COMMENT: A diagnostic laboratory is operative, together with a vigorous herdhealth program arranged with livestock producers. There is continual improvement in library facilities and use of visual aids in the formal and informal teaching process.						
3. Practical training combined with formal course work.							

AID 1020-25 (10-70) PAGE 4 PAR	PROJECT NO. 615-11-110-158	PAR FOR PERIOD: 12/73 - 10/10/75	COUNTRY KENYA	PAR SERIAL NO. 76-3
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IV. PROJECT PURPOSE

A. 1. Statement of purpose as currently envisaged.

2. Same as in PROP? YES NO

To assist the University of Nairobi in the further development of the Veterinary Faculty with particular emphasis on clinical studies and improvement of programs in post-graduate training and research.

B. 1. Conditions which will exist when above purpose is achieved.	2. Evidence to date of progress toward these conditions.
<ol style="list-style-type: none"> 1. Eighteen U.S. trained Faculty members 2. Reference library to support graduate and undergraduate requirement. 3. Sufficient laboratory facilities and teaching aids for a student population of 300 to 3350 in various departments. 4. Established Department of Clinical Medicine with standard course requirements for all BVM degree studies. 5. Major emphasis on practical experience providing maximum exposure to veterinary problems to East Africa. 6. Curriculum improvements with more relevance to East Africa needs. 	<ol style="list-style-type: none"> 1. Seven present faculty members U.S. trained. Three in training in U.S and three being processed for early 1976 entrance. Five proposed for September 1976 starts. 2. Five hundred books representing wide range of subjects added to library. 3. Sixty pieces of laboratory equipment added to Faculty, distributed to all departments with bias towards research and clinical medicine. 4. Twenty-four member Department established headed by CSU contract technician; twelve positions held by Kenyans. All 3rd and 4th year students spend the entire 4th term in clinical medicine. 5. Fifteen farms and settlement schemes' participants in practical herd health programs. Live animal surgery being stressed. Students required to participate in ambulatory service. 6. Curriculum revised twice. Faculty members free to suggest changes to curriculum committee. Practical training geared to East African disease and production problems.

V. PROGRAMMING GOAL

A. Statement of Programming Goal

To produce trained veterinary manpower necessary to support the livestock industry in East Africa.

B. Will the achievement of the project purpose make a significant contribution to the programming goal, given the magnitude of the national problem? Cite evidence.

Yes. Kenya projected veterinary manpower requirements according to the 1970-74 and 74-78 development plans total 240 in addition to the expatriates. To date 129 Kenyans have graduated. Students now enrolled provide a potential for 146 graduates by the end of the 1974-78 development plan, bringing the total to 275, providing a surplus of 35 which will be utilized to speed up Kenyanization of private practice, government service employees, teaching, research and private business. Faculty policy now requires that a minimum of 50% of student intake be Kenyans.

PROJECT APPRAISAL REPORT (PAR)

PAGE 1

1. PROJECT NO. 615-11-110-158	2. PAR FOR PERIOD: 10/10/75 TO 8/77	3. COUNTRY Kenya	4. PAR SERIAL NO. 77-6
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5. PROJECT TITLE
University of Nairobi - Veterinary Faculty

6. PROJECT DURATION: Began FY 71 Ends FY 78	7. DATE LATEST PROP 2/8/77	8. DATE LATEST PIP 12/5/77	9. DATE PRIOR PAR 8/12/75
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10. U.S. FUNDING	a. Cumulative Obligation Thru Prior FY: \$ 2,253,000	b. Current FY Estimated Budget: \$ 618,000	c. Estimated Budget to completion After Current FY: \$ -0-
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11. KEY ACTION AGENTS (Contractor, Participating Agency or Voluntary Agency)	
a. NAME Colorado State University	b. CONTRACT, PASA OR VOL. AG. NO. AID/afr-790

I. NEW ACTIONS PROPOSED AND REQUESTED AS A RESULT OF THIS EVALUATION

A. ACTION (X)			B. LIST OF ACTIONS	C. PROPOSED ACTION COMPLETION DATE
USAID	AID/W	HOST		
X		XCSU	1. Present Certificates of Accomplishment to returned participants.	10/77
			2. Submit Semi-Annual Report for the Veterinary Faculty Project for the period 1/77 to 6/77.	9/1/77
X			3. Meet with Program Office and Controller's Office to determine feasibility of purchasing visual aids material from contract funds held in a Kenyan account.	9/77

D. REPLANNING REQUIRES	E. DATE OF MISSION REVIEW
REVISED OR NEW: <input type="checkbox"/> PROP <input type="checkbox"/> PIP <input type="checkbox"/> PRO AG <input type="checkbox"/> PIO/T <input type="checkbox"/> PIO/C <input type="checkbox"/> PIO/P	August 11, 1977

PROJECT MANAGER: TYPED NAME, SIGNED INITIALS AND DATE L. Hoffarth 9/21/77	MISSION DIRECTOR: TYPED NAME, SIGNED INITIALS AND DATE Charles J. Nelson
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AID 1020-25 (10-70) PAGE 2 PAR	PROJECT NO. 615-11-110-158	PAR FROM 10/10/75 TO 8/77	COUNTRY Kenya	PAR SERIAL NO. 77-6
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II. PERFORMANCE OF KEY INPUTS AND ACTION AGENTS

A. INPUT OR ACTION AGENT CONTRACTOR, PARTICIPATING AGENCY OR VOLUNTARY AGENCY	B. PERFORMANCE AGAINST PLAN							C. IMPORTANCE FOR ACHIEVING PROJECT PURPOSE (X)				
	UNSATISFACTORY		SATISFACTORY			OUTSTANDING		LOW	MEDIUM		HIGH	
	1	2	3	4	5	6	7	1	2	3	4	5
1. Colorado State University					X							X
2.												
3.												

Comment on key factors determining rating

The contractor, Colorado State University (CSU), has a three-man team of dedicated professionals who are doing excellent work in supporting the clinical studies department of the Veterinary Faculty. The candidate for the fourth position decided, at a late date, to join another organization. Due to recruiting difficulties and the short time remaining for the contract, USAID and University of Nairobi agreed to forego the fourth position. This placed a very heavy teaching burden on the three remaining team members. Probably less attention has been given to research as a result.

(See Continuation Sheet Page 5)

4. PARTICIPANT TRAINING					X								X
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Comment on key factors determining rating

The last of eighteen scheduled project participants departed for training in U.S. universities during January 1977. At least two and possibly as many as six participants will be returning after the departure of C.S.U. staff members, thus providing no overlap for counterpart relationships. Otherwise, the participant program can be considered very successful.

5. COMMODITIES					X							X	
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Comment on key factors determining rating

The last order for commodities (U.S.) has been placed; these are now arriving in Kenya. There have been problems maintaining some of the more sophisticated equipment purchased under earlier orders. Recent purchases have avoided this type equipment.

6. COOPERATING COUNTRY	a. PERSONNEL					X							X	
	b. OTHER Local Costs funds				X							X		

Comment on key factors determining rating

The counterpart personnel provided, and participant selection and utilization have in general been very satisfactory. Although there has been occasional breakdown in communications between the Dean of the Faculty and CSU staff, the effect on project effectiveness has been minor.

As U.S. inputs have been phased down, and the required (by ProAg) contribution of the local cost support has suffered. As is true with many institutions, the University of Nairobi budgeting and accounting system is slow and unresponsive to day-to-day requirements. This causes problems with purchase of supplies and services from local suppliers.

7. OTHER DONORS					X								X	
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(See Next Page for Comments on Other Donors)

II. 7. Continued: Comment on key factors determining rating of Other Donors

A number of countries and institutions are providing assistance to the Faculty. These include the U.K., Germany, Norway, and Rockefeller Foundation. They have provided Faculty staff, scholarships, equipment and facilities to the University. Such assistance has been a very useful supplement and complement to AID support.

III. KEY OUTPUT INDICATORS AND TARGETS

A. QUANTITATIVE INDICATORS FOR MAJOR OUTPUTS		TARGETS (Percentage/Rate/Amount)					END OF PROJECT
		CUMULATIVE PRIOR FY	CURRENT FY		78	79	
			TO DATE	TO END	FY	FY	
Trained Veterinarians graduated.	PLANNED	308	377	377	430		430
	ACTUAL PERFORMANCE	365	442				
	REPLANNED			442	512		512
Post-graduate Participants departed for U.S.	PLANNED	13	18	18	18		18
	ACTUAL PERFORMANCE	18	18				
	REPLANNED			18	18		18
Research Projects Organized	PLANNED	13	18	18	18		18
	ACTUAL PERFORMANCE	13	13				
	REPLANNED			13	13		13
Qualified Kenyans teaching in Clinical Studies Dept.	PLANNED	10	13 14	13	19		19
	ACTUAL PERFORMANCE	10	14				
	REPLANNED			14	16		16

B. QUALITATIVE INDICATORS FOR MAJOR OUTPUTS	COMMENT:
1. Trained Veterinarians graduated with B.V.M. degrees.	The number of graduates is exceeding the planned targets. The increased student load plus more Kenyan staff with limited experience may be causing some deterioration of the quality of the degree.
2. Participant Training and research projects.	With the CSU phase-out and no new participant returns, the number of research projects has probably stabilized. However, with 6 participants returning to complete thesis research in 78-79, research should pick up momentum again.
3. Qualified African Faculty for Clinical Studies Dept.	At project end there should be 16 of 22 positions filled by Africans. With return of 4 participants after project and 20 positions should be Africanized.

AID 1020-25 (10-70)	PROJECT NO. 615-11-110-158	PAR FOR PERIOD: 10-10-75 to 8-77	COUNTRY Kenya	PAR SERIAL NO. 77-6
PAGE 4 PAR				

IV. PROJECT PURPOSE

A. 1. Statement of purpose as currently envisaged.

2. Same as in PROP?

YES NO

Provide institutional capability in the University of Nairobi Veterinary Faculty to train and graduate veterinarians.

B. 1. Conditions which will exist when above purpose is achieved.	2. Evidence to date of progress toward these conditions.
<p>1. Recognition by the University of Nairobi officials of the importance of a functioning Dept. of Clinical Medicine to effective training.</p> <p>2. Veterinary Faculty graduates being accepted for post-graduate training at reputable universities in the U.S. and Europe.</p> <p>3. Curriculum oriented to provide practical training through a wide exposure to problems endemic to East Africa.</p> <p>4. Kenyanization of the Veterinary job market by the Veterinary Faculty graduates.</p> <p>5. An expanding post-graduate research program.</p>	<p>1. All third and fourth year students spend the entire fourth quarter in clinical studies.</p> <p>2. During 1976-77 six students accepted by major U.S. universities for graduate studies.</p> <p>3. Students participate in treatment of 400 animals a year in the large animal clinic and make weekly visits to farms and ranches participating in the herd health program.</p> <p>4. To date, all graduating Kenyans have found employment in East African institutions.</p> <p>5. Organized research projects have increased from 3 in 1971 to 13 to date with participants returning to</p>

V. PROGRAMMING GOAL Kenya to complete PhD research.

A. Statement of Programming Goal

Increase the quantity and quality of livestock in Kenya.

B. Will the achievement of the project purpose make a significant contribution to the programming goal, given the magnitude of the national problem? Cite evidence.

Yes. Kenya is making a determined effort to greatly expand the livestock disease-free zone in which improved livestock can be produced in increasing numbers. This work as well as disease prevention and treatment must be carried out by veterinarians. The job can best be done by Kenyans who best understand the problems and objectives of these programs.

SECURITY CLASSIFICATION

PROJECT NUMBER

UNCLASSIFIED

615-11-110-158

PAR CONTINUATION SHEET

This sheet is to be used for any Narrative Sections for which sufficient space has not been provided on the form. Identify each narrative by its Part and Section Designation.

II. A. Comment on Key Factors Determining Rating (Cont'd from page 2)

It also appears that the project design was somewhat faulty by placing considerable and premature emphasis on research and post bgraduate training when work remained to be done to develop the under-graduate clinical studies program. This has been done throughout this project. Also, there was a failure to anticipate the heavy increase in undergraduate student numbers without appropriate increases in teaching staff. Due to the increasing work load on the staff with undergraduate students it was not possible to devote the planned attention to graduate programs and research.

UNCLASSIFIED

SECURITY CLASSIFICATION

KITUI RURAL HEALTH PROJECT 615-0206
PROJECT DESIGN SUMMARY LOGICAL FRAMEWORK

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p><u>Program or Sector Goal:</u> <u>The broader objective to which this project contributes:</u></p> <p>Improve the general welfare of rural population of Kenya through improved health.</p> <p><u>Program Strategy:</u> Expand the delivery of primary health care services in rural areas of Kenya.</p>	<p><u>Measures of Goal Achievement:</u></p> <ol style="list-style-type: none"> 1. Improved trends in morbidity of common illness in rural populations, particularly among women and children. 2. Improved trends in mortality in rural populations, particularly among children under five years of age. 	<p>Baseline and end-of-project statistics on morbidity and mortality in project area.</p>	<p><u>Assumptions for achieving goal targets:</u></p> <ol style="list-style-type: none"> 1. Government is able to supply and maintain rural health care delivery system. 2. Absence of national catastrophes and other factors that exacerbate health conditions and status of population.

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p><u>Project Purpose:</u></p>	<p><u>Conditions that will indicate purpose has been achieved: End-of-Project status.</u></p>		<p><u>Assumptions for achieving purpose:</u></p>
<p>To establish a more effective rural primary health care delivery system in Kitui District.</p> <p>Project Strategy: Institutionalize an effective and low cost community-based primary health care system in Kitui District suitable for replication in other areas of Kenya.</p>	<ol style="list-style-type: none"> 1. Increased availability of basic health care services (curative, promotive and preventive) in project area. 2. Utilization of expanded services by up to 70% of target population. 3. A strengthened referral system extending from community to district level. 4. Improved coordination between Government and NGO health services. 5. GOK and communities able to maintain an expanded primary health care system. 6. Increased community support for curative, preventive and promotive health activities. 	<ol style="list-style-type: none"> 1. Records of service delivery points. 2. RHF and CHW case records. 3. Records of referrals and studies of the management of individual cases. 4. Established protocols and records of NGO participation in RHMT activities. 5. MOH, Kitui District and community budget analyses, CHW support records. 6. Community Development Fund (CDF) activities. 	<ol style="list-style-type: none"> 1. MOH and community commitment to support CHWs. 2. Sufficient number of communities participating in community-based delivery of health services program. 3. District and HC/H staffs willing to undertake community-based health activities.

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<u>Project Outputs:</u>	<u>Magnitude of Outputs:</u>		<u>Assumptions for achieving outputs:</u>
<p>1. RHF's with equipment, vehicles and trained staff in project area.</p>	<p>1.a. RHF's upgraded, improved, or newly constructed in four RHUs. b. RHF's have minimum staff, equipment, vehicles and supplies including drugs.</p>	<p>1.a. Records of upgrading/improvement and new construction. b. Postings, equipment and vehicle purchases and utilization/supply records.</p>	<p>1. GOK can provide necessary construction, equipment, supplies, and staff, and establish drug supply system.</p>
<p>2. Rural Health Management Team established in Kitui District.</p>	<p>2. RHMT fully staffed: 1 Assistant Medical Officer of Health/rural (team leader), 1 PH Nurse, 1 PH Officer 1 Health Education Officer, 1 District Clinical Officer, 1 Nutrition Officer, 1 Statistician, 1 NGO Representative.</p>	<p>2. MOH postings</p>	<p>2. Communities willing to accept responsibility for conducting preventive and promotive health development projects.</p>
<p>3. HC/H Sensitization Teams motivating communities to support activities of CHWs and to undertake health development projects.</p>	<p>3. Up to 5 Sensitization Teams (composed of 1 SCO, 2 ENs) trained in using community sensitization protocols and manuals developed to sensitize and motivate communities to support the activities of CHWs and to plan, initiate, and undertake preventive and promotive health development projects.</p>	<p>3. Training manuals and protocols, plus studies evaluating Sensitization Team activities.</p>	<p>3. GOK and NGO are willing to strengthen coordination processes. 4. Divisional Development Committees (or similar organization) are formed and are willing to undertake responsibilities.</p>

4. HC/H Training Team training, supervising and evaluating RHU staff, CHWs and TBAs..

5. Communities sensitized, motivated and supporting CHWs activities.

6. CHWs and TBAs trained and functioning in communities throughout three RHUs.

7. AMOHs trained and selected MOH personnel exposed to other African and third country community-based health systems.

8. Government and NGO organizations coordinating primary health care activities in project area.

4. Up to 5 HC/H Training Teams, trained in using protocols and manuals developed under project for technical training, management, supervision, and evaluation of CHWs, TBAs and RHU staff.

5. Up to 70 percent of targetted communities in three RHUs in Kitui District supporting CHW activities.

6. Up to 390 CHWs and up to 300 TBAs trained and working in communities in three RHUs in Kitui District.

7. 4 Ministry officers trained to MPH level and 24 PM of short-term observational tours completed.

8. One district level and 4 RHU level committees comprised of relevant provincial, district and sub-district and NGO officers are coordinating MOH and NGO health activities in the project area.

4. Training manuals and protocols plus studies of CHW, TBA, and RHU training processes and outcomes.

5. CHW/RHU records, community surveys and special studies.

6. Training records and surveys of CHW and TBA activities.

7. Project records

8. Committees' minutes and records.

5. CODEL Primary Health Care Project (615-0185) receives additional OPG funding.

8. MOH integrating community health activities with other ministries.

9. Communities planning and participating in preventive and promotive health development projects.

10. Established system for data collection, record keeping and reporting with analysis, feedback, and evaluation mechanisms.

11. Evaluations and assessments of the project's impact and MOH capability to manage and support an expanded Primary health care system in Kitui District.

8. Four Divisional Development Committees (or similar organization) working with RHU staff, NGOs, CHWs.

Up to 70 percent of the targetted communities in three RHUs of Kitui District organizing, providing labor and financial support for preventive and promotive health development activities with CDF support.

10.a. CHW and RHU staff in three RHUs collecting and recording health data.

b. Statistical Officer RHMT, continuously analyzing and evaluating data and submitting reports to RHUs, District and divisional Development committees, and MOH offices.

11. 2 project evaluations, 2 appraisals, and various special studies.

8. Divisional and District Development Committee minutes and records.

9. Surveys and special studies.

10. Completed data collection, protocols, instruments, records, and reports.

11. Assessments, evaluations and reports.

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS		
<u>Project Inputs:</u>	<u>Implementation Target (Type & Quantity)</u>		<u>Assumptions for providing Inputs:</u>		
1. <u>Technical Assistance</u>	<table border="0"> <tr> <td style="text-align: right;">AID</td> <td style="text-align: right;">GOK</td> </tr> </table>	AID	GOK	USAID/GOK project records and field trips	Contracts awarded and funds dispensed on a timely basis.
AID	GOK				
a. Long-term	180 PM Logistic support				
b. Short-term	40 PM Logistic support				
2. <u>Training</u>					
a. Long-term	96 PM Salaries, 1/2 transportation				
b. Short-term	24 PM Salaries, 1/2 transportation				
c. In-country training for:					
(1) Trainers					
(2) CHWs					
(3) TBAs					
(4) RHU staff	20 PM				
(5) RHMT	5 PM				
(6) District and Divisional Committees					
(7) Family Planning Workers					

3. Construction

AID

GOK

a. Upgrading/improvement

6 HC,
12 dispensaries

1 dispensary

b. New construction

2 dispensaries,
1 office building,
1 drug store,
1 garage/workshop
2 staff houses

maintenance,
equipment

4. <u>Staffing</u> (incremental)	<u>AID</u>	<u>GOK</u>
a. RHMT		1 AMOH,
		1 Stats.,
		1 NGO rep.
b. RHU paraprofessional		4 SCOs,
		4 PHOs,
		12 PHTs,
		17 ENs,
		3 Lab. Techs.
c. Other		1 Mechanic,
		3 Equip. Tech.
5. <u>Commodities</u>		
a. Equipment		
(1) Refrigerators	6	Operating expenses
(2) Two-way radios	6	Operating expenses
(3) Other RHF equipment. See Annex H.		Replacement, repair
b. Supplies		
(1) CHW kits	390	Replacement
(2) TBA kits	300	Replacement
(3) Medical		For 195 communities
c. Vehicles		
(1) 4 WD and sedans	16	POL
(2) Bicycles	80	Maintenance
6. <u>Community Development Fund</u>	Activities in 195 communities	Technical and administrative support

7. Health information system and evaluation

AID

GOK

Baseline Personnel
survey,
2 evaluations,
2 appraisals,
data collection,
special studies

DETAILED FINANCIAL ESTIMATES1. Technical Assistancea. AID Contribution(1) 2 Long-term technicians (8 person years) at Kitui

(a)	Salary base \$50,000 plus 7 percent annual increment	444,000
(b)	Payroll overhead 30% of (a)	133,200
(c)	General & administration overhead 70% of (a)	310,800
(d)	Post differential 15% of (a)	66,600
(e)	Defense Base Act Insurance 9% of (a & d)	40,000
(f)	International travel (2 adults, 2 children)	
(i)	3 1/2 tickets, total 8 trips (including 1 home leave per technician)	28,000
(ii)	Excess baggage 4 x 200 x 8	6,400
(iii)	International per diem	4,800
(iv)	Mobilization (medical)	2,400
(v)	Air freight (700 lbs)	6,000
(vi)	Surface freight (including car)	40,000
(vii)	Storage	9,600
(viii)	R and R travel (6 trips)	21,000
(g)	Educational allowance	64,000
(h)	Temporary quarters and Kenya per diem	40,000
(i)	Guard services	9,600
(j)	Appliances and furnishings	21,000
(k)	Contractor's fee	86,400
	Subtotal	1,333,800
Inflation 20% items (f) through (i)		46,400
	Subtotal	1,380,200
Contingency 10%		138,200
	Total (grant)	1,518,200

(2) Long-term Kenyan Engineer - 4 person years
at Kitui

(a)	Salary base \$17,000 (including housing allowance) plus 7 percent annual increment	75,500
(b)	Payroll overhead 30% of (a)	22,600
(c)	Contractors Fee	9,800
	Subtotal	<u>107,900</u>
	Contingency	10,100
	Total (grant)	<u>118,000</u>

(3) Short-term - 40 person months (dollars)

30 person months (U.S.)

(a)	Salary - average \$45,000/year	112,500
(b)	Payroll overhead 30%	33,750
(c)	G&A overhead 70%	78,750
(d)	Defense Base Act Insurance	10,000
(e)	International travel	
	(i) 10 trips @ 2,000	20,000
	(ii) Excess Baggage	4,000
	(iii) International per diem	3,000
	(iv) Mobilization (medical)	1,500
(f)	Kenya travel and per diem (travel cost included in logistic support)	
	(i) 375 days @ \$64	24,000
	(ii) 600 days @ \$40	24,000

<u>10 person months (Kenya)</u>		
(a) Kenyan Consultants 10 person months		80,000
(b) Contractor's fee		<u>36,000</u>
	Subtotal	427,500
Inflation 25% items (e) through (g)		<u>39,000</u>
	Subtotal	466,500
Contingency 10%		<u>46,500</u>
	Total (grant)	<u>513,000</u>

(4) Logistic support for long and short-term technicians (1), (2) and (3)

The following costs for logistic support of technicians will be part of the technical assistance contract.

(a) Communications, consumable office supplies, office equipment	30,000	
(b) Development and printing of training and other documents secretarial services, etc.	50,000	
(c) Operation and maintenance of one 1600 c.c. vehicle and two 1000 c.c. vehicles, including 3 drivers @ \$18,000 per annum	72,000	
(d) Rental charges for a vehicle 3 months	<u>2,000</u>	
	Subtotal	154,000
Inflation 25%		38,500
Contingencies 10%		<u>19,500</u>
	Total (grant)	<u>\$212,000</u>

(5) Long-term - 3 years (Nairobi) - Administration and Procurement Specialist - AID (OPEX - Type) in Nairobi

(a)	Salary Base \$40,000 plus 7 percent annual increment for 3 years beginning January 1982	128,600
(b)	30 percent overhead and fringe	38,600
(c)	International travel	10,500
(d)	Excess baggage	1,600
(e)	International per diem.	1,200
(f)	Mobilization (medical)	600
(g)	Air freight	3,000
(h)	Surface freight	20,000
(i)	Storage	3,600
(j)	Educational allowance	24,000
(k)	Communications and office supplies	10,000
(l)	Temporary quarters and Kenya per diem	15,000
(m)	Guard services	5,000
(n)	Appliances and furnishings	10,500
(o)	One vehicle for official use	16,000
(p)	Vehicle operation and maintenance including driver	17,000
(q)	House rent	36,000
	Subtotal	<u>341,200</u>
	Add inflation 15% on items (c) through (m), (p) and (q)	27,600
	Subtotal	<u>368,800</u>
--	Add contingency 10%	<u>36,800</u>
	Total (grant)	\$405,600

(6) Summary

<u>Technical Assistance - AID Contribution</u>		
<u>Position</u>	<u>Months</u>	<u>Cost</u>
(1) 1 Senior Health Planner	60)	1,518,200
(1) 1 Senior Health Training Specialist	36).	
(2) 1 Engineer (Kenyan)	48	118,000
(3) Short-term consultants	40	513,000
(4) Logistic support for (a) through (d)		212,000
(5) 1 Administration/Procurement Specialist	36	<u>405,600</u>
	Total (grant)	2,766,800
	say	<u>2,767,000</u>

b. Logistic Support - GOK Contribution

(1) Office space, furniture and telephone (Nairobi)		2,000
(2) Office furniture and telephone (Kitui)		5,000
(3) One secretary (Nairobi) \$6,000 per annum		18,000
(4) One secretary (Kitui) 5 years		24,000
(5) Miscellaneous \$2,000 per annum		<u>8,000</u>
	Total	<u>57,000</u>
Inflation 20% on (3) and (4)		<u>8,000</u>
	Total	<u>\$65,000</u>

GOK FY 82/83 - \$6,000
FY 83/84 - \$19,000
FY 84/85 - \$15,000
FY 85/86 - \$13,000
FY 86/87 - \$12,000

2. Participant Training

a. AID

(1)	4 Masters in public health at \$23,000 per year (2 years each)	184,000
(2)	24 person months of short-term observational trips in Africa and other developing countries @ \$5,000 per person per month (one way transport and per diem)	<u>120,000</u>
	Subtotal	304,000
	Inflation and contingency 60%	<u>182,000</u>
	Total (grant)	<u>\$486,000</u>

b. GOK

(1)	Transport Cost (one way airfare) for MPH trainees	4,000
(2)	Salaries for MPH trainees during the training period 8 years x 10,000	80,000
(3)	Transport cost for 24 short-term observational trips	20,000
(4)	Salaries for personnel on short-term observational trips	<u>33,000</u>
	Subtotal	137,000
	Inflation and contingency 60%	<u>82,000</u>
	Total	<u>\$219,000</u>

3. Ministry of Health's Community Development Fund - AID Contribution

AID will finance, with grant funds the cost of following items for community health projects. This should be considered as an illustrative list:

- a. handpumps, pipes, water storage tanks, cement, etc, to 50 communities to build shallow wells or sub-surface at \$1,500 each 75,000
- b. slabs for pit latrines, 50 communities, each with 35 households at \$30 per household 55,000
- c. water pumps and engines, 4 sets 35,000
- d. handtools for ditches and soil conservation activities. Each community will get following tools:

Machettes (<u>pangas</u>)	-10
Hoes (<u>jembes</u>)	-10
Pick Mattoiks	-10
D-Handle shovel	- 5
Rock Bars	- 2
Sharpening files	- 5
Tampers	- 5
Wheelbarrows	- 3
Mason tools	- 2 sets

Cost of tools per community \$360 x 195 71,000

- e. "Seed" money for small community animal production units (e.g. chickens, rabbits, goats) and community kitchen gardens, 50 communities, \$1,500 per community 75,000
- | | | |
|-----------------|-------------|------------------|
| | Subtotal | 311,000 |
| Inflation 30% | | 93,000 |
| Contingency 10% | | 31,000 |
| | Total (AID) | <u>\$435,000</u> |

4. Evaluation - AID Contribution

a. Baseline survey

1. TA Contract	-0-	
2. U.S. Government agencies and/or private contracts	260,000	260,000

b. Health Information System

1. TA Contract (10 Consultant mos.)	117,000	
2. U.S. Government agencies and/or private contracts	61,000	178,000

c. Project Evaluation and Appraisals

1. TA Contract (2 Consultant mos.)	23,000	
2. U.S. Government agencies and/or private contracts	65,000	88,000

d. Special Evaluation Studies

1. TA Contract (8 Consultant mos.)	93,000	
2. U.S. Government agencies and/or private contracts	184,000	277,000

Subtotal		803,000
Contingency on TA contract		23,500
Other contingencies		<u>60,000</u>
Total Evaluation		886,500
Less Evaluation Funds already allocated to TA Contract		<u>-265,500</u>

Net contribution above TA Contract to be ear-marked at post (grant)		<u>\$ 630,000</u>
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5. Construction and Equipment for Rural Health Facilities

a. AID Contribution - Construction

<u>Location</u>	<u>Description</u>	<u>Construction Cost \$</u>	<u>Equipment Cost \$</u>
(1) <u>Near North Division</u>			
(a) Waita Dispensary	- repair existing building	3,000	6,000
	- 2 type F houses	30,000	
(b) Winziie Dispensary (new)	- Dispensary type I	24,000	12,000
	- 3 type F houses	45,000	
(c) Enziu Dispensary	- Dispensary type I	24,000	10,000
	- 2 type F houses	30,000	
(d) Mwingi Dispensary	- Dispensary Type II	52,000	14,000
	- 4 type F houses	60,000	
(e) Nzeuni Dispensary	- repair existing building	2,000	6,000
	- 2 type F houses	30,000	
(f) Migwani Health headquarters	- 4 offices	16,000	1,000
	- 2 type D houses	90,000	
	- 3 type F houses	45,000	
	- 1 garage/workshop	8,000	5,000

(2) Eastern Division

(a) Mutito Health Center/Headquarters	- Upgrade existing sub-center to a headquarters	200,000	36,000
	- 2 type D houses	90,000	
	- 1 type E house	22,000	
	- 9 type F houses	135,000	
(b) Mui dispensary	- Dispensary type I	24,000	12,000
	- 3 type F houses	45,000	
	- Water supply	3,000	
(c) Nuu Health Center	- One type D house	45,000	
	- 1 type E house	22,000	
	- 6 type F houses	90,000	
(d) Endau Dispensary	- Dispensary type I	24,000	14,000
	- 3 type F houses	45,000	
	- Water supply	1,000	

(3) Southern Division:

(a) Voo Dispensary	- Dispensary type I	24,000	12,000
	- 3 type F houses	45,000	
	- Water supply	3,000	
(b) Kisyani Dispensary (New)	- Dispensary type I	24,000	12,000
	- 3 type F houses	45,000	
	- Water supply	4,000	
(c) Kiatune Dispensary	- Repair existing dispensary and staff house	3,000	6,000
	- 2 type F houses	30,000	
(d) Kanziko Dispensary	- Dispensary type I	24,000	10,000
	- 2 type F houses	30,000	
	- repair existing house	6,000	
(e) Ikutha Health Center/Headquarters	- 4 offices	15,000	10,000
	- Garage/workshop	8,000	2,000
	- 2 type D houses	90,000	
	- 5 type F houses	75,000	
	- Water supply	10,000	
(f) Mutha Dispensary	- Remodel existing building.	3,000	8,000
	- 3 type F houses	45,000	

(4) Far North Division:

(a) Kyuso Health Center/Head-quarters	- Full health center head-quarter	262,000	41,000
	- Two type D houses	90,000	
	- 1 type E houses	22,000	
	- 9 type F houses	135,000	
(b) Usueni Dispensary	- Dispensary type I	24,000	12,000
	- 2 type F houses	30,000	
(c) Tseikuru Health Center	- Improve existing health center building	7,000	5,000
	- one type D house	45,000	
(d) Ngomeni Dispensary	- Repair dispensary	2,000	6,000
	- 3 type F houses	45,000	

(5) Miscellaneous

(a) Kitui District	- Office building	30,000	
Hospital	- Drug store	15,000	
	- two type 'C' staff houses (TA team)	109,000	
	- Garage/workshop	<u>20,000</u>	<u>5,000</u>
	Subtotal	2,525,000	245,000
	Add 15% architectural and engineering on designs by private consultants and 5% on designs by MOW for supervision	220,000	
	Add 15% contingencies	412,000	37,000
	Add inflation 22% on facilities at (1) (2), (3) and (5) and 55% on facilities at (4) (15 percent per annum)	<u>773,000</u>	<u>75,000</u>
	Total	3,930,000	357,000
	Total AID contribution for construction and equipment	(loan) <u>\$4,287,000</u>	

b. GOK Contribution - Construction and Equipment

(1) 10% architectural and engineering fee for buildings being designed by MOW	160,000
FY 81/82 - \$90,000 FY 84/85 - \$70,000	
(2) Maintenance of buildings: (Inflation rate 12 percent/annum)	
GOK FY 83/84 - \$24,000	
FY 84/85 - \$27,000	
FY 85/86 - \$30,000	
FY 86/87 - \$34,000	
FY 87/88 (3 months) - \$9,000	124,000
(3) Fuel, water, washing and cleaning at \$1,000 for dispensary and \$1,200 for health center	
FY 83/84 - \$18,000 FY 86/87 - \$31,000	
FY 84/85 - \$21,000 FY 87/88 (3 months) - \$9,000	
FY 85/86 - \$23,000	102,000

- (4) Equipment replacement and maintenance
15 percent of original cost plus 12 percent
inflation

GOK	FY 83/84	- \$37,000	
	FY 84/85	- \$41,000	
	FY 85/86	- \$46,000	
	FY 86/87	- \$51,000	
	FY 87/88 (3 months)	- \$14,000	189,000

- (5) Construction of Kauwi Health Center/
Headquarters including equipment (FY 81/82) 457,000

Total \$1,032,000

6. Vehicles & Bicycles

a. AID Contribution

<u>Facility</u>	<u>Type</u>	<u>Cost</u>
(1) Mutitu HC/H	- 2 four-wheel drive (1600 c.c.)	36,000
	- 2 four-wheel drive (1000 c.c.)	24,000
(2) Ikutha HC/H	- 1 four-wheel drive (1600 c.c.)	18,000
	- 3 four-wheel drive (1000 c.c.)	36,000
(3) Migwani HC/H	- 3 four-wheel drive (1000 c.c.)	36,000
(4) Kitui District Hospital	- 1 four-wheel drive (1600 c.c.)	18,000
(5) Technical assistance	- 1 sedan (1600 c.c.)	16,000
	- 2 four-wheel drive (1000 c.c.)	24,000
(6) 2 Bicycles per health facility 40 x 200		8,000
	Subtotal	216,000
	Inflation 15 percent	<u>32,000</u>
	Total (loan)	<u>\$248,000</u>

b. GOK Contribution

- (1) Maintenance and operation costs of 4 1600 c.c. vehicles
@ \$7,000 (July 1981 prices) per annum/vehicle plus
12 percent inflation per annum

GOK	FY 82/83	- \$16,000	
	FY 83/84	- \$35,000	
	FY 84/85	- \$39,000	
	FY 85/86	- \$44,000	
	FY 86/87	- \$50,000	
	FY 87/88	- \$14,000	\$198,000

- (2) Maintenance and operation costs of 1000 c.c. vehicle (8 No.) at \$3,500. (July 1981 prices) per annum/vehicle plus 12 percent inflation per annum

GOK	FY 82/83	-	\$16,000	
	FY 83/84	-	\$35,000	
	FY 84/85	-	\$39,000	
	FY 85/86	-	\$44,000	
	FY 86/87	-	\$50,000	
	FY 87/88	-	(3 months) - \$14,000	\$198,000
				<u>\$396,000</u>
			Total	

7. Medical Supply

a. AID Contribution

(1)	Community Health Worker first aid kit including one weighing scale at \$80 for 195 communities	15,700
(2)	Traditional Birth Attendant kit at \$33 for 281 communities	9,300
	Total	<u>\$25,000</u>

b. GOK Contribution

- (1) Incremental cost of drugs at Sh. 3 (June 1981) (\$0.36) per person per annum.
500 people per community,
total 195 communities (12% inflation)

GOK	FY 83/84	-	40 communities - \$ 9,000	
	FY 84/85	-	80 communities - \$20,000	
	FY 85/86	-	147 communities - \$42,000	
	FY 86/87	-	195 communities - \$50,000	
	FY 87/88	-	(3 months) - \$14,000	135,000

- (2) Replacement of first-aid kits and TBA kits (12% inflation)

	FY 84/85	-	\$ 3,000	
	FY 85/86	-	\$ 7,000	
	FY 86/87	-	\$13,000	
	FY 87/88	-	\$ 4,000	27,000

- (3) Medical Supplies and Replacements, Linens, etc. for Health Facilities

	FY 83/84	-	\$22,000	
	FY 84/85	-	\$24,000	
	FY 85/86	-	\$40,000	
	FY 86/87	-	\$44,000	
	FY 87/88	-	\$ 4,000	134,000

Total \$296,000

8. Additional Staff Cost for Static Facilities and CHW Program - GOK

Salary (Including 10% Social Security and 10% Provident Fund and housing allowance for which accommodation is not provided by MOH)

FY 82/83 - \$ 60,000	
FY 83/84 - \$160,000	
FY 84/85 - \$180,000	
FY 85/86 - \$207,000	
FY 87/87 - \$309,000	
FY 87/88 (3 months) - \$86,000	
Total	\$1,002,000

9. Training of CHW Trainers - GOK

a. 4 Weeks at rural health training unit at \$120 per person

12 Enrolled Nurses	
3 Clinical Officers	
3 Public Health Officers	
6 Public Health Technicians	
6 Family Health Field Educators	\$ 3,600

b. Family Planning Training - 36 staff @ 120 \$ 4,320

c. Support for cadre staff \$ 6,000

d. Training materials \$ 4,080

FY (82/83) Total \$18,000

10. Training of Community Health Workers - GOK

Out of town allowance for trainers at \$10 per person per day.
(Other costs included in staff salaries and transport cost)

FY 82/83 - \$1,000	
FY 83/84 - \$3,000	
FY 84/85 - \$3,000	
FY 85/86 - \$3,000	
FY 86/87 - \$3,000	
FY 87/88 - \$1,000	
Total	\$14,000

11. District Rural Health Management Team - GOK

a. Assistant Medical Officer of Health/Rural @ \$10,000 per annum	\$60,000
b. Logistic support \$10,000 per annum	\$60,000
Total	\$120,000

Total incremental staff salaries and training (8,9,10 and 11) \$1,154,000
(GOK)

12. Radio Communication

a. AID Contribution

Two-way radio system connecting Migwani Health Center/Headquarters, Mutitu Health Center/Headquarters, Ikutha Health Center/Headquarters with Kitui District Hospital, and Mutha with Ikutha, and Mutomo Hospital (NGO), and Endau with Mutito.

\$70,000

b. GOK Contribution

Maintenance and replacement FY 86-87
FY 87-88

\$10,000
3,000

ANNEX C

IMPLEMENTATION SCHEDULESA. Overall Project Implementation

<u>Event</u>	<u>Date</u>	<u>Responsibility</u>
1. Project agreement signed	9/30/81	USAID/K, AID/W, GOK
2. Recruit for Administration and Procurement Specialist	10/15/81	
3. First disbursement; CP's met.	12/31/81	USAID/K, MOH, MOF
4. Administration and Procurement Specialist on board and initiation of baseline survey design.	1/31/82	MOH, USAID/K, Consultants
5. Vehicles arrive.	6/15/82	MOH, USAID/K
6. TA Team arrives	8/01/82	Contractor, MOH, USAID/K
7. Review, revise and initiate conduct of baseline survey	9/01/82- 3/01/83	Contractor, MOH, USAID/K, Consultants
8. RHMT to develop training protocols and curriculum for all training sessions.	9/01/82 11/01/82	Contractor, MOH
9. First phase construction begins on site.	9/01/82 10/01/82	MOW Consultant
10. First phase training sequence begins and initiation of design of special studies.	10/01/82	MOH, Contractor, USAID/K, Consultants
11. Community Sensitization and CHW training begins.	12/01/82	MOH, Contractor
12. Contract TA for family planning training.	12/01/82	AID/W
13. First phase CHW staffing completed.	12/01/82	MOH
14. First phase drug distribution system in place, and design of special studies completed.	2/01/83	MOH, USAID/K, Contractor, Consultants

15.	First phase construction completed and special studies initiated.	2/28/83- 6/30/83	MOW, USAID/K, Contractor and Consultants
16.	First phase static facility staffing assignments completed.	6/01/83	MOH
17.	Mid-Term evaluation of project and initial findings of special studies.	10/01/84	USAID/K, MOH, AID/W, GOK, Contractor, Evaluation Contractor, Consultants
18.	Second phase construction begins.	8/15/85	MOW
19.	Training of CHWs complete.	6/30/86	MOW
20.	Second phase construction complete.	8/30/86	MOW
21.	Second phase static facility staffing assignments completed.	8/30/86	MOH
22.	Final project evaluation and evaluation of findings of special studies.	6/30/87	USAID/K, MOH, AID/W, GOK, Contractor, Evaluation Contractor, Consultants.

B. Technical Assistance Contract

	<u>Event</u>	<u>Date</u>	<u>Responsibility</u>
1.	Scope of work drafted.	9/30/81	USAID/K
2.	Scope of work approved by Ministry of Health.	10/30/81	MOH
3.	Request for proposal (RFP) sent to AID/W.	11/07/81	AID/K
4.	CBD notice published.	12/05/81	AID/W
5.	Proposals received.	3/01/82	Prospective contractors, Kenya Embassy.
6.	Proposals received by MOH.	3/20/82	Kenya Embassy in U.S.
7.	Proposals evaluated and selection made.	4/20/82	USAID/K, MOH

- | | | | |
|-----|--|----------|---|
| 8. | Contract negotiations begin. | 5/15/82 | MOH, Contractor |
| 9. | Contracts approved and signed. | 6/15/82 | USAID/K, MOH, Contractor |
| 10. | TA team members arrive in country. | 8/01/82 | Contractor |
| 11. | Training sequence begins (See Schedule G). | 9/01/82 | Contractor, RHMT, MOH |
| 12. | Information and evaluation sequence begins (See Schedule E). | 3/07/83 | Contractor |
| 13. | First progress appraisal. | 10/01/83 | Contractor |
| 14. | Mid-Term project evaluation. | 10/01/84 | Evaluation Contractor, Contractor MOH, USAID/K. |
| 15. | Second progress appraisal. | 3/01/86 | Contractor |
| 16. | Final project evaluation. | 6/30/87 | USAID/K, Evaluation Contractor, Contractor MOH. |
| 17. | TA team submits final summary report and departs country. | 8/01/87 | Contractor |

C. Host Country Static Facility Staffing

- | | <u>Event</u> | <u>Date</u> | <u>Responsibility</u> |
|----|---|----------------------|-----------------------|
| 1. | Identify candidates for Assistant Medical Officer of Health/Rural and Second Clinical Officers (3). | 3/30/82 | MOH |
| 2. | Assign AMOH/Rural and SCOs to Kitui. | 6/01/82 | |
| 3. | Staffing plan for first phase completed. (See PP section IV.D.2 for staff requirements.) | 9/01/82 | MOH, Contractor |
| 4. | Identify, recruit and assign staff for Kitui health facilities for first phase. | 10/01/82-
6/01/83 | MOH |

5. Identify, recruit and assign 12/01/85- MOH
staff required for staffing 8/30/86
of second phase facilities.

D. Family Planning Training for Static Facility Staff

<u>Event</u>	<u>Date</u>	<u>Responsibility</u>
1. Contract for TA to conduct family planning training.	11/01/82	MOH, AID/W
2. Begin training of ENs and COs in family planning.	12/01/82	MOH, Contractor
3. Complete training of ENs and COs.	7/31/83	MOH, Contractor

E. Information and Evaluation

<u>Event</u>	<u>Date</u>	<u>Responsibility</u>
1. Initiate design of baseline survey.	1/31/82	MOH, USAID/K, Consultants
2. Review and revise design of baseline survey.	9/01/82	Contractor, MOH, USAID/K, RHMT, Consultants.
3. Initiate design of special projects.	10/01/82	USAID/K, Contractor and Consultants.
4. Conduct baseline survey, complete design of special studies and initiate.	1/01/83- 3/01/83	Contractor, MOH, RHMT, HC/H, USAID/K Consultants
5. Analyze baseline survey.	3/01/83- 6/01/83	MOH, Contractor, RHMT
6. Develop and implement district health information system.	9/01/82- 9/30/85	MOH, Contractor, RHMT Consultants.
7. Mid-term evaluation of project and results of special studies.	10/01/84- 12/01/84	MOH, Evaluation Contractor, USAID/K

- | | | | |
|----|---|---------------------|--|
| 8. | Final evaluation. | 6/30/87-
8/31/87 | Evaluation Contractor,
MOH, USAID/K |
| 9. | TA team and special studies groups submit final summary report. | 7/30/87 | Contractor |

F. Drug Distribution

- | | <u>Event</u> | <u>Date</u> | <u>Responsibility</u> |
|----|---|-------------|-----------------------|
| 1. | Identify appropriate drugs for prepackaging for Kitui community Health Workers. | 9/30/82 | MOH, Contractor, RHMT |

- 5 -

- | | | | |
|----|---|----------|--------------------------|
| 2. | Establish distribution system to ensure drugs are available at rural health facilities. | 12/01/82 | MOH, Contractor, RHMT |
| 3. | Implement public information campaign on drug distribution system in Kitui District. | 12/01/82 | MOH |
| 4. | Conduct training sessions for rural health facilities staff and others on drug distribution. | 11/01/82 | MOH, ASU |
| 5. | Adapt drug distribution system to provide supplies to CHWs. | 2/01/83 | |
| 6. | Evaluate drug distribution system to ensure fulfillment of condition precedent for second phase activities. | 9/01/84 | MOH, Contractor, USAID/K |
| 7. | Schedule developed for extension of system in the Far North and Central divisions. | 10/01/84 | MOH |

G. Training of HC/H Teams

- | | <u>Event</u> | <u>Date</u> | <u>Responsibility</u> |
|----|--|-------------|-----------------------|
| 1. | Select first 3 HC/H Teams consisting of 1 SCO 3 EN, 1 PHT and 1 PHO. | 10/01/82 | RHMT |
| 2. | Begin training 1 SCO, 6 EN, 1 PHO and 4 PHT of first team including PHTs and ENs from local RHF at RHTC followed by 1 week training. | 10/25/82 | RHTC, Contractor |
| 3. | First half of first team completed training. | 11/25/82 | RHTC, Contractor |
| 4. | Start sensitization of communities and CHW training in first division | 12/01/82 | HC/H Team |
| 5. | Select second group for training (7 from first HC/H and 6 from second HC/H). | 12/01/82 | |

6. Begin training of second group at RHTC. 1/05/83
7. Second group completed training 2/05/83
8. Third training session to begin (6 from second HC/H and 10 from third HC/H). 3/01/83
9. Third training session complete. 4/01/83
10. Fourth and final training session (7 from third HC/H) 5/01/83-6/01/83
Number of staff trained to this date would permit fielding of upto 6 community Sensitization Teams and 6 CHW Training Teams or 5 of each assuming attrition.

H. Community Sensitization and CHW Training

<u>Event</u>	<u>Date</u>	<u>Responsibility</u>
1. First sensitization activities.	12/01/82-2/01/83	HC/H, RHMT, Contractor

Team Schedule

<u>Week Number</u>	<u>Community</u>	<u>Action</u>
1	A,B,C,	First Visit - Orientation
2	D,E,F	" " "
3	A,B,C	Second Visit - Facilitate decision
4	D,E,F,	" " " "
5	A,B,C,	Third Visit - Training Arrangement
6	D,E,F	" " " "
7		Assessment and Preparation
8		" " " "

2. First CHW training - Stage 1 - train CHWs from six communities. 2/01/83-2/15/83 HC/H Team

3. Stage 2 CHW training - include TBAs - from six communities. 3/15/83-3/22/83 HC/H Team
4. Stage 3 CHW training - five days training for CHWs, six communities 4/22/83-4/27/83 HC/H Team and division officers
5. Visit to RHF and HC/H by first group of trained CHWs. Completion of first training activities 4/28/83

Illustrative 12 Week CHW Training Sequence

Week

- | | |
|-------|---|
| 1 & 2 | Training by CN and PHT. |
| 3 - 6 | Village job training. |
| 7 | Follow-up training by CN, PHT. |
| 8 -11 | Village job training. |
| 12 | Final pre-service training by CN, PHO and divisional technical officers including rural health facility visits. |

-
6. Second group of sensitization and CHW training activities including visits to RHF and HC/H. 3/01/83-5/01/83 HC/H Team
 7. Third sequence of sensitization and CHW training. 5/15/83-7/15/83 HC/H Team
 8. Fourth sequence of sensitization and CHW training. 8/15/83-10/15/83 HC/H Team
 9. Fifth through fifteenth sequence of sensitization and CHW training. 1/01/84-6/30/86 HC/H Team

I. Construction

Event/Responsibility

Date

Facilities designed by MOW

1. Winziie Dispensary
2. Voo Dispensary
3. Kisyani Dispensary
4. Kanziko Dispensary
5. Nuu Health Center
6. Mutito Health Center/Headquarter

1. MOH notifies MOW to complete final plans and bid documents for above facilities. October 15, 1981
2. MOW prepares construction contractors prequalification advertisement for publication in local paper(s) and the U.S. Commerce Business Daily (CBD) January 15, 1982
3. MOW receives prequalification questionnaires. March 15, 1982
4. MOW prepares list of prequalified contractors and submits list to MOH and USAID/Kenya. April, 1, 1982
5. MOH and USAID/Kenya approve the contractors list. April 15, 1982
6. MOW completes final plans and bid documents for above facilities and submits documents to MOH and USAID/Kenya for approval. May 1, 1982
7. MOH and USAID/Kenya approve documents May 15, 1982
8. MOW invites bids from prequalified contractors. May 20, 1982
9. MOW receives bids. June 24, 1982
10. MOW evaluates bids and submits recommendations for award to MOH and USAID/Kenya. July 24, 1982
11. USAID/Kenya approves awards. August 2, 1982

12. MOH issues notice(s) of acceptance to approved contractors through MOW. August 10, 1982
13. MOW hands over sites to contractors. September 1, 1982
14. MOW prepares contract documents for signature by MOH, MOF and contractors. September 10, 1982
15. Construction completed:
 1. Winziie Dispensary February, 1983
 2. Voo Dispensary January, 1983
 3. Kisyani Dispensary February, 1983
 4. Kanziko Dispensary February, 1983
 5. Nuu Health Center March, 1983
 6. Mutito Health Center/Headquarters May, 1983

Facilities designed by Private Consulting Firm

1. Waita Dispensary
 2. Enziu Dispensary
 3. Mwingi Dispensary
 4. Nzeuni Dispensary
 5. Migwani Health Center/Headquarters
 6. Mui Dispensary
 7. Endau Dispensary
 8. Kiatune Dispensary
 9. Ikutha Health Center/Headquarters
 10. Mutha Dispensary
 11. Kitui Town
1. MOH/MOW prepares requests for proposals for architectural and engineering (A&E) services required to design above facilities. October 15, 1981
 2. USAID/Kenya forwards RFP and advertisement to AID/Washington for publication in CBD. October 16, 1981
 3. RFP advertised in CBD and local newspaper(s). November 1, 1981
 4. MOW/MOH receives proposals. January 2, 1982
 5. MOW/MOH evaluated proposals. February 1, 1982
 6. USAID/Kenya approves the ranking. February 15, 1982
 7. MOW/MOH invites the highest ranked firm for negotiations. March 1, 1982

8. A&E services contract signed. March 15, 1982
9. USAID/Kenya approves the contract. April 1, 1982
10. A&E firm starts final plans. April 1, 1982
11. MOW prequalifies construction /
contractors. January 15, 1982
12. A&E firm completes final plans and
bid documents and submits them to
USAID/Kenya, MOW and MOH for approval. July 1, 1982
13. MOW, MOH and USAID/Kenya approve the
documents. July 15, 1982
14. MOW invites bids from prequalified
contractors. July 20, 1982
15. MOW receives bids. August 1, 1982
16. MOW/A&E firm evaluates bids and
submits recommendations for awards
to MOW, MOH and USAID/Kenya. September 1, 1982
17. USAID/Kenya approves awards. September 5, 1982
18. MOH issues notice(s) of acceptance
to approved contractors through MOW. September 10, 1982
19. MOW hands over sites to contractors. October 1, 1982
20. MOW/A&E firm prepares contract
documents for signature by MOH,
Ministry of Finance and Contractors. October 10, 1982
21. A&E firm provides periodic supervision
of construction.
22. Construction completed:
 1. Waita Dispensary February, 1983
 2. Enziu Dispensary March, 1983
 3. Mwingi Dispensary April, 1983
 4. Nzeuni Dispensary February, 1983
 5. Migwani Health Center/Headquarters March, 1983
 6. Mui Dispensary March, 1983
 7. Endau Dispensary March, 1983
 8. Kiatune Dispensary February, 1983
 9. Ikutha Health Center/Headquarters June, 1983
 10. Mutha Dispensary February, 1983
 11. Kitui Town April, 1983

Facilities designed by MOW (Far North Division)

1. Kyusa Health Center/Headquarter
 2. Usueni Dispensary
 3. Tseikuru Health Center
 4. Ngomeni Dispensary
-
1. MOH notifies MOW to complete final plans and bid documents for above facilities. October 1, 1984
 2. MOW prepares construction contractors prequalification advertisement for publication in a local paper and the CBD. October 15, 1984
 3. MOW receives prequalification questionnaires. January 2, 1985
 4. MOW prepares list of prequalified contractors and submits list to MOH and USAID/Kenya. January 15, 1985
 5. MOH and USAID/Kenya approve the prequalified contractors list. February 1, 1985
 6. MOW completes final plans and bid documents for above facilities and submits documents to MOH and USAID/Kenya for approval. April 1, 1985
 7. MOH and USAID/Kenya approve documents. April 15, 1985
 8. MOW invites bids from prequalified contractors. April 15, 1985
 9. MOW receives bids. June 1, 1985
 10. MOW evaluates bids and submits recommendations for award to MOH and USAID/Kenya. July 1, 1985
 11. USAID/Kenya approves awards. July 10, 1985
 12. MOH issues notice(s) of acceptance to approved contractors through MOW. July 20, 1985
 13. MOW hands over sites to contractor. August 15, 1985

14. MOW prepares contract documents for signature by MOH, MOG and contractors. August 20, 1985

15. Construction completed:

- | | |
|-------------------------------------|----------------|
| 1. Kyuso Health Center/Headquarters | August, 1986 |
| 2. Usueini Dispensary | February, 1986 |
| 3. Tseikuru Health Center | January, 1986 |
| 4. Ngomeni Dispensary | January, 1986 |

ENGINEERING ANALYSIS

The construction component of this project consists of improvements or upgrading of 12 dispensaries, 6 health centers, and construction of two new dispensaries.

The Ministry of Health has divided Kenya into 254 geographically defined rural health units (RHUs) each of which is to service between 50,000 to 70,000 persons. Each RHU is to have at least one health center designated a headquarters, and four to six dispensaries. Kitui district comprises six rural health units as follows:

(a) Near North:

- (i) Migwani Health Center/Headquarters
- (ii) Mwingi Dispensary
- (iii) Waita Dispensary
- (iv) Enziu Dispensary
- (v) Nzeuni Dispensary
- (vi) Ngomeni Dispensary
- (vii) Nguni Health Center
- (viii) Winziie Dispensary (proposed)

(b) Eastern:

- (i) Mutito Health Center/Headquarters
- (ii) Nuu Health Center
- (iii) Mui Dispensary
- (iv) Endau Dispensary

(c) Southern:

- (i) Ikutha Health Center/Headquarters
- (ii) Kiatune Dispensary
- (iii) Voo Dispensary
- (iv) Mutha Dispensary
- (v) Kanziko Dispensary
- (vi) Kisyani Dispensary (proposed)
- (vii) Mutomo Hospital (NGO)

(d) Far North:

- (i) Kyuso Health Center/Headquarters (presently a dispensary)
- (ii) Tseikuru Health Center
- (iii) Usueni Dispensary
- (iv) Tharaka Dispensary
- (v) Mivukoni Dispensary
- (vi) Katse Dispensary
- (vii) Kimangao Health Center (NGO)

(e) Central:

- (i) Kitui District Hospital (Headquarters)
- (ii) Yatta Health Center
- (iii) Katulani Health Center
- (iv) Miambani Dispensary
- (v) Inyuu Dispensary
- (vi) Mbitini Dispensary
- (vii) Motume Dispensary (NGO)
- (viii) Mulango Dispensary (NGO)

(f) Kauwi-Kathibo:

- (i) Kauwi Health Center/Headquarters (under construction)
- (ii) Matinyani Dispensary
- (iii) Muthale Hospital (NGO)

In most instances the RHU boundaries coincide with those administrative divisions. And Ngomeni Dispensary included in the Near North RHU unit is in Far North Division, however Kauwi Health Center and Muthale Hospital of the Kauwi-Kathibo RHU are in Near North Division.

The MOH has, with the assistance from DANIDA, developed minimum standards for each rural health facility. These standards are as follows:

(a) Dispensary Type I provides out-patient services to a population between 1,000 to 4,000 people in a radius of 6 kilometers. The dispensary consists of 4 rooms: treatment room, pharmacy room, consulting room and maternity child health care room. The total area is 800 square feet.

(b) Dispensary Type II is similar to dispensary type I except that it serves a population over 4,000 people and consists of 7 rooms: office, store, pharmacy room, treatment room, consulting room and two MCH/FP rooms. The total area is 2,500 square feet.

(c) Health Sub-Center is similar to dispensary type II except that it has inpatient facility for 4 beds. The sub-center serves as a referral institution for dispensaries. The total area varies from 3000 to 5000 square feet.

(d) Health Center/Headquarters provides all aspects of primary health care: curative, preventive and promotive. It has outpatient facilities, and an inpatient facility of 12 beds. The total area is 6,700 square feet.

In addition, staff houses for critical health personnel are provided at each facility. The MOH standards for staff houses are as follows:

(a) Dispensary Type I: 3 Ministry of Works (MOW) standard type F houses for 2 Community Nurses and 1 Public Health Technician. Area of each house is 420 square feet.

(b) Dispensary Type II: 4 MOW type F houses for 3 Community Nurses and 1 Public Health Technician.

(c) Health Sub-Center: One MOW type D house (Area 1000 square feet plus two roomed-servants quarter) for one Clinical Officer; one MOW type E house (area 750 square feet) for Senior Nurse and 5 MOW type F houses for one Community Nurse, one Public Health Technician, one Laboratory Technician, one Watchman and one Driver.

(d) Health Center/Headquarters: same as health sub-center with addition of 4 type F houses for 2 Community Nurses and 2 Patient Attendants.

A detailed inventory of all existing facilities in three administrative divisions, namely Near North, Eastern and Southern Divisions, was conducted by the Ministry of Health planning staff and USAID and REDSO engineers. The same staff also conducted a detailed inventory of four facilities in Far North Division which are included in the Ministry of Health's Five Year Development Plan (1979-1983) and among the high priorities of the District Development Committee.

Existing dispensaries range in size from one to seven rooms. General structural condition is good except for several instances of termite damage. Five of the dispensaries are one room units constructed in early 1930s. These facilities although functional are inefficient for meeting the high usage encountered. Two dispensaries are structurally unsafe. Health center structures are generally adequate. Staff housing is generally inadequate, and rental housing is generally not available in rural areas. Most health facilities are equipped with rainwater catchment tanks. Four facilities will be served by a new system being planned or under construction. Three facilities have adequate water supply. Only one facility (Mutito Health Center) has provision for electrical power, but the generator was out of service. In all facilities either pit

latrines or septic tanks for water borne sanitation are provided. Each facility is sited within 1/2 mile of a permanent settlement such as a market center or urban center and has adequate land area for expansion.

Based on the site surveys and the MOH's minimum standards described above, it is proposed to finance with loan funds improvements or upgrading of existing facilities and the construction of two new facilities included in the DDC and the MOH Development Plans as follows. At some sites additional facilities, mostly staff houses, are provided to support the Community Health Workers.

(a) Near North Division:

- (i) Waita Dispensary - Repair existing building
- 2 type F houses
- (ii) Winziie Dispensary - Dispensary Type I
(New) - 3 type F houses
- (iii) Enziu Dispensary - Dispensary Type I
- 2 type F houses
- (iv) Mwingi Dispensary - Dispensary Type II
- 4 type F houses
- (v) Nzeuni Dispensary - Repair existing building
- 2 type F houses
- (vi) Migwani Health - 2 type D house
Center/Headquarter - 3 type F houses
- 4 offices
- 1 Garage and Workshop

(b) Eastern Division

- (i) Mutito Health Center/ - Upgrade existing
Headquarters center to a headquarter
and repair existing two
houses
- 2 type D houses
- 1 type E house
- 9 type F houses
- (ii) Mui Dispensary - Dispensary Type I
- 3 type F houses
- Water supply from the Ministry of
Water Development's pipe line
about 2000 feet.

- (iii) Nuu Health Center
 - One type D house
 - 1 type E house
 - 6 type F houses

- (iv) Endau Dispensary
 - Dispensary Type I
 - 3 type F houses
 - Water supply from Kitui County Council's pipe line

(c) Southern Division:

- (i) Voo Dispensary
 - Dispensary Type I
 - 3 type F houses
 - Shallow well equipped with hand pump for water supply.

- (ii) Kisyani Dispensary (New)
 - Dispensary Type I
 - 3 type F houses
 - Sub-surface dam about 4000 feet from the facility for water supply.

- (iii) Kiatune Dispensary
 - Repair existing dispensary and staff house.
 - 2 type F houses

- (iv) Kanziko Dispensary
 - Dispensary Type I
 - 2 type F houses
 - Repair existing house

- (v) Ikutha Health Center/
Headquarters
 - 4 offices
 - 1 garage/workshop
 - 2 type D houses
 - 5 type F houses
 - Water supply

- (vi) Mutha Dispensary
 - Remodel existing building
 - 3 type F houses

(d) Far North Division:

- (i) Kyuso Health Center/
Headquarters
 - Full health center headquarters
 - Two type D houses
 - 1 type E houses
 - 9 type F houses

- (ii) Usueni Dispensary
 - Dispensary Type I
 - 2 type F houses

- (iii) Tseikuru Health - Improve existing Health Center
Center building
- One type D house
- (iv) Ngomeni Dispensary - Repair dispensary
- 3 type F houses

Construction Standards and Design

The Ministry of Works standard designs, with minor modifications for some locations, will be used for all physical facilities. The construction will basically consist of concrete or stone walls, steel windows, wooden doors, concrete floors, corrugated galvanized iron roof with timber trusses and hard board ceiling. All facilities will be provided with septic tanks or pit latrines. Electrical power will not be provided.

The Ministry of Works is in the process of preparing final design for ten sites. The design for the remaining sites will be prepared by a group of private consultants to avoid delays in completing the design.

ECONOMIC ANALYSIS1. General Considerations

Accurate benefit/cost studies of "soft" social overhead projects in general, and of health projects in particular, are difficult to undertake. While cost data are often reasonably accurate, there is really no completely satisfactory way to impute monetary value to the flows of many of the benefits occurring to society and to individuals. These difficulties are compounded in the case of benefit/cost studies performed in the context of developing countries.

The problems can perhaps be more clearly understood and appreciated by sketching the benefits that will occur as a result of the present project. A partial list of these benefits is presented below.

- reduced mortality
- reduced waiting time
- reduced travel time
- reduced out-of-pocket travel expenses
- reduced number of sick days, restricted work and educational activity
- reduced time required for home care of the sick

In order to quantify these benefits into discounted revenue stream for purposes of comparison with a similarly discounted stream of costs, it is necessary to impute prices as measures of marginal social value to units of each of the elements of benefits listed above. In benefit cost analysis undertaken in the context of a developed country, required prices are imputed, based on rather restricted assumptions. For example, given that the number of years of life saved can be estimated, an average annual cash income is usually imputed as the "price" or value to society of averting premature mortality of adults.

Similarly, upon estimating the number of hours of reduced travel time, time-off from work, time required for home care of the sick, and time spent waiting to receive health care, an average market wage is usually imputed as the price or marginal social value used to convert an aggregate quantity of time saved into a stream of social benefits. Valuing the benefit of reduced days missed from school on the part of children requires some special judgments, which usually result in an hour of schooling being valued at an arbitrary fraction of the estimated average adult market wage. Out-of-pocket travel costs saved as a result of reduced visits to health service facilities are perhaps estimated most accurately of all the items listed above, at least in principle.

Even in the context of developed countries, price estimates are of questionable accuracy. In the context of a developing country price estimates are even more questionable. Prevailing market wages and incomes in the U.S. in large measure reflect the marginal valuation of the social significance of human productivity. Given a fairly high degree of competition among producers and mobility among labor markets, wages and incomes approximate marginal products of labor services (marginal physical product times market price), and prices are near those that would prevail if markets were perfect.

However, in developing countries, shortages of capital, inappropriate technologies, institutional and political constraints all serve to restrict producer competition and labor mobility. The result is that wages and prices often reflect significant departures from values that truly reflect the marginal social significance of labor services and the value of the output of manufactured products and services.

For example, it is estimated that the agricultural wage that currently prevails in rural Kenya is 16 Ksh/day or 2 Ksh/hour. However, due to the various factors cited above, agricultural employees may often be employed in an imperfect (monopsony) labor market. As a consequence, the prevailing wage can be below the marginal revenue product that truly reflects the value of labor output to Kenyan society.

Similarly because of monopoly elements which sometimes prevail in the case of transport in rural areas, out-of-pocket transport costs can reflect monopoly pricing policies resulting in substantial divergence between marginal revenue and price. In this case prevailing prices exceed those that would prevail in a more competitive market and costs are overstated. Given such factors, converting a benefit stream into a stream of monetary values to be compared with a stream of costs would be difficult and could be misleading.

In addition to benefits which in principle may be quantified, there are additional benefits, the value of which may not be quantified easily, or not at all. Consider such things as reduced anguish, pain and suffering; reduction of anxiety; gains to family well being as the result of averting premature death of a loved one; and a general reduction in uncertainty pertaining to illness and premature death. Gains in these areas lead to a more positive attitude toward investment, borrowing, and other activities crucial to development undertakings on the part of individuals. These non-quantifiable or not easily quantifiable elements may be the most important health benefits contributing to the development process. They change the attitudes of society favorably toward entrepreneurial activities, family planning, physical and human capital deepening (education) and adopting more productive but round-about production processes (investment projects with high yield but long pay out periods). Yet it is difficult, if not impossible, to quantify these benefits that originate from health activities that improve the health status of the population.

In summary, a full-blown benefit cost analysis of the project would be difficult to perform at best. Crucial data are lacking at this stage and data that are available are biased for the purposes at hand. Special studies of the monopsony and monopoly character of local markets do not exist and there exists no basis for appropriately adjusting the data that are available.

2. Applicable Economic Analysis

In spite of these general obstacles to undertaking a benefit cost analysis of the project, there are a number of economic matters which can be explored in connection with the project which are essential to its justification as an AID technical assistance intervention. These include the following:

- a. Whether or not the project is least cost relative to alternatives.
- b. Whether or not Government can afford to sustain the project and extend the activity nationwide.
- c. Whether or not gains to communities and to individuals are sufficient to warrant their acceptance, adoption and participation in the project.

Each of these issues is explored in individual sections below:

3. Project as a Least Cost Alternative

a. Comparability of Project Alternatives

The innovative feature of the project is the integration of a community-based health care delivery component within an existing static health facility system. Reference has already been made to the fact that the GOK is going to expand the static health facility system in Kitui District as part of the five year economic development plan. However, even with the planned expansion of static facilities combined with the introduction of mobile units, it is estimated that the system will provide primary health care services up to only 30 percent of the population.

The project will extend coverage of primary health care services to an estimated 70 percent of the population of three divisions by the end of the second phase (six years). If successful, the project will increase primary health service coverage by 40 percentage points (70-30) in the target population.

The main alternative to the present project is to intensify the Government's program of static health facilities construction, supplemented by greater use of outreach mobile clinics. Even with such an approach, the GOK static health facilities expansion program could reach no more than 50 percent of the target population. Thus, even if the goal of 70 percent population coverage is not completely reached by this project, it would be as successful as the next best alternative so long as primary health care services are offered to at least 50 percent of the target population. The present project offers a very good prospect of reaching 70 percent of the target population, while the best alternative offers no such prospect. Thus, in terms of potential population coverage, this project is clearly superior to the next best alternative, and in general sense the two projects are not strictly comparable.

However, costs per unit of population served in the case of this project can be compared with the cost per unit of population that would be served under the next best alternative, even though the volume of population to be served in the case of the two approaches are different.

b. Quality of Care Considerations

One other difference should be noted prior to presenting comparative per unit cost data. Some would argue

that because CHWs offer very minimal curative care and place greater emphasis on disease prevention and health promotion than static facilities, CHWs in fact offer a lower quality of health care than that offered by static facilities.

Such an argument is fundamentally incorrect. First, examination of the illnesses being presented and treated at static health facilities reveal that the vast majority require very unsophisticated medical interventions, most of which can be provided by CHWs. Second, the social value of a case of illness prevented is just as great or greater than the social value of treating illness that was not prevented from occurring, or which was not treated inexpensively at an incipient stage. Clearly the social costs are lower in the case of illness prevention or in treatment of disease at early stages than in the case of more sophisticated interventions administered after illness has occurred. Lower cost care need not be taken to imply lower social value. Third, if one considers every case of illness that is neither prevented nor treated due to inaccessibility of services offered by a comparatively sophisticated and "high quality" health system, the average level of the quality of care available to the entire population is likely to be so low as to be unacceptable. Average quality in such a system is likely to be lower than that of a system that offers preventive and promotive health services as well as unsophisticated but effective curative services to the bulk of the population. The more important issue is whether health care is or is not being made available to the bulk of the population.

c. Project Per Unit Costs as Compared to Alternatives

The simplest way of undertaking a per unit comparison between this project and the static facility expansion alternative is to compare the per unit annualized development costs (allowing for amortized replacement of all human and physical capital components), plus recurrent costs of servicing a community of a given population in the case of the two approaches.

The most inexpensive static facility is a Type 2 dispensary with 2 Type E and F houses staffed according to MOH staffing norms. This facility on the average would serve a population of 4,000 persons within a radius of 100 square kilometers. Assume an expected life of 4 years for the facility, 10 years for the staff, 7 years for the life of equipment, annual maintenance of structure and equipment at 2 percent of initial cost of acquisition, and an annual rate of recovery sufficient to replace all capital indefinitely at 14 percent. The annual economic costs are 373,000 Ksh.

Alternatively, the proposed project supplies two half-time CHWs to serve a population of 500 persons. We may assume a job life expectancy of five years and 30 percent attrition. Training is done in the community. Supervision is provided by the RHU at 3,400 Ksh per annum. Drug costs may be assumed equal to maintenance costs of 3,000 Ksh (in kind or cash) per annum per CHW. The annualized costs per CHW per annum are 17,000 Ksh. Since two CHWs are required to serve a population of 500, there must exist 16 CHWs to serve a population of 4,000 persons at a cost of 136,000 Ksh per annum (17,000 x 8).

In addition, one mobile unit ideally may be employed to provide drug supplies, logistical support, technical supervision and other types of support, visiting each community once per week. The annualized costs (replacement Suzuki vehicle at five year intervals) assuming an annual rate of economic recovery at 14 percent as in the case of the static facility alternative, are calculated at 85,000 Ksh. Summing the costs of training, sustaining and supporting 16 CHWs, the annualized costs are 136,000 Ksh plus 85,000 Ksh or 221,000 Ksh annually. The cost savings, on an annualized replaceable basis, of a CHWs intensive system as compared to the expanded static facility system is 153,000 Ksh annually. Recalling that the population coverage in the case of the CHW system could exceed that provided by the static facility intensive system by as much as 40 percentage points (70-30) the advantages of a CHW intensive system over available alternatives are quite clear.

The CHW subsystem essentially is being piggybacked on an existing but strengthened static facility system. Initially we would expect patient volume at static facilities to increase due to an increased volume of illnesses detected, an increased health consciousness on the part of individuals, and a consequent increased number of referrals and "walk ins". Eventually, patient volume will level off and stabilize as the effects of CHW preventive and promotive and curative health service activities begin to improve the health status of community dwellers. We would expect to see patient volume at static health facilities beginning to level off at the end of the second phase (six years) and fewer common illnesses presented for treatment at static facilities, thus serving to increase the efficiency of the entire rural health services delivery system.

4. GOK Ability to Afford System

a. Issues of Replicability

A question arises in connection with the ability of Government to afford the costs of expanding the Kitui District primary health care system model into other districts in Kenya. One first must recognize that replication to the entire population is neither necessary nor desirable. Not all districts are rural. Nairobi, Kisumu, and Mombasa are rather large urban centers and along with other large towns in Kenya already offer a level of primary health services (with gaps in coverage to be sure) that is equal to that provided as a result of this project. In addition, areas of Kenya such as Northeastern Province, Turkana District and others present unique problems principally involving nomadic and migrating populations which will require alternative approaches to health services delivery substantially different from the delivery incorporated in this project.

The project is not and cannot be strictly regarded as demonstrational or pilot in character leading to ultimate replicability and generalization to all of Kenya. Rather, the project represents a phased operational field experience in establishing an effective primary health care delivery system at district level incorporating the CHW system of care as an innovation, which, with considerable modification, will have broad applicability elsewhere in Kenya particularly in other arid and semi-arid land areas.

The GOK could not afford to replicate a similar type primary health care system in all relevant districts of Kenya in the five years after project completion but the GOK has no intention of doing so. However, the GOK does intend to provide reasonable health care for all by the year 2000, 19 years in the future. At the end of project, the GOK will have at least 12 plus years to adapt, modify, and extend similar systems to other districts as appropriate.

The primary health care delivery model using CHWs is more cost effective than the health services expansion course on which the GOK was embarked prior to the design and implementation of this project. USAID is assisting the GOK in developing a technology of primary health care delivery that is more cost effective and affordable than other alternatives. USAID also is assisting the GOK in institutionalizing processes and activities of management, drug supply, referral, logistics and transport, health information gathering and evaluation which have transferrability and replicability, with appropriate modification, to various types of primary health care systems that may be extended to other areas of Kenya. Although the model of primary health services delivery in this project may

not be applicable without modification elsewhere, the operational experience obtained from institutionalizing concepts and activities that are embodied in this project will have some applicability virtually everywhere in Kenya.

b. Recurrent Cost Requirements

Recurrent costs required by Government in connection with this six year project include the following:

<u>Category</u>	<u>GOK Recurrent Cost (\$000s)</u>
(a) Technical Assistance	65
(b) Incremental Staff Salaries and Training	1,154
(c) Participant Training	219
(d) Evaluation	-
(e) Contingencies	140
(f) Construction and Equipment	-
(g) Vehicles	369
(h) Medical Supply	269
(i) Community Development Fund	-
(j) Radio Communications	<u>33</u>
Total	2,303

With regard to replicability, not all these recurrent costs would be required (e.g., technical assistance support). The incremental requirements involved with this project relate to extra staff required to strenghten those health facilities in three target RHUs and not staff needed to strengthen health facilities in the fourth administrative division (Far North) near the end of project. In additon, for replicability all other items in the above would be required with the exception of participant training, construction and equipment.

In order to get an accurate picture of recurrent cost requirements of the innovative feature of the project, namely the CHW component, analysis will include only the three target RHUs in which CHWs are introduced.

Replicable recurrent cost requirements including only those associated with staff required to strenghten health facilities to support CHWs in the three target RHUs and other elements required of replicability, are as follows:

<u>Category</u>	<u>GOK Recurrent Costs (\$000s)</u>
(a) Technical Assistance	-
(b) Incremental Staff Salaries and Training	807.8
(c) Participant Training	-
(d) Evaluation	100
(e) Contingencies	140
(f) Construction and Equipment	-
(g) Vehicles	396
(h) Medical Supply	296
(i) Community Development Fund	435
(j) Radio Communications	<u>33</u>
Total 6 Year Project Costs	2,207
Annual Recurrent Project Costs	368

c. Annual Recurrent Cost Per Beneficiary

Assuming optimal target accessibility on the part of 70 percent of population in the three divisions, the annual recurrent cost per beneficiary is (368,000 divided by 98,500) \$3.73. Assuming the minimum success of the project, only 50 percent of the population of the three target divisions would have access to care or 70,357 persons at a cost of \$5.23 per person. Under the unlikely assumption that the project would reach 100 percent of the population (140,714), costs per person would equal \$2.62.

d. Discussion of Recurrent Cost Per Beneficiary and Implications for Replicability

Currently, on recurrent account the GOK is spending 55,576 million Kenya pounds annually on health services. Upon conversion to dollars this represents an annual outlay of \$123.5 million. Of Kenya's population of 15.9 million persons, 90 percent are rural. Of those rural person, 25 percent or less have access to Government health services. Thus in reality, only 35 percent of the population, or about 5.56 million persons have access to Government-supplied health services.

Dividing \$123.5 million of total outlay by 5.56 million persons who may be presumed to be reached by Government supplied health services yields approximately \$22.21 as the recurrent cost per beneficiary of Government supplied health services. The

range of \$3.73 to \$5.23 as the incremental recurrent cost per beneficiary of the CHW component of this project compares very favorably to what is currently being spent per beneficiary for Government-supplied health service generally.

The discussion presented in 4.a. above in this Annex suggest tht it would not be appropriate for Government to replicate this model of primary health delivery in all districts of Kenya. There is no need to replicate the model in urban areas, in major towns, and in vast areas of Turkana District, Northeastern Province and possibly other parts of the Rift Valley Province.

Given these considerations, it is estimated that the model, minimally modified, would be appropriate for no more than 70 percent of the rural population of Kenya. With a rural to urban shift in population averaging 10 percent over the next 19 years, approximately 80 percent of the population would reside in rural areas of Kenya in the year 2000. Since the model is applicable to 70 percent of the rural population, opportunity for replication by the year 2000 would apply to roughly 60 percent of Kenya's population existing in that year. However, given Kenya's static facility expansion program, roughly 25 percent of the population would be covered by static facilities, leaving a maximum of 35 percent of population to be covered by a CHW system supported by existing static facilities.

An important feature of the project is the element of private sector cost sharing embodied in project design. Communities are asked to support the activities of community health workers (in kind or shilling contributions). It is estimated that roughly 400 Ksh. would be required to support one half time CHW per month which implies a community CHW support cost of \$1200.00 per annum $((400 \times 2) \times 12 \div 8)$. Assuming an average community beneficiary population of 500 persons yields an annual CHW support cost of \$2.40 per beneficiary $(\$1200 \div 500)$.

An additional element of private sector cost sharing stems from communities contributing local resources (funds, land labor, materials) on a matching basis with Community Development Fund (CDF) resources used to undertake community health development projects. The value of the CDF made available in the project is \$438,000. On the basis of the conservative assumption that community beneficiaries will provide local resources on a one for one matching basis over the 6 year life of the project yields \$1.03 of additional private sector cost sharing per beneficiary $(\$435,000 \div (6 \times 70,357))$ in the case of 50 percent population coverage, \$.74 in the case of 70 percent coverage $(\$435,000 \div (6 \times 98,500))$ and \$.52 per beneficiary in the event

of 100 percent coverage. The following table summaries current costs per beneficiary of Government supplied health services and the costs per beneficiary of health services supplied in the Kitui project broken down by Government and the private sector.

Current Recurrent Costs and Project Recurrent Costs Per Beneficiary (RC/B) and Division of Cost Sharing Between Government (GOK) and Private Sector (P.S.)

	<u>Total RC/B</u>	<u>GOK RC/B</u>	<u>P.S. RC/B</u>	<u>%GOK</u>	<u>%P.S.</u>
1. Current Situation	\$22.21	\$22.21	-0-	100%	-0-
2. CBHS					
a. 50%	\$ 8.66	\$ 5.23	\$3.43	60.4	39.6
b. 70%	\$ 6.87	\$ 3.73	\$3.14	54.3	45.7
c. 100%	\$ 5.52	\$ 2.60	\$2.92	47.2	52.8

The table above reveals that the project raises the level of private sector cost sharing in connection with Government supplied health services from zero which is the level currently to a minimum of 39 percent, and potentially to a level equal to nearly 53 percent. The project targets 70 percent population coverage as an objective, which if obtained would result in private sector cost sharing of approximately 45 percent.

It should be noted that medical supplies including drug costs included in the project consist of \$296,000 over the life of the project. If these costs were eventually picked-up by the private sector and 70 percent population coverage were achieved, Government costs per beneficiary would decline from \$3.73 to \$3.23 and private sector costs would rise from \$3.14 to \$3.64 ($\$296,000 \div 6 \div 98,500 = \$.50$). In this case Government's share of costs would equal 47 percent ($\$3.23 \div 6.87$) and the private sector cost sharing level would rise from 45.7 to 53.0 percent. While relative to other elements of private sector cost sharing drug costs are not high, they remain significant and pro-pharmacy options will be explored through special studies in the course of project evaluation and policy dialogues with Government throughout the life of project.

At the root of the issue of replicability is concern for Government's capacity to bear its share of the increased recurrent cost burden beyond the life of project. The ability of Government to bear its share of increased costs depends on the projected level of recurrent costs required, and growth in real per-capita health recurrent budget, where the latter depends on growth in real GDP, the share of Government budget as a ratio of real GDP, the relative share of the health budget to total Government revenues, and the rate of growth in population within the period of desired replicability.

It is assumed that Government's share of GDP will remain constant and that the health recurrent budget share of Government budget will remain constant over the period of replicability. It is also assumed that the rate of population growth remains constant at 4 percent annually and that the project target of 70 percent coverage can be achieved by the end of project and beyond during the period of replication. Finally it is assumed that 35 percent of the population would be appropriate for replication, as described above.

The estimates of levels of real GDP presented to and accepted by donors attending the Consultative Group Meeting held in Paris in July 1981 are presented below.

Real GDP - Kenya*

	<u>79/80</u>	<u>80/81</u>	<u>81/82</u>	<u>82/83</u>	<u>83/84</u>	<u>84/85</u>	<u>85/81</u>
Real GDP	2.4	3.8	4.3	4.9	5.5	5.7	6.0

The table above shows that past, current, and projected real GDP ranges from 2.4 to 6.0 over years 1979/80 to 1985/86. The wide variability principally reflects the severe drought afflicting Kenya in calendar years 1979 and 1980 and the grinding impact of rising energy costs. Since the period of project replicability extends far beyond the life of project (at least to the year 2000) it is difficult to select a single figure as an average growth projection for periods of replicability. In view of this problem more than one rate is incorporated into the analysis. The following rates are selected:

*Reproduced from Table 2 - Projections of GDP at Constant (1980 prices in Economic Prospects and Financial Prospects, 25th July 1981, Government of Kenya, Nairobi, Kenya.

- 4.9 percent which is the median of the growth rates presented.
- 6.0 percent complete recovery is expected and the most proximate estimate to the period of replication beyond the life of the project.

Given a population growth rate of 4 percent per annum, the population that could be covered upon appropriate replication of this model of health delivery by the year 2000 is 8.2 million ($33.4 \times .7 \times .35$). The MOH is currently spending \$123.5 million on recurrent account. Given Government share of recurrent per beneficiary at \$3.73, the MOH recurrent budget must grow by \$30.6 million ($\3.73×8.2 million) by the year 2000.

Given a real rate of growth of GDP of 4.9 percent and assumptions of constant Government and MOH relative shares, the MOH recurrent budget would equal \$306.5 million on recurrent account. However, much of this increase in recurrent budget will be needed to supply an increased value of services to a larger population which has increased from 15.9 million existing currently to 33.4 million by the year 2000. Since 35 percent of population would be subject to project replication only 65 percent of the total growth in population would necessarily be serviced by MOH sponsored health programs other than this model. In order to provide for these programs the recurrent budget must grow ($.65 \times 4$) 2.6 percent per annum. This means that \$201.1 million of recurrent budget would be needed to continue existing programs. Adding this amount to the \$30.6 million of incremental recurrent budget needed to support replication of this project to 35 percent of the population yields \$231.1 million as total MOH recurrent budget needs to support existing programs at real per-capita levels in the year 2000 as well as to replicate this project. This leaves a surplus of 75.4 million on recurrent account to support additional health programs.

Clearly the GOK can afford to replicate this project as appropriate, even at the low rate of growth in real GDP of 4.9 percent. This conclusion is even stronger if rates of GDP approach 6 percent as forecast for 1986, if sustained throughout the period of replication. Note that if annual GDP real rates of growth approximated 6 percent, recurrent funds would be available to support replication costs much sooner than the year 2000. However, replication prior to the year 2000 would likely not prove to be feasible due to development constraints involved with renovating physical facilities, training capacity, etc.

A final question involved in the issue of recurrent cost constraints and replicability concerns what would be the lowest real rate of growth in GDP that would permit replication of the project by the year 2000. This can be answered as follows. Given a population growth rate of 4 percent, 35 percent population subject to project replication and 70 percent population coverage, \$30.6 million are needed to replicate the project, causing the recurrent budget to grow to \$154.0 by the year 2000. Over a period of 19 years, the current recurrent budget of \$123.5 million must grow at a real rate of 1.2 annually. Adding 1.2 to 2.6, which is the rate of annual growth in GDP required to support existing programs, yields 3.8 percent as the minimum rate of real GDP growth required to replicate the current project at no disadvantage to existing programs. This assumes that the rate of growth in population continues at 4 percent, a most unlikely prospect in view of the Integrated Rural Health and Family Planning Program that is targeted to reduce the rate of population increase.

5. Private versus Social Rates of Return

In most social overhead investments, a considerable discrepancy exists between the rate of social return and private return to society in the form of various externalities generally accompanying Government investments are not captured in the incomes of individuals and thus in the private return on individual investment. For example, the goal of alleviating poverty contributes to political stability, a benefit that members of a rural community may not perceive as a benefit individually. As a second example, enhanced health status leading to greater life expectancy and resulting in changing attitudes about investment, size of families and borrowing for investment purposes, all of which contribute to the social development processes, occur gradually and may not be perceived as part of the private return to individual investment and participation in the project.

Therefore, one other issue for this analysis remains. This concerns community perception of the advantages of accepting the particular modality of primary health service delivery that is embodied in the project. Government can see considerable advantage in extending health services generally as visible evidence of political concern for equity, as an instrument for development, the alleviation of poverty, etc. All of these benefits are easily recognized from the perspective of Government resulting from community acceptance and participation in supporting CHWs and preventive and promotive health programs.

Collectively, the rate of flow of these benefits to Kenya society represents a component of the aggregate rate of social return on public and private investment.

In order to implement the program successfully, substantial private investment is required by the community involving outlays of resources in kind, effort, and perhaps money. The question exists whether the community will perceive a benefit flow that will justify the investment required to support the implementation and eventual success of the project. In short, the issue concerns whether the private return to communities is positive and is at a level that adequately compensates investments of community resources.

The best way to demonstrate the fact that private returns on investment in the project are positive is to calculate costs and benefits on the basis of an individual member of the community. The annual maintenance costs of one to two CHWs to provide service to 500 people ranges between Ksh 4,800 and 9,600 (in kind or cash) or 9.6 - 19.2 Ksh per member of the community.

The MOH estimates that the incremental cost of drugs that it will provide to each member of the community as a benefit at around 3 Ksh. Assuming that on the average each individual saves two trips to a static health facility annually, savings of transport costs are conservatively estimated at 10 Ksh per individual. Assuming that each member of the population saves 4 hours annually in waiting and travel time valued at 2 Ksh/hour, private benefits increase by 8 Ksh per individual annually. Additional time saved from tending the ill say two hours annually valued at 2 Ksh/hour yields another 4 Ksh of private annually per individual. At this point private benefits are seen to have an annual value of 25 Ksh per individual as compared to costs of between 9.6 - 19.2 Ksh per individual, yielding a positive private rate of return on investment.

Similar calculations could be performed in connection with community initiated and maintained preventive and promotive health projects, taking into account the value of labor inputs less the value of materials received from Government in comparison with benefits derived from time saved as a result of reduced illness, increased productivity of individuals, etc.

SOCIAL SOUNDNESS ANALYSIS1. Socio-Cultural Feasibilitya. Social Organization and Self-Help Activities

Kitui district is composed almost entirely of Akamba, a Bantu-speaking group, who also inhabit the adjacent Machakos district. Traditionally Akamba society was not highly structured and it never had a centralized political organization. The basic unit was the homestead, a self-government entity with the senior male having control over its members. Rule of patriliney and patrilocality operated. The highest level of corporate responsibility was at the clan level. The entire Akamba society is composed of twenty-five exogamous clans. Clans are linked through marriage and ensuing obligations.

The Akamba have a concept of community based on settlement patterns call ndua. In terms of numbers an ndua may vary from 15 to 50 households, and they may be scattered over a wide area. The community is based on locality rather than strict kinship bonds. While there may be a dominant lineage group, members may be from other lineages or even clans. Although Akamba tradition stresses values related to community collaboration and cooperation, the highly monetized economy within which the members operate has eroded the traditional value system.

Traditional work parties which provided mutual aid are claimed to be the basis of modern self-help groups in Akamba society. The traditional type most common nowadays, called myethya, is based on co-residency and entails multi-complex relations between those living within a fairly well-defined boundary. A communal work party, forming part of or the entire neighborhood, may be called by a member for agricultural work or tasks such as housebuilding. The person calling together the work party is obliged to provide the participants, usually women and young girls, with food and drink. The frequency of myethya work parties operating under such principles is decreasing because of stratification within society, technological innovations and the monetization of labor. However, other self-help groups, also called myethya, are involved in modern development activities. Ideally each self-help group elects its committee members, chooses its project, decides on the kind and amount of contributions from members, and applies sanctions. About 1800 self-help groups are registered in Kitui district but most are not active. A

group will form to meet a particular need which usually involves construction and members will provide unskilled labor and often money. After completion of the project, the group will cease to function or, if management is necessary, the committee will continue to function. The following illustrates the fluidity of the situation. Group A forms around the building of a primary school but when construction is completed the group becomes dormant, although some members are on the local school committee. In response to the need to provide water for a wider geographic area, members of Group A join with people from another community, Group B, thus forming Group AB. After completion of the water project, Group AB dissolves.

The last few years have witnessed a change in self-help. The trend has been for highly placed leaders to identify a common need, e.g., improvement of existing primary schools, and to organize a district-wide self-help campaign for collection of funds. This collection has often been accompanied by a high degree of coercion. The funds collected then are allocated to a select number of areas or to all schools but if every facility receives some, the amount is small and does not meet expectations. The recent trend in self-help has not only eroded the basic meaning of self-help but has also resulted in suspicion and resentment since donating households are not certain directly to benefit. The new self-help movement has been plagued by misallocation of funds. When the local donors have no supervisory role over the use of funds, particularly in the case of district-wide campaigns, dissappointments become pervasive.

In recent years, there has also been the trend for the GOK to place greater responsibility on local communities to help finance development and recurrent expenditures of non-economic services. Particularly in arid or semi-arid districts like Kitui, which has a fragile economic base, the demands place a heavy burden on the poor majority. Yet in the present situation under the structure of Government, its limited resources and its patterns of allocating these resources, (in this case about 40 percent of the health budget benefiting the urban population) the rural people provide funds in order to obtain services or live without services within a reasonable distance.

b. Perceptions of Causes of Illness

Numerous traditional beliefs surrounding the causes of illness are contrary to Western science. First, a cause of ill-health is the dislocation of a person from his or her cultural milieu, by the breaking of socio-cultural rules or regulations. This ill-health is associated with sin or guilt.

Second, a person becomes ill if dislocated from his/her environment. This occurs through a malevolent force implanted into a person's body. Third, ancestors can cause sickness if an individual ignores rituals to the ancestors. Fourth, witchcraft is associated with misfortunes which result in ill-health. Fifth, a person may be ill by being denounced by someone whom the sick person has offended. Sixth, one may be seized by demons or an offense to God can result in illness. Finally, and considered the worst, there are illnesses associated with injustice, i.e., the taking of other people's resources.¹

These traditional views do not necessarily exist in isolation from those of "modern" science. The following table illustrates that traditional views of illness are not all-pervasive; the majority of Kitui residents relate certain diseases with scientific cause. It is interesting to note the slight difference between the sexes: females tend to be a little less aware of environmental causes than males.

1. Kitui Health Feasibility Study

Table 1: Kitui Repondents Perceived Causes of Selected Diseases by Sex (percentages)

<u>Disease & Cause</u>	<u>Respondents</u>		
	<u>Males</u>	<u>Females</u>	<u>Total</u>
Diarrhea:			
1. Food Related Causes	26.1	39.1	59
2. Water Related (dirty water, beer, etc.)	4.3	4.3	4
3. Flies and dirty surrounds	30.4	4.3	17
4. God	4.3	8.7	7
5. Other (Don't know)	34.8	43.5	39
Malaria:			
1. Mosquitoes	69.6	47.8	59
2. Other (Don't know/No Resp.)	30.4	52.2	41
Scabies:			
1. Washing in dirty water/ stagnant water	30.4	17.4	24
2. Not keeping clean/contact with infected persons	-	17.4	24
3. Other (Don't know)	43.5	47.8	46
4. No Response	26.1	26.1	26
Total Number Respondents	N = 23	N = 23	N = 46

Source: Based on E. K. Mburugu, "Assessment of Potential Recipients to Support a Community-based Health System in Kitui district."

c. Household Health-Related Practices

Practices by households indicate the degree of awareness of preventive health care. In some areas of Kitui almost three-fourths of the households have pit latrines as a result of previous health campaigns. But, in other places, because the ground is very hard except during the rainy season which is a peak labor period due to agricultural tasks, pit latrines are not commonly found. In the survey of Kitui households two-thirds of the respondents reported disposing of refuse in the bush or field. About 18 percent stated that they bury refuse and only 13 percent reported throwing refuse into a pit.

When asked about storage of water, 80 percent of the respondents stated that water for drinking and cooking is stored in clay pots or gourds. The others use containers such as buckets, cans and drums where contamination due to rust and other forms of corrosion are likely to occur. Almost all (94%) claim to cover the containers in which water is stored.

One of the practices which contributes to low nutritional status of infants and young children is extended breast feeding without adequate solid food supplementation. In the survey 22 percent of the females did not give their children solid food until they were over 12 months old. It is unclear whether the delayed time for giving children solid food is due to a lack of knowledge or of availability of proper food.

d. Existing Services

Five categories of health services are available in Kitui district.

First there are four types of traditional practitioners:²

(a) Diviners (athaani) - This group of practitioners deals with events that are going to take place in the future but have their germ in the present. They include also rainmakers (not in the American sense).

(b) Healers (awe) - They are the "wise men" who devise methods of healing, capturing witchcraft culprits. They also purify/immunize against all forms of witchcraft attacks.

(c) Herbalist (akui ma miti) - These are skilled persons who are knowledgeable about medicinal plants. The skills are either learned or inherited.

(d) Birth Attendants (esikyia) - This is one area that is entirely dominated by women. The skill is learned or inherited.³

Second, almost every market has at least one retail shop or canteen which stocks a limited supply of basic non-prescription drugs, such as anti-malarials and cafenol. Most of these places, however, do not stock items for first aid treatment such as gauze and anti-bacterial ointments. Third, although not common, there are some unlicensed individuals who treat patients along the lines of Western medical practices. Fourth, the missions, who have been a major source of health services, have static and mobile health facilities. Fifth, static Government health facilities serve some of the population. All except the latter require a financial payment for services received.

In a survey of 46 people in 10 communities of Kitui District information was asked about treatment of the most recent illness in the household. The data indicate that advice from a family member or friend is often sought prior to seeking treatment. In one community a particular woman seemed to be the local advisor. Information on source of first treatment reveals that treatment at a Government facility was the most common, followed by purchase of drugs in retail shops or canteens (21%). Drugs are sought from shopkeepers usually for treatment of headaches and coughs.

If a second source of treatment was sought it was usually the Government hospital. Although respondents reported that the source of treatment depended upon the nature of the illness, this seemed to be broadly defined.

Cost in terms of cash or time was not stressed as a reason for selecting the source of treatment. When respondents were asked to mention drugs that were most demanded in the community, 35 percent of the women mentioned drugs related to malaria, headaches and fever.

3. See Norman N. Miller's "Traditional Medicine in East Africa: The Search for a Synthesis" American University Field Staff Report No. 22 Africa 1980 for a further discussion of traditional practitioners in Kitui District and recommendations on how they can be integrated into Western medical practice.

e. Decision Makers

Respondents in the Kitui household survey were asked who decided where a household member should go for treatment. Table 2 shows that most males (52%) believe that they make the decision, whereas most of the others report doing it in consultation with women. An insignificant number of men think women alone make the decision. On the other hand, thirty percent of the women perceive themselves making the decision, whereas 48 percent claim that there is mutual consultation. The data indicate that for a community-based health care program aimed at providing health education equal attention must be given to men and women in order to meet the perceived decision-making position of the sexes.

Table 2: Percent Response by Males and Females on How Households Arrive at Decisions of Where to go for Treatment

<u>Decision Maker</u>	<u>Respondent's Sex</u>		
	<u>Males</u>	<u>Females</u>	<u>Both</u>
Man	52.2	21.7	36.9
Wife/Wives	4.3	30.4	17.4
Both (mutual consultation)	39.2	47.8	43.5
Other	4.3	-	2.2
	23	23	N = 46

Source: E. K. Mburugu, "Assessment of Potential Recipients to Support a Community-based Health System in Kitui district".

f. Health and Nutritional Status

The level of health and nutrition of family members is closely related to the degree of poverty and access to appropriate foods. Studies conducted in Kitui reveal that diseases associated with lack of clean water are the most common. Research in a Central Division site revealed that during the previous week, 22 percent of the households reported at least one member having scabies or other skin or scalp problems.⁴

4. Based on questionnaires from a CARE-Kenya Survey carried out in Katathya, Kitui district. Grateful acknowledgement extended to M. Whiting and A. Krystal for access to their work.

This type of ailment was found to be the most common among adults (56 percent of the complaints) and prevalent among children under 5 years in a Southern Division study.⁵ Stomach problems or diarrhea had inflicted at least one member the previous week in 46 percent of the households in the Central Division study. The occurrence of these appeared less in the research conducted in Southern Division. The latter study, though, which was more comprehensive on health matters than the former, found chronic cough the second most common ailment in both children under 5 and those over 5 years old. Fever was the most common ailment among children under 5.

Data from the field studies support information gathered at district health units on outpatient illnesses, although the rank order is not the same. The most common outpatient treatments are for malaria (19%), diseases of the skin (15%), acute respiratory infection (12%), diarrheal diseases (4%), eye and ear infection (3%); these five categories account for approximately 53 percent of the cases, with malaria claiming over a third of these.⁶

Food consumption was assessed in the Southern Division study during August-September, 1977, the dry season, but after a relatively good rainy season. Respondents were asked the type of food and the frequency it was eaten the previous day. The only significant difference between the two study sites was in the use of fats/oils; the one site where oil was used is 3-5 km. away from a hospital where cooking oil was given out at clinics to be used for undernourished children. The information revealed that households tend to have only two meals a day, consisting primarily of cereals and legumes. Milk is seldom consumed and animal protein is rare.

Food given to children under 5 years old was the same in the two study sites, except for fats/oils being higher in the site closest to the hospital. Millet and sorghum were served, usually three times a day, and these were accompanied by legumes, mainly cow peas, at least once a day. The fruits which were sometimes given are mainly wild ones, added to a porridge or eaten separately.

5. J. H. Munyao et al "Kitui Primary Health Care Program" Department of Community Health University of Nairobi, August 1977.

6. Consortium for International Development, Kenya Marginal/Semi-Arid Lands Pre-Investment Inventory, Report No. 6, August 1978.

Data on the nutritional status of children indicate the prevalence of mild to moderate causes of protein energy malnutrition (PEM). PEM in dramatic form causes kwashiorkor, marasmus and combinations of the two. Moderate PEM reduces resistance to disease and infection, which lower further the nutritional status. The following table summarizes findings on the nutritional status of children in Kitui.

Table 3: Summary of Anthropometric Findings of Nutrition Surveys in Kitui District

Division/ Location	Year	Ref.	No. of Children	Age (Months)	Percent of children Below Specified Cut- off for Weight-Age	
					Below 80 Percentile	Below 60 Percentile
Central (Muthale)	1978	Malone and Noel	129	0-60	45	
Southern (Mutomo)	1977	Munyao and Mboloi	75	0-60	30 near hospital	0
Southern (Kanziku)	1977	Munyao and Mboloi	78	0-60	31 20-30 km. hospital	0 from
Eastern Province	1979	Central Bureau of Statistics	736	6-60	29	21
Eastern	1977	Central Bureau of Statistics	318	12-48	41	3

Source: Kitui Feasibility Study Report

The nutritional data for Kitui when compared with nationwide studies show Kitui among those districts with the greatest level of child malnutrition based on weight-age index. This implies that an overall attack on sources of poverty and an extensive program of preventive health care, need to be undertaken. The project will contribute to this type of strategy.

g. Project Feasibility

Unquestionably a community-based health care program focusing on curative services as well as preventive and promotive health measures is needed. The critical issues are communities' willingness and ability to financially support such a program. Willingness is related to perceived benefits and ability is related to financial status. Two assessments were carried out in Kitui, based on different methods, addressing these issues. In one, questionnaires were administered to a total of 23 men and 23 women in 10 rural communities in four divisions * at least 20km from a static health facility. In the second, group discussions, using a non-directive approach, were held in four communities ** with groups of men and women, at least 6 km from a static health facility.

In the facilitator sessions, the concept of CHWs was proposed as a possible way by which communities could help their members have better health. In only one of the four sessions did the participants select this as a strategy; in regard to remuneration these participants generally but not conclusively agreed that the CHW should be paid for drugs and treatment received by community members. Sometimes the subject of CHWs was pursued by the facilitators. There was general agreement in all sessions that people did not want to be involved in self-help fund-raising efforts, with the exception of construction of facilities. People feel that there are too many self-help activities and are uncertain over the actual use of the funds generated. When a couple of participants mentioned volunteer workers, others did not agree with them. They believed that CHWs should be remunerated to cover personal financial responsibilities and opportunities foregone. All communities commented on the frequent lack of drugs in existing MOH facilities. The desire for curative treatment is high and people said that they are willing to pay for drugs and treatment received. In three of the four communities this willingness was not connected with the idea of having a CHW. The participants focused almost exclusively on curative health. The discussions revealed a low-level of awareness of preventive and promotive health measures, except in the case of improved water supplies.

* Far North, Near North, Central and Southern Divisions

**Southern, Eastern, Far North and Near North Divisions

In comparison, in the interviews with household members the interviewees introduced the subject of CHWs by telling respondents:

"In some districts of Kenya there are community-based health care programs in which a man, woman or both are selected by members of the community to be trained in such things as maternal and child health care, diagnosis of disease and treatment of simple injuries, nutrition education and better environmental sanitation. After training these persons go back to their home community and work, sometimes on a part-time basis, with community members through home visits, community meetings (barazas), and people coming to consult them. They are sometimes volunteers, sometimes the community provides payment in money or in-kind, and sometimes an organization pays them a little money. We would like to get your views on the subject of whether a community-based health care program for Kitui District would be a good idea."

This set the framework for asking direct questions. Although 87 percent of the male respondents and 96 percent of the females accepted the principle of the CHW, they were less in agreement concerning the functions of a worker, as shown in the table below.

Table 4: Percent Distribution of Respondents by Perceived Functions of CHW

Function*	Distribution of Respondents (percent)	
	Males	Females
1. Preventive care (e.g. sanitation, teach personal hygiene, improve living standards, etc.)	30.5	4.3
2. Child care, family planning, midwifery, nutrition	13.0	30.5
3. Curative care (e.g. treat and nurse people, advice on drug taking)	34.7	56.6
4. Ambiguous (e.g. be kind and respectful, knowledgeable)	13.1	4.3
5. Other (e.g. do not know, answer not applicable)	8.7	4.3
	N = 23	N = 23

*Only the most important function is selected from a list of priorities.

Only 15 percent of the respondents thought that a CHW should be a volunteer; the others opted for a paid CHW. The type of remuneration preferred by 76 percent of all respondents is cash payment. In-kind payment even when accepted is likely to drop over time since residents are operating in the cash economy. The respondents were asked what would be the best and second best way of paying for CHW. The responses are shown in Table 5 below.

Table 5: Distribution of Respondents of 'Best' and 'Second Best' Method of Payment of CHWs

<u>Method of Payment</u>	<u>Distribution of Response</u>	
	<u>Male</u>	<u>Female</u>
Standard amount paid by each family	5	7
Payment according to wealth of family	3	3
Payment according to services received	9	17
Payment through an annual harambee fund raising effort	5	33
Payment by money raised through selling drugs	2	3
Payment by government or county council	57	30

Source: Questionnaires of Kitui Household Study

Whereas most respondents favored government funding of CHWs, 48 percent indicated a willingness to pay themselves through some measure.

The issue of ability to pay is more difficult to assess, since the necessary economic data from households are not available. Most Kitui households raise food crops and animals. Probably at least one-fourth receive remittances from members working away from the farm.*

* Based on figures from the Central Bureau of Statistic 1974/75 Integrated Rural Survey an average household in the project area expended Kshs 1,914 in cash of which Kshs 690 was for non-food purchase.

Drought is common and even in normal years many households do not have enough food to meet domestic consumption needs. Cash for essentials such as school fees is usually obtained through selling a goat or sheep. During a drought period like last year, animals were sold to purchase food. While animals are their main asset, most households cannot be considered wealthy given the few animals they possess. The survey showed 75 percent of the households with less than 5 cows, 30 percent with less than 5 goats and 35 percent with less than 5 sheep.

The cost of the CHW system is estimated at between Ksh 9.6 and 19.2 per individual per year depending on the arrangement the community works out with the CHWs. Some communities may want one part-time CHW, others may want one full-time and some communities may decide on two CHWs - both most likely working on a part-time basis. The remuneration for one part-time CHW is estimated at around Ksh 400 per month and a full time CHW at Ksh 800 (the same amount as for two part-time CHWs). Although payment may be in-kind, cash or a combination of the two, a Ksh value is imputed for purposes of analysis. If an average community of 500 opts for one part-time CHW at a cost of Ksh 4,800 per year the cost to each member would be Ksh 9.6. This figure would double for one full-time CHW or two on a part-time basis. The cost to a family of seven could, therefore, range between Ksh 67.20 and 134.40 per year. The willingness of households to spend these amounts on a community-based health system will depend on the benefits they perceive as a result of CHW and Community Development Fund activities.

The desire for health services, particularly curative, indicates that families are willing to use the limited funds at their disposal for this purpose. Their willingness to be part of the community-based health program will be based largely on perceived benefits. And, if these are realized, they are likely to continue in the program. In particular, the CHWs must be able to deliver the promised services and medicines. The CHWs' ability to diagnose and treat simple ailments and injuries is considered critical in maintaining a community's commitment to involvement. Thus, the initial training of these workers must focus carefully on a few basic curative treatments, so that the worker can deliver to community members services and drugs; the community will thus recognize an immediate benefit from their participation in the program. Other incentives for community participation discussed in the section on strategy are considered necessary ingredients for involving and maintaining involvement in the program.

2. Strategy for Involving Communities

Initially the project will focus on communities which have a good record of communal activities or functioning groups, since these indicate a history of cooperation and a management capacity. The identification of such communities will involve project personnel consulting with divisional development committees, and where operating, locational development committees or locational self-help committees. The communities will then be grouped geographically to ease travel and subsequent arrangements for training CHWs. A Sensitization Team will hold meetings with community members to discuss health problems and elicit responses in regard to what the community can do to help itself. The team will present the framework of the community-based health program. Since the program requires the community to support financially CHWs and to have a managing committee as well as to encourage preventive and promotive health care action at the community level, the communities will be asked to consider whether or not they wish to participate, and if so, whether they want one or two CHWs, the method of paying such a worker, the selection of a community health committee and its role, and the approximate number of participating households and geographic area of coverage. They will be asked to discuss these topics prior to the next meeting with the Sensitization Team. Ample time will be allowed for reflection and internal discussion. By this means each household will have time to learn about the program and reflect on its participation. In follow-up meetings a community plan will be drawn up. It will be very important for the Sensitization Team to present alternatives and to lead the community through an analysis of the implications of various alternatives and its decisions. It is important that community leaders do not decide on behalf of the community. Since the work of the Sensitization Team requires particular skills and a non-authoritarian orientation towards communities, one member of each Sensitization Team should have experience in community development work. Also wherever possible a community development assistant from the Ministry of Social Services and Culture will work with the Sensitization Team.

The project criteria for selection of CHWs are that the person be able to read and write Swahili, be 25 years or older, married or have children, and not have full-time off-farm employment. Also, CHWs will be elected by popular participation. The minimum criteria for CHWs is based on similar NGO programs and the results of Kitui household interviews. The criteria are considered necessary to provide a framework for the selection process. Based on this criteria it is unlikely that many older, respected women will be chosen since most of them do not meet the literacy requirement.

However, it is open enough, since it does not require a certain level of formal education, to allow for those who have attended adult education classes and for self-learners. The literacy requirement is necessary since the CHWs will be expected to keep simple records, use printed guides on health care and since they are expected to understand at a basic level scientific reasons for illness. Care must be exercised not to demand too much record keeping from the CHW.

Communities will be left to decide the sex of the CHW. Ideally each community would have a male and a female worker. However, due to the financial obligations it would entail, it may not be feasible for each community to select two workers. When the community elects to have only one worker, it is expected that they would choose a woman. Any community projects which might fall outside the normal pattern of sex-related roles, can be led by a member of the community health committee. Selection of a CHW by the community at large will mitigate against favoritism and will help to legitimize his/her position within the community.

It will be important that the number of households and geographic area be feasible for the CHW to cover. There may be a tendency for communities to suggest a large number of households in order to reduce each household's financial obligation. Approximately 70 - 100 households within a 4 km. radius per worker is considered maximum both in terms of coverage and reasonable in terms of financial obligation.

In regard to incentives, there is a great demand for curative services. The availability of free treatment and simple medicines within the community will meet an important felt need. Also, the potential for inoculation services being brought to the community will be an attraction. In regard to preventive and promotive health, care must be taken not to raise expectations. The major felt need in most communities is access to clean water. In most cases an improved water supply requires a significant input of outside technical expertise. However, some funds will be available through the Project Community Development Fund and less so the district's Rural Development Fund for building, where feasible, shallow wells, sub-surface dams and so forth. Since data on Kitui reveals that most households do not own simple hand tools, such as picks and shovels, which are essential for building pit latrines and refuse pits, some tools will be made available to communities for preventive health activities. It is only by this method of providing some outside funds that the project can expect significant community preventive health care action.

3. Role of Women

According to the 1969 census the sex ratio, i.e., the number of males per 100 females, was 89 for Kitui District. The imbalance of males to females is particularly high in the age range of 20-49 years. The dependency ratio (dependents are those under 15 years and those 60 and over) was 120. Kitui households tend to contain between 6-8 residents. About 59 percent of the farms are operated solely by women.

The Akamba place a high value on marriage, as do other ethnic groups in Kenya. Women join their husband's extended family unit upon marriage. Until bearing a child a woman is supposed to serve as an apprentice to the husband's mother. Usually, only upon bearing her first child does the wife receive a piece of land to cultivate for herself. The Akamba consider a marriage that does not result in producing a child as incomplete. A woman who cannot bear children is not respected by many, sympathized with by others. If a woman dies shortly after marriage or before being pregnant, bridewealth is supposed to be returned. However, if a woman produced children and they all died, bridewealth is not returned when she dies, since it is taken that the marriage was complete, i.e., the woman had performed her responsibility. Having sons has traditionally accorded parents a high social status. Children tend to be regarded as providing social and economic security: they are to take care of the parents when the latter are ill and aged and they provide status and posterity. Traditionally, the belief is held that God determines how many children a woman should have. These values and beliefs, however, are slowly changing among the young and highly educated.⁷

Polygamy also has been common, but its frequency is slowly diminishing. In polygamous households the basic unit is a woman and her children, with separate dwellings and gardens. In some cases wives do not inhabit the same compound, but are spread over a wide area.

The traditional division of labor between men and women has tended to change as women are frequently forced to do male jobs, due to lack of this labor input. Women may be found cleaning fields, tending cattle, applying fertilizer and plowing, all tasks the society ideal places on men. Women also carry out the responsibilities traditionally allocated to them such as planting, hoeing and weeding of food crops; harvesting crops; seed selection, storage and treatment; food preparation

7. T. B. Kabwegyere, "Determinants of Fertility: A Discussion of Change in the Family Among the Kamba of Kenya," Department of Sociology Staff Seminar No. 19, University of Nairobi, June 1976.

and processing; fetching water and firewood; grinding grain; making beer, honey, pottery and baskets; milking cows; and conducting certain rituals.⁸ Their work day tends to be about 15 hours.

A study carried out in one site, Katathya, Central Division, located 30 miles from Kitui town provides further information.⁹ Prior to the initiation of a water project, women obtained water from rivers and streams spending an average of 5 hours walking an average of 6 km. As a result of building a water catchment, the average distance is now 2-3 km. However, the time spent collecting water has not decreased mainly because of the time required waiting in line at a single communal water point. During the rainy season when the follow-up study was conducted, women reported making less trips for water. It is not known, however, whether or not alternative sources were used.

During the dry season and especially drought periods, it is not uncommon for women to walk 15 km. to fetch water. Enterprising ones will begin their trek about 3 a.m. so as to diminish the amount of time spent at the water source. Otherwise, when river bottom wells are used, patience has to be exercised waiting for the water level to revitalize after the previous drawer has finished.

The Katathya study provides information on time women spend on other tasks. Of course, the amount of time devoted to many functions varies with seasons, but certain ones remain relatively constant. On the average women spend at least 5 hours a day collecting water, between 2 to 2 3/4 hours cooking and about 3/4 of an hour collecting firewood. These women belong to households where an average of 6.9 people live and eat together and the average farm is 5.7 acres. Virtually all the women work on maize and millet fields and almost all cultivate sorghum and beans. About half spend time on cowpeas and fewer on green grams and other crops. During the agricultural season, women tend to spend about 17 hours a week weeding. An average of one hour a day is spent guarding fields from monkeys who have to be chased away. Slightly over half the women care for animals and poultry, which absorbs about eight hours a week. Almost half the women do not frequently market items; the others usually go once a week, spending five hours each time. Participation in self-help projects usually takes place during the dry season.

8. L. C. Redlect, "The Role of Women in the Kamba Household," Department of Sociology Occasional Paper, University of Nairobi, December 1971.

9. Martha Whiting and Abigail Krystal, "The Impact of Rural Water Supply Project on Women," CARE-Kenya.

Only about one fourth of the women in the sample attended educational programs or meetings held by health, agricultural or community development staff. All of these had attended one held by an agricultural officer: second most common was one conducted by a Community Development Assistant. In response to the question if they had more time what would they like to do to take care of their home, farms, or children, the most common reply was to improve or extend their farming. Women also mentioned participation in groups and improved hygiene of children.

4. Spread Effect

The project approach to community-based health care under the MOH is anticipated to have a spread effect. If successful, other districts are likely to request that similar programs be established to provide more adequate health coverage in their rural areas. Districts which are less poor than Kitui are especially likely to want to adopt a similar program. As for other arid and semi-arid lands (ASAL) districts, the project will reveal ways of providing primary health care to rural areas with low population densities. With the current GOK focus on ASALs the approach may be replicated in new programs for these areas.

Certain project components may be found very attractive and hence be spread. For example, funds are to be provided for simple tools to facilitate community preventive health activities. If criteria and procedures are developed which influence timely delivery of materials and effective actions, the GOK or other donors may be persuaded to provide funds for similar activities in this manner.

5. Social Consequences and Benefit Incidence

Approximately 98,000 persons (or 14,000 households) are expected to benefit through participation in the CHW component of the project. Benefits will be in the form of continuously available treatment of simple injuries and illnesses, free medicines, improved services of traditional midwives, inoculation of children and community-level preventive and promotive health activities. Indirect benefits will accrue particularly to women through a reduction in time spent attending static health facilities and going to shopkeepers for simple cures. A further 98,000 persons or 14,000 households in Far North, Near North, Eastern and Southern divisions will benefit through strengthening and expansion of static health facilities which will result in improved health care. Within the project area, there should be a reduction in mortality and morbidity due to an increase in health services.

The most direct beneficiaries will be up to 560 persons trained as CHWs. At least 60 percent of these CHWs are expected to be females. They will benefit through the creation of part-time jobs and an increased skill base as a result of training received. Approximately another 300 women, who are traditional midwives, will benefit from training received under the project. Approximately 150 MOH staff and officers will also receive training.

The project is designed to test the feasibility of a particular model of community-based health under the MOH. Implementation may reveal weaknesses in the model which will require modification. At project completion, if a successful model has been devised, the project should significantly impact on future rural health programs of the MOH. It should also help the MOH to redress its current bias in favor of urban areas.

Draft Scope of Work and Job Descriptions
for Technical Assistance

(This draft scope of work for technical assistance
is subject to revision after further review by
the GOK and USAID)

I. Background

The Ministry of Health (MOH), Republic of Kenya, has entered into an agreement with USAID/Kenya to strengthen its capacities to expand the delivery of rural health services. The activity will concentrate on expanding rural health services in Kitui District, Eastern Province, Republic of Kenya. The bulk of technical and other services that will be required to implement the project will be provided by a host country contract that will be awarded to an appropriate intermediary. This project will improve, upgrade and construct rural health facilities and institutionalize community-based rural health services delivery in Kitui District. USAID assistance is programmed to cover a period of six years.

The purpose of the project is to establish a more effective rural health care system in Kitui District. To accomplish this it will be necessary to strengthen and expand the network of health delivery facilities (health centers and dispensaries); augment equipment and supplies to rural health units (RHUs); and to train RHU staff to utilize, supervise and monitor Community Health Workers (CHWs). In addition, it will be necessary to organize local communities, select and train CHWs, and establish effective working relationships between CHWs, local communities, RHU staffs, private voluntary health agencies and divisional and district level agencies. The project sees as major objectives the establishment of an effective patient referral and a drug distribution system in the Kitui District.

By end of project, the GOK will have a demonstrated capacity to expand rural health services through a strengthened static infrastructure that supports and is integrated with a community-based delivery component that operates beyond the periphery of static facilities. Such a system will provide greater health coverage to the rural population than is possible with reliance on static facilities and which will be at a cost that the GOK and recipients can sustain in the future. The project will enable the GOK to undertake the broad-scale expansion of integrated community-based rural health services delivery in other areas of Kenya.

II. Tasks of the Long-Term Technical Assistance Team

The major task of the Technical Assistance Team will be to assist the MOH in the institutional development of an expanded primary health care project working with the District Health Team (DHT) comprised of the Medical Officer of Health (team leader), Assistant Medical Officer of Health, Hospital Secretary, Medical Superintendent, District Maintenance Officer and NGO Representative. The technical assistance team will also have independent reporting and other document preparation responsibilities to the USAID Mission/Kenya. The technical assistance team will have major responsibility to ensure that all policies, procedures and practices necessary for the effective operation of the expanded primary health care delivery system in the three target divisions are in place and are operational. Major institutional capabilities which are to be developed include new training programs and protocols, referral policies and procedures, monitoring and supervision practices, protocols for the distribution and dispensing of pharmaceuticals. The Technical Assistance Team will help to foster new cooperative arrangements between Government and private health organizations and improve relationships between local, divisional, district, provincial and headquarters agencies. All policies, procedures, and practices will be documented, tested and evaluated. Definitions of duties, lines of communication and reporting, and responsibilities among individuals and agencies will be clearly developed. Major tasks to be performed principally concern assisting the Kitui District Rural Health Management Team (RHMT) which will consist of Assistance Medical Officer of Health, Rural (Team Leader), Public Health Officer, Public Health Nurse (CN with MCH/FP), Health Education Officer, District Clinical Officer, Nutrition Officer, Statistician and NGO Representative. During the course of the project these responsibilities will include the following:

- A. Assist in selection and training of trainers of CHWs, TBAs and RHU staffs.
- B. Assist in developing an appropriate training program for CHWs.
- C. Assist in developing an appropriate training program for TBAs in conjunction with CHWs.
- D. Assist in developing an appropriate training program for RHU staff that will enable them to utilize, monitor, supervise and support the activities of CHWs in local communities.

- E. Assist in developing appropriate programs of continuing education and follow-up training for CHWs, TBAs and RHU staffs.
- F. Assist in the development of a referral protocol which provides data for administrative and evaluation purposes.
- G. Assist the MOH to expand its new prepackaged drug distribution system throughout Kitui District to include supplies for CHWs.
- H. Assist the RHMT in developing organizational relationships and procedures which provide coordination of Government and private health services delivery activities in Kitui District generally and coordination of the training, monitoring, supervision, evaluation, and technical support of CHWs and TBAs operating in local communities in particular.
- I. Assist in developing the training program and monitoring and evaluation procedures for community sensitization and motivation teams.
- J. Assist the RHMT and other district officers in developing procedures for integrating local community health development programs within the context of divisional and district level development projects.
- K. Assist the RHMT in developing policies and procedures that result in the effective deployment, utilization, and maintenance of equipment and vehicles in the targeted areas.
- L. Assist the RHMT develop operational procedures for administering the Community Development Fund to support health promotion and illness prevention programs.
- M. Assist the MOH in developing effective data gathering instruments and analytical techniques that provide information required for administration, planning, policy formulation and evaluation at all levels of the health delivery system.

- N. Assist the MOH in identifying the need for and the procedures and protocols required for special analytical and evaluative studies of the performance of the various components of the Kitui District expanded health care system as it evolves.
- O. Assist the MOH in developing mechanisms for reporting health information to the MOH Division of Planning and Development so this information is taken into account in formulating national health policy and plans.
- P. Provide administrative services to the MOH and the USAID Mission involving drafting scopes of work for consultants, procurement lists, Project Implementation Orders (Commodities, Technical services, Training) and Project Implementation Letters, as required for project implementation.
- Q. The Technical Assistance Team shall report as described in section IV. below.

III. Logistical Support

A. Professional Support Services

1. Three Member Technical Assistance Team Based in Kitui

Under the Project Agreement the GOK has agreed to provide office and phone services in Kitui District as required by the three member long-term Technical Assistance Team based in Kitui Town. The Technical Assistance Team will be assigned the services of two Stenographer-Typists Grade II or above, three Drivers and one Executive Officer/Messenger as specified in the Project Agreement. Office equipment, furniture and expendable supplies will be provided by the GOK. A list of appropriate items will be developed during the period of contract proposal submission and negotiations. Upon contract award, the Contractor will make arrangements to ship necessary imported items to Kenya so they arrive with the long-term technical assistance personnel. All imported items shall be imported "duty free" as stated in the Project Agreement. Per diem and travel allowances while on official duty shall be paid according to USAID-established rates and shall be financed from the award of contract funds.

2. Administration and Procurement Specialist
Based in Nairobi

The services of the Administration and Procurement Specialist will commence prior to the completion of contract negotiations and will be procured separately from the rest of the Technical Assistance Team. The professional support services (including communications and office supplies, project vehicle and vehicle operation and maintenance costs) for this officer will be financed from funds earmarked at post. No personal services or professional support services costs required on behalf of this officer are subject to host-country contract award.

The GOK will provide adequate office space, furniture and phone services to the Administration and Procurement Specialist in MOH headquarters in Nairobi. This officer will be assigned the services of one Stenographer-Typist Grade II or above, one Driver and one Executive Officer/Messenger as specified in the Project Agreement.

B. Personal Support Services

1. Three Member Technical Assistance Team Based
in Kitui

The contract discussions shall include negotiations concerning provision for housing of two U.S. long-term technicians and their families, educational allowances, home leave, utilities, night-guard services and international travel for long-term technicians and their families, shipping and storage of household effects and other matters as appropriate. Housing allowances for the Kenyan Civil Engineer will be included as an item subject to contract negotiations and award.

In all cases when applicable, allowable costs will be determined according to USAID standard provisions. Long-term technicians will be allowed initially to import personal effects and one privately owned vehicle (or purchase of same in Kenya) duty free within three months after arrival at post. APO, pouch, embassy check cashing privileges will not be extended to members of the long-term team or to their families. Services of the Embassy Medical Unit are extended to members of the Technical Assistance Team but not to their families, on an "as available basis" within the limits of first aid for accidents suffered in line of duty during official working hours. Any medical care beyond available first aid and all medical care required for the families of long-term technicians shall be the responsibility of the Contractor.

The GOK has agreed to construct new staff housing in Kitui District for two members of the Technical Assistance Team and their families. However, prior to the construction and consequent availability of such housing, members of the team and their families will lodge temporarily in Nairobi or elsewhere as most convenient to contract performance and reasonable comfort. Temporary living arrangements for two long-term technicians and their families are also the responsibility of the GOK as stated in the Project Agreement, the costs of which shall be subject to contract negotiations. Terms and conditions concerning temporary living arrangements for two long-term technicians and their families shall be discussed during contract negotiations. Amenities, immunities and other matters of tax remission and privileges and how these may be extended to long-term technicians and to members of their families by the GOK shall be discussed during the course of contract negotiations.

2. Administrative and Procurement Specialist
Based in Nairobi

All matters pertaining to the personal support needs of this officer shall be a matter of separate negotiation and are not subject to award in connection with the host country contract.

IV. Reporting

All members of the U.S. long-term Technical Assistance Team shall report to the Medical Officer of Health, Kitui District and to the Senior Deputy Director of Medical Services at the MOH headquarters. In all respects the team will be regarded as employees of the MOH but will have some reporting and other responsibilities to USAID/Kenya.

Long-term technicians will provide written reports quarterly, five copies to the Medical Officer of Health, Kitui District, the Senior Deputy Director of Medical services, MOH headquarters and two copies to the USAID Mission, Kenya. Such reports will be presented in a format agreed upon in the course of the development of the Technical Assistance Team's work program upon arrival in Kenya and shall be due not later than thirty (30) days after the expiration of each quarter's activity.

In addition, annual reports in the same number of copies to the above-named parties shall be submitted at the end of each full year of project activity. A final comprehensive report will be delivered in the same number to the above-named parties at least two weeks prior to the technical assistance team's departure from Kenya or termination.

V. Working Conditions and Relationships

Members of the long-term Technical Assistance Team will maintain normal working hours in Kitui and at the MOH Headquarters, as circumstances warrant, consisting of 0815-1245 hours and 1400-1630 hours Monday through Friday and 0830-1215 hours on Saturdays. Members of the Technical Assistance Team will be entitled not to work on all GOK public holidays and on the U.S. holidays of Thanksgiving and Independence Day. Long-term Technical Assistance Team members will be entitled to annual, sick and home leave days as per AID Standard Provisions.

VI. Draft Job Descriptions

The project calls for four long-term technicians: a Senior Health Planner, a Senior Health Training Specialist, a Civil Engineer and an Administration and Procurement Specialist. The qualifications and experiences required, working relationships and specific duties of each individual are specified below in draft. This draft will be thoroughly reviewed and finalized jointly by the GOK and USAID once the project has been approved and funded.

A. Senior Health Planner (5 years)

1. Qualifications

The incumbent will possess an M.D. with an MPH or equivalent experience, or a Ph.D. in economics, health administration, or related discipline with substantial experience in the health field beyond clinical training and purely academic research. The incumbent should have a broad understanding of health care organization, programming, primary health services delivery, community organization and health planning. This person's qualifications should warrant appointment at the private sector equivalent of a GS-15 level or above.

2. Experience Requirements

The incumbent should have a minimum of ten years experience beyond the completion of educational study. This should include substantial successful experience in working in sensitive settings in developing countries and involving work with government health agencies. Previous experience in health planning, primary health services delivery and especially community-based health systems in a developing country context, preferably in Africa, are required.

The incumbent must have demonstrated leadership capabilities through the management of field studies and organizational units in the health sector. He or she must also have demonstrated the ability to be sensitive to political constraints within a developing country context.

The person must be experienced in the coordination of and working with host country counterparts and in working cooperatively with technical assistance personnel from other than host-country agencies. He/she must be willing to accept direction and supervision from senior host country officials.

3. Relationships

The incumbent will act as the Chief of Party of a four member long-term Technical Assistance Team and coordinate the efforts of forty person months of consultant activity. This person will report directly to the Senior Deputy Director of Medical Services at the Ministry of Health Headquarters and the Medical Officer of Health, Kitui District. He or she will also serve as counterpart to the Assistant Medical Officer of Health, Kitui District. He/she must be sensitive to professional differences of opinion and be able to integrate the resources available to the project into a complex technical and political setting.

4. Duties and Responsibilities

The incumbent will have shared responsibility for the overall direction of the project, including the delegation of significant responsibility to the other members of the U.S. Long-Term Technical Assistance Team and to short-term consultants. The complexity of the project requires a major division of labor among all technical assistance components. It will be necessary to develop individual work programs and scopes of work as well as to organize components into an integrated program of activity. It is essential that individual work programs and the overall project work programs be developed collaboratively with senior GOK officials and receive their approval prior to the substantial initiation of project activity. The specific duties and responsibilities listed below for this position are tentative and are subject to revision as a result of specific consultation between Technical Assistance Team members and GOK officials.

Duties and responsibilities of the senior health planner include the following:

- a. Serve as Chief of Party with responsibility for the overall direction and coordination of the technical assistance activity provided in connection with the project.
- b. Work cooperatively as a counterpart with the Assistant Medical Officer of Health, Kitui District, in the technical design and implementation of project components.
- c. Assume major responsibility for the oversight and preparation of project documentation and reports, special analytical studies, and USAID project-related documents.
- d. Work with the Senior Health Training Specialist, the Civil Engineer, the Administration and Procurement Specialist, and the Assistant Medical Officer of Health in the development of an work program for the project as well as assisting in final drafting and review of individual work programs and consultant's scopes of work.
- e. Serve as the principal representative of the Contractor and work with the Administration and Procurement Specialist in administering the procurement, deployment, and utilization of all commodities acquired for purposes of implementing the project and maintain records of expenditures of contract funds.
- f. Assist in coordinating project activities with other USAID-funded projects in Kitui District, the MOH headquarters, and elsewhere in Kenya as appropriate.

- g. Work with the other three members of the Technical Assistance Team in the overall development and monitoring of project implementation including monitoring progress of facility construction, upgrading and improvement; staffing of facilities and mobile units; training programs; CHW activities; equipment and vehicle procurement deployment and utilization; and drug procurement, distribution and utilization.
- h. Assist in the development of referral protocols at community, dispensary, health center, health center/headquarters and district hospital levels and upward as appropriate.
- i. Work with RHMT and the Senior Health Training Specialist in developing organizational relationships and procedures which coordinate Government and private health services training and delivery activities in Kitui District.
- j. Work with the Senior Health Training Specialist in assisting the RHMT to develop procedures and policies for coordinating training, monitoring, supervising, evaluating, and technically supporting CHWs and TBAs working in local communities.
- k. Work with the Civil Engineer in assisting the RHMT and other district officers in developing procedures for integrating local community health development activities within the context of divisional and district level social and economic development.
- l. Work with the Civil Engineer in assisting the RHMT develop operational procedures for administering community Development Funds allocated to local communities to support health promotion and illness prevention programs.

- m. Work with the Senior Health Training Specialist and expert consultants in developing data gathering instruments and in applying tools and analytical techniques that produce information required for administration, planning, policy formulation and evaluation at local community, RHU, district, provincial and MOH headquarters levels.
- n. Work with the Senior Health Training Specialist and consultants in identifying procedures and protocols required to conduct special analytical studies of the various training and delivery components of the project as it evolves.
- o. Work with the Senior Health Training Specialist and consultants in developing mechanisms for reporting the results of analytical studies and other information gathering activities to the to-be established so that this information is used in formulating national health policy and plans.

B. Senior Health Training Specialist (3 years)

1. Qualifications

The incumbent will possess an M.D. degree or doctorate in health administration, public health, or possibly health occupation education with substantial experience in the health field beyond clinical training and purely academic research activity. The incumbent should have substantial understanding of health care organization and delivery and the teaching and evaluation of professional and paraprofessional health workers.

This officer's qualifications and background should warrant appointment at the private sector level equivalent of GS-15 level or above.

2. Experience Requirements

The incumbent should have a minimum of ten years experience beyond the completion of educational study. Experience should include substantial involvement in curriculum design, teaching, and evaluation of professional and paraprofessional health workers in a developing country context, preferably in Africa. It is imperative that the incumbent have substantial experience in developing training, monitoring and evaluation programs for village or community health workers or equivalent cadres of health workers in a developing country context. The incumbent should have demonstrated a capacity to undertake independent activity and the ability to work collaboratively with host-country colleagues in rural settings.

3. Relationships

The incumbent will act as the Deputy Chief of Party of the four member Long-Term Technical Assistance Team and will coordinate the efforts of forty person months of consultant activity. The officer will report directly to the Chief of Party and the Assistant Medical Officer of Health. The officer must be sensitive to professional differences of opinion and be able to integrate technical training resources available to the project into a complex rural health setting.

4. Duties and Responsibilities

The incumbent will share responsibility for the overall direction of the project, but will have principal responsibility in the area of training, curriculum design, and training evaluation. The incumbent will have major responsibility for the delegation of responsibilities to short-term expert consultants in the area of training.

- a. Serve as Deputy Chief of Party and assume major responsibility for the development of training programs and materials, the selection and supervision of training consultants.
- b. Assist the Senior Health Planner in the preparation of project documentation and reports, special analytical studies, and USAID project related documents.

- c. Work with the Senior Health Planner and the Assistant Medical Officer of Health in the development of an overall work program for the project and draft scopes of work for training consultants.
- d. Work with the Senior Health Planner in the overall development and evaluation of project implementation including monitoring progress of facility construction and upgrading; staffing of facilities and mobile units; training programs; equipment and vehicle procurement deployment; progress of CHW programs; and adequacy of drug procurement.
- e. Work with the Senior Health Planner in assisting the RHMT to develop procedures and policies for coordinating training and monitoring, supervising and evaluating support of CHWs and TBAs.
- f. Work with the Senior Health Planner and expert consultants in developing data gathering instruments and analytical techniques that produce information required for administration, planning, policy formulation and evaluation purposes at local community, RHU, district, provincial and headquarters levels.
- g. Work with the Senior Health Planner and expert consultants in identifying procedures and protocols required for special studies of the performance of the various components of the project.
- h. Work with the Senior Health Planner and expert consultants in developing mechanisms for reporting the results from studies and information gathering activities to the MOH in order that this information will be taken into account in formulating national health policy and plans.

- i. Assist the RHMT in developing organizational relationships and procedures for coordinating Government and private health services delivery activities.
- j. Assist the RHMT in developing training programs, monitoring and evaluation procedures, and materials required for village sensitization and motivation teams.
- k. Assist the RHMT in developing criteria for selecting trainers of CHWs, TBAs and RHU staff and develop appropriate training programs, procedures, and materials for these cadres.
- l. Assist the RHMT in developing training programs, procedures and materials (e.g. visual aids, manuals) for CHWs and TBAs as well as treatment protocols for CHWs.
- m. Assist the RHMT in developing a training program and materials for RHU staff including appropriate protocols for effectively utilizing, monitoring, supervising and supporting the activities of CHWs and TBAs in local communities.
- n. Assist the RHMT and trainers in developing and scheduling follow-up training for CHWs, TBAs, and RHU staffs.

C. Civil Engineer (local hire 4 years)

1. Qualifications

The incumbent should possess a degree in Civil Engineering.

2. Experience

The incumbent should have a minimum of three years experience beyond completion of educational study. Experience should include at least one year's involvement in

supervising design or construction of rural water supply or sanitation projects in Kenya. Previous experience in working with local communities or self-help groups is desirable.

The incumbent should be able to initiate design water and sanitation projects and be able to work amicably with local communities and district and Ministry officers. He or she must be able to speak Kiswahili fluently (FSI-3 level). Some knowledge of Akamba is desirable.

3. Relationships

The incumbent will report to the Chief of Party for administrative supervision and will receive technical and managerial direction from Ministry of Health Officers.

4. Duties and Responsibilities

The incumbent will be primarily responsible for the implementation of the community health activities financed by project's Community Development Fund. He or she will also provide periodic supervision of buildings under construction at various health facilities in Kitui District.

Specific duties and responsibilities of the Civil Engineer include the following:

- a. Serve as advisor to the RHMT with responsibility for the overall direction and coordination of technical matters relating to community self-help projects such as water supply, sanitation and drainage.
- b. Work cooperatively with and seek advise from officers of various ministries, Kitui District and Kitui County Council responsible for managing human and natural resources.
- c. Review with the RHMT proposals for Community Development Fund projects. The review will include technical designs and cost estimates including quantities of materials required to implement projects.
- d. Provide guidance to local communities in the design, construction and maintenance of community health development projects.

- e. Undertake environmental assessment of each project as required by Government of Kenya and USAID regulations.
- f. Be responsible for procurement and delivery of materials for the construction of community health projects in accordance with GOK and USAID regulations.
- g. Make periodic site visits to inspect the progress and the completion of development projects.
- h. Prepare quarterly progress reports and a project completion report for each activity.
- i. Co-operate with AID officials in evaluating various project activities.
- j. Advise as to the use of appropriate technologies for each project.
- k. Make periodic site visits to inspect the progress and the completion of health facilities financed by AID. Prepare appropriate reports after each site visit noting in particular construction, contractor's workmanship, adherence to specifications and design, progress and possible delays.

D. Administration and Procurement Specialist (3 years)

(This officer will be considered as part of the TA Team; however a separate PIO/T and contract will be executed for his/her services based on information in this annex. The Administrative and Procurement Specialist should be on board approximately eight months before the rest of the TA Team.)

1. Qualifications

The Administrative and Procurement Specialist should possess a Bachelor's degree in engineering, planning or business administration.

2. Experience

The incumbent should have a minimum of five years experience managing construction or design of rural facilities or of buildings with some experience in procurement. Previous experience in working with a host government ministry, preferably in Africa, is required.

The incumbent must have leadership capabilities demonstrated through the management of the design or construction of a building project costing over one million dollars.

The incumbent must be experienced in working with host-country officials and technical personnel.

3. Relationships

The incumbent will work as a staff member of the Ministry of Health in a line position in the Ministry's Planning Division. The officer will report directly to the Senior Deputy Director of Medical Services or the Assistant Director of Medical Services. He or she will carry out responsibilities in accordance with Government of Kenya's and Ministry of Health's Code of Conduct for Government employees in similar positions. As a member of the Technical Assistance Team the incumbent will coordinate his/her activities with the TA Chief of Party.

4. Duties and Responsibilities

The incumbent will be the initial contact person in the Ministry of Health for all matters relating to the design and construction of health facilities and the procurement of goods and services required by the Technical Assistance Contractor and as delegated by the Senior Deputy or Assistant Director of Medical Services. In particular, the incumbent will:

- a. Coordinate with the Ministry of Works and private consulting firms concerning the design and construction of health facilities.
- b. Prepare scopes of work for the design of health facilities by private consulting firms.

- c. Help in the negotiation of contracts with consulting firms and construction contractors.
- d. Prepare specifications of equipment required for each health facility.
- e. Co-ordinate the procurement of equipment and supplies.
- f. Make periodic site visits to inspect the progress of construction activities and the completion of each building.
- g. Arrange logistic support for the Technical Assistance Contractor.
- h. Approve payments to consulting firms responsible for the design and supervision of health facility and housing construction.
- i. Assure that the procurement of consulting and construction services and equipment and supplies are in accordance with AID and GOK rules and regulations.
- j. Prepare quarterly progress reports concerning the status of construction activities and the procurement of commodities.
- k. Approve payments to construction contractors suppliers of commodities.
- l. Cooperate with AID and MOH officials in implementing project activities.

E. Consultant Services

1. General Considerations

The project calls for 40 person months of consultant services. It is estimated that about 10 person months of consultant services will be available locally and the remaining 30 person months of such services will be procured from the U.S.

2. Qualifications

Consultants should have prior experience working in developing countries, preferably in Africa. They should be capable of working harmoniously with other professionals and with host-country officials in the field setting.

Due to their technical expertise required by the project, it is believed that consultants should mostly be senior experts in their respective fields warranting appointments at the private sector equivalent to a GS-14 level or above.

3. Categories of Need and Time Requirements

Projected categories and estimated time requirements are as follows:

	<u>Category</u> - Project Implementation	<u>Time Requirements</u>
a.	Design and implementation of curricula and training programs	8 months
b.	Development of referral network	8 months
c.	Adaptation of logistics systems (medical supplies, drugs, etc.)	4 months
	<u>Category</u> - Evaluation, Establishment of Health Information System, and Design of Special Studies	
a.	Evaluation	6 months
b.	Establishment of health information and evaluation system	4 months
c.	Design of special project activities (e.g. Community Development Fund)	10 months
	Total	40 months

4. Relationships

Consultants shall work under the general direction of the Technical Assistance Team Chief of Party or Deputy Chief of Party as specified in scopes of work. Consultants will be expected to submit 5 copies of reports based on scope of work presenting findings, analyses and recommendations to the Chief of Party prior to departing country, who in turn will make copies available to District Medical Officer, USAID, and MOH headquarters as appropriate.

In-country clearances will be required of all external consultants prior to entry into Kenya.

STANDARD LIST OF EQUIPMENT FOR HEALTH CENTERS

<u>QUANTITY</u>	<u>EQUIPMENT</u>
<u>Garage Store</u>	
1	Ladder
1	Wheelbarrow
1	Footstool
1	Tool Kit
<u>Public Health Technician Store</u>	
1	Work-bench (fixed) Carpenters vice stool/masonry/carpenters kit
<u>Sampling and Inspection Kit</u>	
1	Butcher's knife
1 pair	Gum Boots
1	Spray pump
1	Scoop & container (litre)
2 dozen	Test-tubes, graduated
6 pair	Hand gloves
1	Protective apron
2	Rain coat
1	Torch
2 dozen	Polythene specimen bags
1 dozen	Bacteriological containers
<u>Lobbies/Toilets</u>	
NIL	

Health Office

1	Office table
4	Office chairs
1	Drawing board
1	Drawing stool
1	Set of drawing instruments
1	Waste paper receptacle

Staff Room

1	Table 36 x 130cm x 75cm high
7	Chairs
1	Waste paper receptacle

Consulting Room MCH/FP

1	Examination couch
1	Step surgeon
1	Screen or rails
1	Office desk
2	Chairs
1	Bench, loose
1	Bucket, pedal action
	NB. Instrument trolley to contain basic dressing equipment.
1	Instrument trolley
1	Adult scale (with heights)
1	Foetus-scope
1	Tape measure (3m)

1	Pelvimeter
1	Stethoscope
4	Scissors, ordinary
1	Bulletin board
1	Sphygmomanometer
1	Clinical thermometer
1	Diagnostic set
1	Torch
1 packets	Spatulla, wooden
1	Spatulla, metal
1	Immunization kit
1	Baby scales
1	Refrigerator (6.5 cu.ft.)

Consultation Room FP

1	Gynaecology Couch
1	Step surgeon
2	Filing cabinets
1	Ordinary stool
1	Trolley instrument
1	Card index
1	Bucket, pedal action
1	Stethoscope
2	Scissors, ordinary
1	Bulletin Board .
1	Syphgnomanometer
1	Torch
1	Family planning kit

Consultation Room

1	Examination couch
1	Step surgeon
1	Screen and/or rails
1	Office desk, MOW No. 15/51562/456
2	Chairs 15/51562/21
1	Bench loose, MOW No. 15/51562/50
1	Bucket, pedal action
1	Adult scale (with height)
1	Foetuscopal
1	Tape Measure (3m.)
1	Pelvimeter
1	Stethoscope
1	Bulletin Board
1 dozen	Clinical thermometer
1	Diagnostic set
1	Torch
1 packet	Spatulla, wooden
1	Spatulla, metal
1	Protatable, light
1	Cool boxes

Cleaners Room

1	Stool, high, MOW No. 15/51562/24
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Urine Test Room

1	Bed-pans and covers urinals
	Urine test with 20 oz. glass tubes graduated
1	Spirit lamp
1	Reagents (i) Albustix (ii) Olnistic
100	Disposable urine containers 6" x 5" tubes
1	Wooden rock
1	Urinometer
1	Stool high

Waiting Room MCH

General

2	Flower boxes 600 x 1200 cm
1	Bench 500 x 1000 cm

Waiting Area Registration

NIL

Registry

1	Table (office)
2	Chairs, office 665 x 530 cm. x h760 cm.
1	Card index
2	Cabinets, filing (steel) 4 drawers, stove enamel
1	Typewriter (manual, 15' carriage)
1	Chair, typist
1	Desk, typist (with single pedestal)
1	Bulletin board
1	Cupboard, stationary (metal)

Waiting Passage

NIL

Pharmacy

2	Stools, high
1	Refrigerator (big)
4	Brushes for test-tubes washing, assorted sizes
1000	Pollypots
4	Funnel, stainless steel
3	Graduated glass measure
100	Dispensing paper ream
5	Plastic containers
2	Chairs, MOW, MOW No.15/51562/22

Dressing Room

1	Dressing bench (high)
2	Bench ordinary - MOW No. 15/15562/50
2	Stool, ordinary
1	High stool MOW No. 15/15562/24
1	Dressing trolley
1	Sterilizer bowl, water
4	Kidney basin
2	Lotion bowls
4	Gullipots
1	Measuring tape (1m)
2	Bucket, pedal action
24	Dressing towel

2	Hand towels
2	Scissors, bandage
6	Forceps, artery mosquito
6	Dressing forceps
2	Chetal forceps with a jar
1	Examination couch
22	Stitch removing scissors
6	Drum sterilizing dip
2	Sinews forceps

Injection Room

1	Table
1	Bench MOW No. 15/51562/50
1	Revolving stool
1	Stool high, MOW No. 15/51562/24
1	Examination couch
1	Foot stool
1	Sterilizer
1	Instrument trolley
1	Bucket, pedal action
1	Kerosene stove
1	Sufuria big - 300 mm
2	Dressing jars
4	Kidney basins
2	Instrument trays with covers
36	Nylon syringes 2 cc.
36	Nylon syringes 5 cc.

20 Nylon syringes 10 cc.
60 Needles, hypodermic
1 Scissors paper

Consulting Room CN

1 Table/45A
1 Chair/21
1 Bench/50
1 Examination couch
1 Step surgeon
1 Bucket, pedal action
1 Instrument trolley
1 Torch
1 packet Spatulla, wooden
1 Spatulla, metal
1 Stethoscope
1 Tape measure
1 Scissors, paper
1 Bulletin board
2 Clinical thermometer
1 Diagnostic set
1 File tray
Curtain windows

Consulting Room CO

1 Examination couch
1 Table MOW No. 15/51562/45A, pedestal
1 Chairs

1	Diagnostic set
1	Bench, ordinary
1	Torch
1	Sphygmanometer
1	Bucket, pedal action
100	Spatulla, wooden
2	Spatulla, metal
1	Safe with T.S. Number
1	Tuning fork
1	Stethoscope
1	Dissecting forceps
1	Dressing scissors
1	Ophthalmoscope
1	Nasal speculum
1	Larynsal mirror
2	Clinical thermometer
1	Adult weighing scale
2	Kidney dish, small
2	Kidney dish, medium
1	Screen

Minor Surgery

1	Revolving stool
1	Bench/50
1	Examination couch
1	Foot-stool

1		Bucket, pedal action
1		Angle poise lamp
1		Box instrument
1		Instrument trolley
6		Gowns, surgeon
12		Masks, green
24		Dressing towels
30		Gloves, surgeon
6		Forceps
6		Scissors
Consummables (as needed)	(((Suture materials Syringes Needles
4		Graduated measure
1		Tourniquot
2		Nail brush
12 oz.		Catheters, assorted
1		Suction pump
		Adaptors, nylon 1/16
		Bottle droppers, plastic
		Fracture splints
		Cannula
1		Stomach tube
1		Local anesthetic
1		Oxygen cylinder
1		Instrument Tray

6 Dressing jar
1 Patella hammer
1 Tape Measure (3m)

Laboratory

2 Centrifuge, large and small
1 Colorimeter (portable)
1 Refrigerator, 8.5 cu.ft.
1 Autoclave, small
1 Distiller
2 Microscopes (e.g. Zeiss or Leitz)
1 Scale balance, 1/2 gram - 1 kg.
1 Spencer Haemoglobinometer
1 Eye-ton reflomat
2 Westergren-racks
1 Venturi pumps
1 Battery charges, small
1 Bucket, pedal action
1 Water bath, small
2 Jerricans/buckets, 20 liters
1/2 dozen N-Multi-Stix bottles
1/2 dozen Burrets assorted sizes
2 Counting chambers & coverslips
2 Tally cell counter
6 dozen Microscope slides, assorted sizes
1/2 dozen Graduated cylinder, assorted

6 gross	Cover slips (micro), assorted
2 dozen	Racks for staining tests
2 dozen	Wire nickel SWG, Gauge 24
1 gross	Heparanized capillary tubes plain
20 gross	Stool containers (polypots)
20 gross	Urine containers (bottles universal)
20 gross	EDTA blood containers
20 gross	(Ethyline diemintetra acitic BK)
1 dozen	Urostrat
1	Pipette washer (automatic)
1/2 dozen	Test tube racks (assorted)
1 gross	Test tubes (assorted sizes)
4	Laboratory stools
1	Chair MOW No. 15/51562/21
1 dozen	Pipettes, assorted sizes
2 dozen	Flasks, assorted sizes
1/2 dozen	Beakers, assorted sizes
2	Forceps
2	Scissors, ordinary
1	Dymo tape
1	Diamond penal
1/2 dozen	Glass tubing, assorted sizes
1/2 dozen	Rubber teats, assorted sizes
2	Sufurias (small & large)
2	Test tubes wire brackets

1	Draining boards
1/2 dozen	Grouping tiles & racks
1	Timer clock
1	Stop watch
1	Decicator, Medium
2	Sieves, metal
1	Lovibond comparator
2	Bunsen burner, straight
2	Bunsen burner, rings

Water Closet

General Store

NIL

NIL See general equipment.

NIL

Store Lines & Medical Equipment

2 Bed Ward

2	Hospital beds
2	Lockers, patients
2	Stools
2	Easy chairs
2	Bed head ticket boards
4	Bulldog clips
12	Blankets
12	Sheets
4	Pillows

12 Pillow slips
3 Mattresses
4 Counter pans
3 Bed canvasses
1 Bulletin board
2 Carafes
24 Patients gowns
30 Childrens gowns
2 Mackintoshes

2 Bed Ward

2 Hospital bed with fixed cots
2 Cots - 1 child - 1 baby
2 Lockers, Patients
2 Stools
2 Easy chairs
2 Bed head ticket boards
4 Bulldog slips
12 Blankets
12 Sheets
4 Pillows
12 Pillow slips
3 Mattresses
4 Counter pans
3 Bed canvasses
1 Bulletin board

2 Carafes
24 Patient gowns
30 Childrens gowns

6 Bed Ward

2 Bed with cots attached
2 Bedside cots (1 small - 1 big)
2 Stools
1 Blind for 3 x 120 cm. windows
2 Stools
2 Easy chairs
2 Bed head ticket board
4 Bulldog clips
12 Blankets
12 Sheets
4 Pillows
12 Pillow slips
3 Mattresses
4 Counter pans
3 Bed canvasses
1 Bulletin board
24 Carafes
30 Childrens gowns
6 Mackintoshes

Yard

NIL

Nurses Bay

1 Table MOW No. 15/51562/45B
2 Chairs MOW No. 15/1562/21
1 Easy chair
Tea set
1 Hot plate
1 Records trolley
1 Medicine
6 Clinical thermometers
1 Treatment set (medication)
1 Shaving tray
1 Enema tray
1 Admission couch with screen

Clean Utility

1 Clean utility trolley
1 Sterilizer
1 Autoclave

Delivery Room

1 Stool ordinary
1 Oxygen set complete with the following items:
Stand
Flow-meters
Gauge
Key
Wolf's bottle
Nasal catheters
Oxygen faces masks

4 sets	Delivery trolley with equipment:
	Spencer wells forceps
	Kidney basin
	Scissors, share cutting
	Umbilical scissors
	Towel surgeon
6	Green dressing
6 1/2 - 8	Gloves, assorted
1	Lignocaine
1	Stitch scissors
1	Delivery couch
1	Sucking machine
1	Cat-gut suturing
Consummables (as needed):	(Needles, syringes 2 cc.
	(Syringes, I.U. cc.
	(Intramuscular needles
	(Cord ligature clamps
	(Sanitary towel pads
	(Egametriñ spirit antiseptic
	(Surgeon gowns and masks
1	Foetuscope stethoscope
1	Syphygonomanometer
<u>Dressing Material</u>	
1	Baby scale
1 dozen	Bed pans
2	Sterilizer 1 small

1 1 big drip
Drip stand
1 Resuscitation table
1 Suction machine
10 Mucus extractor
NB Taps in this place should be elbow
opening taps
1 Draw mackintosh
1 dozen Draw sheets
1 Delivery bed

Dirty Utility

1 Dirty utility trolley
1 Sterilizer
1 Autoclave

6 Beds Ward

6 Hospital beds
6 Portable lockers
8 Baby cots
7 Mattresses
14 Pillows
28 Pillow slips
28 Draw sheets
7 Mackintoshes
7 Canvas covers
14 Counter pans
22 Blankets
28 Patient gowns

7	Carafes
4	Basins, plastic
2	Personal weighing machine
<u>General Store</u>	
10	Dust bins
4	Watering cans
10	Dust collecting pans
4	Rakes, garden
4	Chairs, garden
4	Jembes
1	Claw Hammer
2	Ladder, step
2	Nail extractor
2	Wheel barrows
10	Door mats 'fiber'
50	Brushes bass head
24	Brushes banister
50	Brushes, broom
50	Brushes, nail
50	Brushes, scrubbing
4	Brushes, cobwebs
20	Mops, common
12	Brushes, test tube
1	Machine, weighing platform
2	Machine, mowing
1	Motor mower (heavy duty)

10	Dishes, soap
6	Lamps, hurricane
12	Foam mattresses 3"
6	Slashers, grass cutting
4	Sprayer insecticide
6	Stoves pressure 2 burner
6	Torches, hand
6	Torches, pen light
6	Children's cots

Kitchen

36	Cups, tea
36	Forks, table
36	Spoons, table
36	Spoons, tea
36	Knives, table
36	Plates, dinner
36	Plates, tea
36	Carafes with tumbler
12	Trays, dining
1	Clock, wall
6	Ladles, cook
2	Milk, ladle
2	Ladle, pouring
2	Serving spoons
2	Meat fork
4	Knives, kitchen

2 Knives, bread
2 Tin, openers
2 Choppers, meat
2 Food, pails
2 Jugs 1 pt., graduated
2 Jugs 2 pt., graduated
2 Kettles 4 pts.
2 Kettles 6 pts.
2 Ewers 10 pts.
1 Refrigerators
1 Machine, mincing (manual)
4 Sufurias, small 20 cm. diameter w/cover
6 Sufurias, medium 30 cm. diameter w/cover
4 Sufurias, large 60 cm. diameter w/cover
3 Saucepans, small
2 Saucepans, large
24 Mugs, enamel
2 Pans, frying large
4 Pots, tea
2 Strainers, tea
2 Strainers, soup
1 Cooking range with 3 plates 60 x 60 cm
1 Jiko (prison economic type), big
1 Table 60 x 60 cm.
1 Chair MOW No. 15/51562/21
2 Gas cylinders

1 Counter weighing scale

2 Tin boxes with covers

Laundry

Washing machine, 8 kg.

1 Dry weight

4 Laundry trolleys (clean linen)

1 Stool

2 Iron boxes, charcoal

1 Iron boxes, electric

1 Manglin wringer

4 Trolleys (dirty linen) with stool high

1 MOW No. 15/51562/24

Sluice Room

To be decided

DRUG SUPPLY SYSTEMA. Specific Problems Related to Supply of Rural Health Facilities

The principal problems with respect to supply of drugs to Rural Health Facilities (RHF), include the following:

1. Supply Orders

Orders of drugs by RHF in the past have been packed with those for district hospitals. In many cases hospital secretaries have "second guessed" the drug requirements of RHF.

2. Distribution to RHF

Drug consignments have been distributed from Central Medical Stores (CMS) to district hospitals with no protocol for allocation between district hospitals and RHF. This has allowed district hospital administrators to select drugs according to their perceptions of hospital needs leaving the remaining less sophisticated or less desirable drugs for RHF. Consequently drugs supplied to RHF bear little relation to patient utilization levels or disease patterns in RHF's service areas.

3. Records, Management and supervision

Record keeping for drug orders, receipts, distributions, and dispensation is inadequate. Supervision is virtually impossible due to the lack of adequate records. The result has been inappropriate and sporadic supply to RHF, poor dispensing practices, and serious wastage of drugs at all levels.

B. Ministry of Health Proposed New Drug Management System1. System Objectives and Schedule of Implementation

In 1980 the Ministry of Health (MOH) developed a new drug management system to address the above problems. The objectives of this system are twofold:

- to improve the availability of drugs so that at least 80 percent of listed essential drugs are available at RHF; and

- to improve the use of drugs so that at least an 80 percent adequacy in the management of patients will be achieved.

The MOH has been pilot-testing the new system in two districts (Kilifi and Embu). It had planned to begin nationwide implementation of the system in January 1981, but implementation is about a year behind schedule. When nationwide implementation commences, Kitui district will be one of the first districts to make use of the new system.

2. Brief Description of System

Note: In section E below the proposed drug management system is reproduced in its entirety with its Annexes providing guidelines for clinical diagnosis and management of drugs by RHF's.

a. Essential Drugs, Equipment and Supplies Protocols

A standardized list of essential drugs and standardized dosages has been drawn up for each type of RHF in Kenya. In addition, the MOH has developed guidelines for clinical diagnosis and standardized treatment schedules for common illnesses as well as a list of essential diagnostic and treatment equipment and requisite supplies. These lists and guidelines have been developed for the diseases treatable at each type of RHF and the level of training of staff of each.

b. Prepackaging Distribution System

In those Rural Health Units (RHUs) that are fully operational, such as will be the case in Kitui District, drugs are to be assembled and prepackaged at the CMS for each RHF and distributed at regular intervals directly to health center/headquarters for distribution to individual RHF's. Until a RHU is fully operational, RHF's would pick up packages of drugs from the district hospital. The content of drug packages follows according to established lists and guidelines. The mix and amount of drugs varies according to disease patterns at each facility as well as patient volume and rates.

The new system circumvents the bottleneck of the district hospital deciding which drugs should be distributed to RHF's. Indent of drug orders will be dispensed with entirely, with the exception of cases in which special drugs or unusual quantities are required at RHF as a result of epidemics or significant seasonal increases in illness, migrations of people or other unpredictable factors.

c. Information

The public is being informed of the new system through the media, barazas (public meetings), and printed materials at RHF's. The aim is to educate the public about what drugs will be available at different types of RHF's and to increase accountability of those involved in the distribution system. Similar information will be introduced in schools.

d. Legislation

Proposed legislation will identify persons authorized to dispense each type of drug, strengthen the authority of Drug Inspectors and Public Health Officers to look for and confiscate drugs in the possession of unauthorized persons, and authorize the MOH to mark, color, wrap or otherwise distinguish MOH distributed drugs from those whose distribution is the legal prerogative of the private sector. The aim of the legal and informational initiatives is to reduce leakage of Government purchased and distributed drugs and promote responsible and effective use of drugs at RHF's and elsewhere in the health system.

e. Training

Before introducing the new system in each district, workshops and conferences will be held to inform health officers, district administrators, politicians and members of the public about the new system. In addition, training sessions ranging from four days to two weeks will be conducted for the benefit of RHF staff. These sessions will acquaint personnel with the drugs, equipment and supplies that will be made available, the diagnosis and treatment regimes for each illness by each cadre of staff and record keeping and supervision requirements.

f. Drug Management Team

The six member Rural Health Unit Management Team (RHMT) will oversee and monitor the rate of effective implementation of the new drug supply system and evaluate the adequacy of quantities, types and dosages supplied to each RHF. The team will also evaluate prescribing practices of RHF staff and recommend revisions, disciplinary actions, and other adjustments as necessary.

C. Implementation of New System in Kitui District

The MOH will implement the new drug supply system in Kitui District during the first year of the project. Additional training and information programs relevant to the activities of CHWs will also be developed during the first year of the project, and will be implemented as CHWs are trained and placed in local communities. The successful introduction of the new drug supply system in Kitui District is a condition precedent for the second phase of the project. During the first phase, the project team will also explore the possibility of increasing the supply of non-prescription drugs made available to village shops (dukas) by private drug distributors.

The pilot activities have been considered successful in Embu and Kilifi districts. Both USAID and MOH believe that the new drug management system provides a solid base upon which to build a drug distribution system for the Kitui project, which must incorporate CHWs, and elsewhere in Kenya.

D. Proposed New Management System of Drug Supplies for Rural Health Facilities

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Administrative Support Unit
Ministry of Health
April 1980

Note: Only Annexes c and f are included here.

* Shown in parenthesis after annex page number.

1. Introduction

a. Priority Concern

The availability of drugs and their proper use in Rural Health Facilities (RHF) are two of the priority concerns of the Ministry of Health. In response to this concern the Administrative Support Unit (ASU) - in close cooperation with the Rural Health Project (RHP) Team, Central Medical Stores (CMS) and other parties concerned - started an assignment in January 1979 which aims at strengthening the management system of drug supplies for RHF.

b. Major Assignment Activities

In carrying out this assignment the following major activities can be identified:

(1) Situation Analysis

This first major activity was carried out during the first six months of 1979 with the aim of assessing shortcomings in the present management system of drug supplies for RHF.

(2) Systems Design

The purpose of this second major activity is to design a management system of drug supplies for RHF which aims at an adequate supply of drugs at the RHF level and at a proper use of drugs.

This activity was started in June 1979 and completed in February 1980.

(3) Pilot Studies

The proposed new management system of drug supplies for RHF will be tested in two districts (Kilifi and Embu) prior to their nationwide implementation. These tests, in the form of pilot studies, will start in March 1980 and should be completed by the end of 1980.

(4) Countrywide Implementation

Implementation of the systems design propositions on a countrywide basis will start in January 1981. The whole country should be covered by mid 1982.

2. Situation Analysis: Major Problems

The findings of this major activity are contained in a report 'Strengthening the Management of Supplies in Rural Health Facilities - Situation Analysis: Summary'. The report is based upon investigations in a sample of 27 RHF's, on studies by the African Medical and Research Foundation (AMREF), the RHP team, the Department of Community Health of the Faculty of Medicine, and upon information provided by other organizations and individuals.

The report's main points can be summarized as follows:

- the shortages start at the Central Medical Stores;
- RHF's drug supplies are pooled with those of hospitals at district level;
- RHF's are not supplied according to work load and disease pattern;
- inadequate clinical diagnosis and prescription; harmful clinical practices are common as a result of the widespread drugs shortages;
- records are inadequately maintained to ensure proper control;
- management procedures and supervision are generally weak;
- leakages and wastages of drugs occur at all levels;
- the public's and the health workers' attitudes to the drugs situation are contributing to the shortages; to wastages of scarce supplies; and to growing irregular practices and dissatisfactions which threaten the future efficiency of the health services.

3. Proposed New Management System

a. Objectives

The objectives of the proposed new management system are two-fold:

(1) Availability of Drugs

To improve the availability of drugs so that at any time at least 80% of all essential drugs are available at RHF's;

(2) Use of Drugs

To improve the use of drugs so that at least an 80% adequacy in the management of patients will be achieved

To meet these objectives a new management system of drug supplies for RHF's has been designed which includes the following components:

- list of essential drugs;
- list of essential equipment items;
- guidelines for clinical diagnosis and standard treatment schedules;
- package rations; procurement and repackaging; distribution, storage and control; indenting; *
- public information on drugs; legislation;
- briefing and training.

b. List of Essential Drugs

An important component of the proposed new management system of drug supplies for RHF's is the 'List of Essential Drugs for Health Centers/Sub-Centers and Dispensaries'.

Criteria for Selecting Essential Drugs for RHF's

Prior to making the list of essential drugs, criteria (reasons) for selecting essential drugs for RHF's had to be defined. Two 'exclusive' criteria and nine other 'comparative' criteria were identified. The two 'exclusive' criteria are:

- relevance to diseases treatable at RHF's;
- relevance to the level of training of the health workers in RHF's.

The 'comparative' criteria were applied to make comparison between drugs that belong to the same class or are used for similar disease conditions. In addition, the relative importance of each 'comparative' criterion was determined as shown below:

* "Indenting" refers to ordering.

<u>Description of 'comparative' criterion</u>	<u>Weight Factor</u>
Therapeutic effectiveness.....	4
Safety of the drug.....	4
Cost of one treatment.....	3
Safety in dispensing.....	3
Long expiry date.....	3
Usable against more than one disease/condition.....	2
Easy to take by patients.....	2
Easy to dispense by staff.....	2
Locally produced.....	1

List of Essential Drugs

In making the List of Essential Drugs several existing lists were reviewed including the WHO Model List of Essential Drugs, WHO TRS 615, Geneva 1977; and the Ministry of Health List MED. 41/B, 1979. Each drug was evaluated under the two 'exclusive' criteria; drugs which satisfied the 'exclusive' criteria were then evaluated under each 'comparative' criterion. The result of this evaluation is the new 'List of Essential Drugs for Health Centers/Sub-Centers and Dispensaries' as shown in annex A. The list contains 47 drugs for health centers/sub-centers and 34 drugs for dispensaries.

c. List of Essential Equipment Items

Several equipment items are needed with the essential drugs for RHF's. The attached list (annex B) contains the essential equipment items and their quantities which are needed with the essential drugs in RHF's.

d. Guidelines for Clinical Diagnosis; Standard Treatment Schedules

One of the major shortcomings in the management of drug supplies in RHF's are the harmful clinical practices. In response to this problem a concentrated effort will be undertaken to upgrade both the diagnostic and therapeutic skills of the RHF staff. For this purpose 'Guidelines for Clinical Diagnosis' have been prepared (for illustration see annex C).

According to age groups or body weights 'Standard Treatment Schedules' - dosage and duration - were set for each essential drug in RHF's (see annex D). These schedules will facilitate the work of clinical officers and nurses in RHF's.

e. Package Rations; Procurement and Repackaging; Distribution, Storage and Control; indenting

(1) Package Rations

One of the most important aspects of the proposed new management system is to replace the present 'indenting' by RHF's by an arrangement of Package Rations for all essential drugs with the exception of mixtures and other fluids. The main features of package rations are:

- the composition of the package rations is based on assumptions regarding morbidity (i.e. the diagnostic pattern at RHF's according to the health information system);
- all essential non-liquid drugs will be supplied automatically at regular intervals as a package ration to RHF's, containing a fixed quantity of each drug;
- some liquid drugs will still be indented for;
- one package ration of essential drugs for rural health centers/sub-centers (Box 1) will be supplied to these facilities per 3,000 new patients;
- one package ration of essential drugs for dispensaries (Box 11) will be supplied to these facilities per 2,000 new patients;
- The drug quantities, as shown in annex E, are based on the estimated number of treatments of each drug per 3,000 new patients in health centers/sub-centers and per 2,000 new patients in dispensaries. These treatment estimates in turn are based on morbidity returns for RHF's;
- epidemiological variations - usually resulting from different ecological conditions - will imply variations in morbidity patterns. The resulting differences in drug requirements will be provided for.

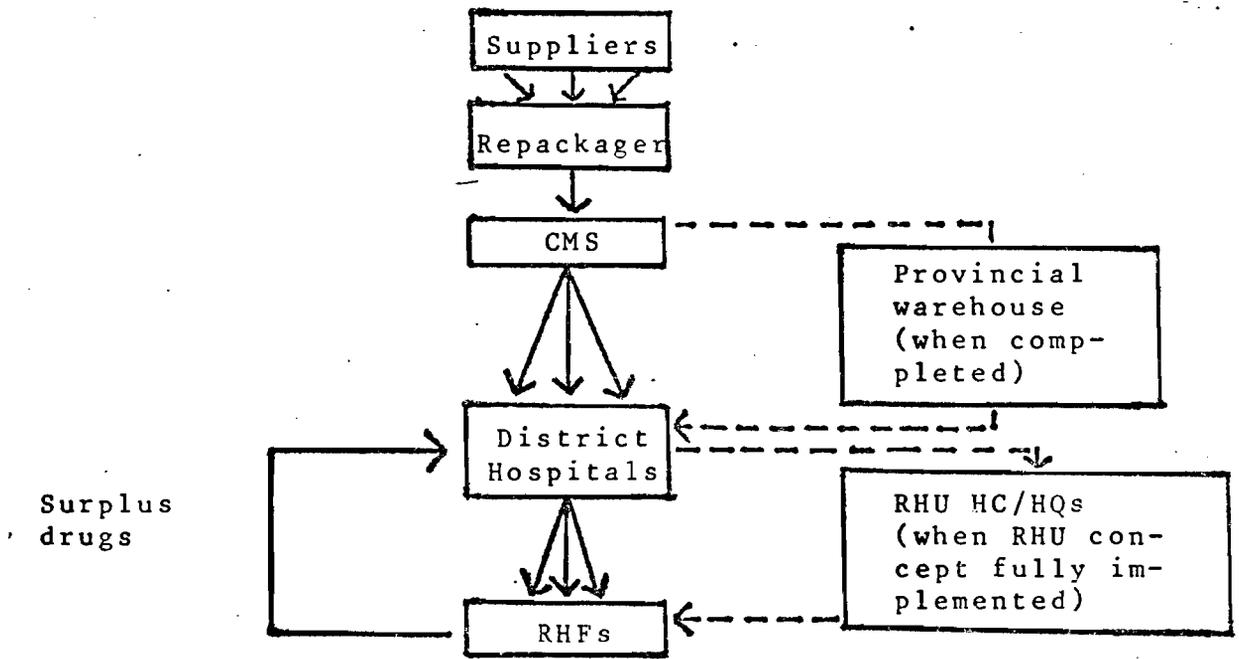
(2) Procurement and Repackaging

The procurement of the right drugs at the right time in the quantities necessary, and the repackaging into units specifically tailored to the needs of the RHF's, will constitute a key element of the new drug supplies management system.

As far as possible, it is proposed to take advantage of local production/repackaging facilities. This will facilitate control and supervision of production/repackaging operations and will be in accordance with the Kenya Government's policy of developing local industry. Where necessary, local management skills and capacities will be upgraded.

(3) Distribution Flow

The proposed distribution system will be as follows:



(4) Distribution, Storage and Control Tasks

CMS, district hospitals and RHF's have specified distribution, storage and control tasks which are identified in annex F. As soon as the rural health unit (RHU) concept is implemented and fully operational several district hospital tasks will be carried out by the RHU Health Center Headquarters.

(5) Indenting

No indenting by RHF's will be done for the Package Rations.

Indenting for an essential drug in the packages will only be 'by exception', i.e., for epidemiological reasons such as epidemics or significant seasonal increases in certain specific illnesses.

Indenting for the fluids among the essential drugs and other supplies will be done on Form S11 in the ordinary way well before the fixed delivery dates for the package rations, so that the mixtures and other fluids can be sent to the RHF's with the package rations (for more details see annex f).

f. Public Information on Drugs; Legislation

Still two other elements of the proposed new management system are public information on drugs and several legal decisions concerning drugs.

Public Information on Drugs

The 'public' is here defined as both the mass population and as those attending the country's various health facilities, particularly RHF's.

At this stage a mass media public information campaign has been proposed using the media; broadcasting/TV, and prints.

Broadcasting/TV

Broadcasting/TV will include the radio program/TV discussion, Mambo Leo which will carry a discussion with two senior Ministry of Health staff in April 1980, prior to the initiation of the Pilot Studies. One or two follow-up discussions should be carried out at a later stage, i.e., prior to the start of the country wide implementation of the drug program.

Two curriculum radio programs on drugs will be broadcast to coincide with the beginning of the country wide programme, one for Standards 6 and 7, one for teachers.

Prints

A poster will be made available to all health care facilities for patients, and will be used in waiting areas.

Feature stories concerning various aspects of the drug situation will be written for the three major newspapers. News releases will be sent regularly to the Kenya press to highlight certain aspects which the public should be aware of.

Legislation

The amendment of existing legislation or the drafting and approval of a new law are quite time consuming. Drug legislation will have to include:

- identification of persons authorized to prescribe certain drugs and to issue them;
- a law which would make it possible for the Ministry of Health to mark, color, wrap or otherwise distinctively distinguish certain drugs bought by the Ministry of Health;
- legislation which strengthens the powers of drug inspectors and public health officers to look for and possibly confiscate drugs in the possession of unauthorized persons.

g. Briefing and Training

Prior to introducing the package rations in a district, several briefing and training activities have to be carried out, including:

- one-day briefing in the proposed new management system of provincial and district health team staff, and rural health training center (RHTC) staff;
- four-day training in clinical tasks and drug control of selected district health team staff and RHTC staff;
- two-week training in clinical tasks and drug control of clinical officers and graded nurses;
- two-week training in clinical tasks and drug control of ungraded nurses i/c of dispensaries.

After having tested the proposed new management system during the pilot studies, discussions with the country's health training institutions should be conducted to ensure that the curricula include the various aspects of the new system.

At the same time the curricula for the training of teacher students of RHTCs and for the post-basic training of RHU teams have to be modified.

h. Management Unit of Drug Supplies for RHF's

Another important element of the new drug supplies management system is the 'Management Unit of Drug Supplies for RHF's'. The Unit is concerned with standards of clinical diagnosis and management of patients; determination of drug supplies requirements; and liaison with the Central Medical Stores.

Functions

Functions of the unit are:

- to review and up-date at regular intervals the list of essential drugs for rural health centers/sub-centers and dispensaries; standard treatment schedules in RHF's; and guidelines for clinical diagnosis;
- to evaluate the adequacy of clinical diagnosis and management of patients in RHF's;
- to determine - in consultation with district medical officers of health and provincial medical officers - the drug supplies requirements in RHF's;
- in liaison with the Central Medical Stores to manage the procurement; repackaging; quality control; stocking/inventory control; and distribution of drug supplies within the budget allocated;
- to engage in the training of provincial and district health teams and RHF staff in clinical diagnosis and drug control.

Staffing

To carry out the above functions, a team will be developed composed of the following staff:

- 1 x Medical Advisor
- 1 x Drug Supplies and Logistics Liaison Officer
- 1 x Senior Clinical Officer
- 1 x Pharmaceutical Technologist
- 2 x supporting staff (short-hand typist and driver)

4. Pilot Studies

It has been decided to test the new management system of drug supplies for RHF's in all respects and at all levels. Kilifi (excluding Malindi sub-district) and Embu have been selected as pilot districts. The details of these studies are described in a separate protocol.

A detailed protocol for the pilot studies including service objectives and educational objectives is being prepared and should be completed by the end of April 1980.

a. Briefing and Training

An important component of the pilot studies will be several briefing and training activities to be carried out in the RHTCs Tiwi and Karurumo. The following schedules have been set:

<u>Tiwi</u>	<u>Date</u>
Briefing of the Provincial Health Team and Kilifi District Health Team, and RHTC, Tiwi staff;	19 May 1980
Training in clinical tasks and drug control of selected district health team staff and RHTC staff;	19 May (afternoon) - 23 May
Training in clinical tasks and drug control - COs, ENs, ENs - Ungraded Nurses (UN)	26 May - 6 June 1980 2 June - 20 June 1980
<u>Karurumo</u>	
Briefing of Provincial Health Team and Embu District Health Team, and RHTC Karurumo staff	4 August 1980 (morning)
Training in clinical tasks and drug control of selected district health team staff and RHTC staff	4 August (afternoon) - 8 August
Training in clinical tasks and drug control of COs, CNs, ENs	11-16 August

b. Pre-Testing

To be able to assess the impact of the training activities, pre-testing activities - including determining the degree of present clinical diagnosis and prescriptoin adequacy - have to be carried out. The following schedules have been set for the two pilot districts:

- Kilifi: 5-10 May 1980
- Embu: 14-26 July 1980

5. Nationwide Implementation

As already stated one key element in the new management system is having the right drugs in sufficient quantities in the right places at the right time. Requirements of essential drugs for the national program have been determined and a budget drawn up based upon the best information regarding world market (generic) prices and local repackaging costs. The total amount budgeted to cover the present 255 health centers/sub-centers and 536 dispensaries would be approximately Ksh. 27 million in 1980/81 at December 1979 prices. This amount includes repackaging into the package ration kits.

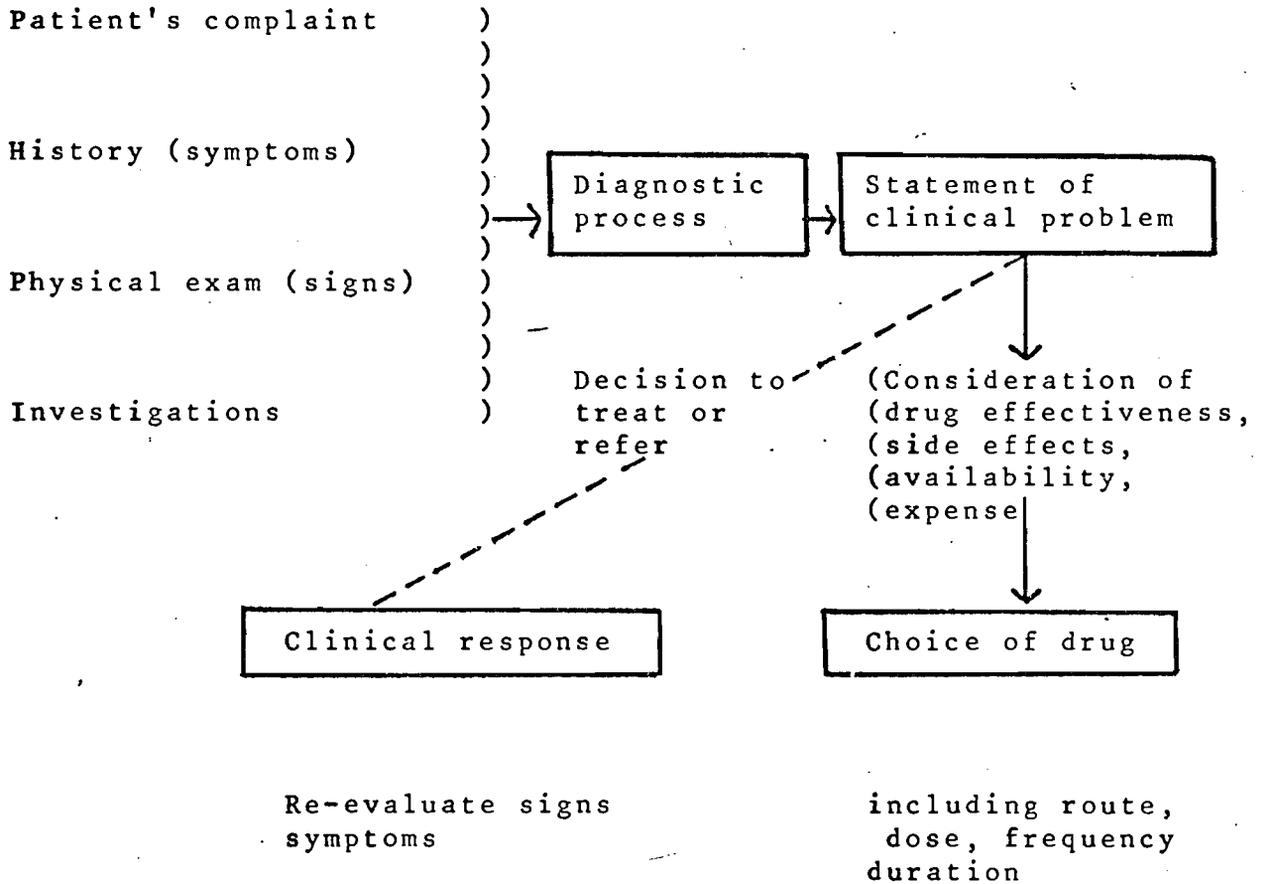
Nationwide implementation of the new management system of drug suplies for RHF's is scheduled to start in January 1981.

A detailed plan to cover the whole country should be ready by September 1980.

(Annex c)

GUIDELINES FOR CLINICAL DIAGNOSIS:

SUMMARY OF PATIENT MANAGEMENT



(Annex f)

MANAGEMENT OF DRUG SUPPLIES IN RHF's:
DISTRIBUTION, STORAGE AND CONTROL TASKS

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Appendix I

* Shown in parentheses after annex page number.

1. Introduction

The successful implementation of the proposed new management system of drug supplies in RHF's will depend on the Central Medical Stores, district hospitals and RHF's to carry out their distribution, storage and control tasks. The tasks are described in detail on the following pages.

2. Central Medical Stores (CMS)

- CMS will hold always at least 6 months stock of Package Rations I and II for the whole country.

- CMS each quarter will distribute three months supplies of Package Rations I and II to district hospital stores, in accordance with the annual Package Rations required as estimated by the Medical Officer of Health (MOH).

- CMS will arrange for checking a random sample, say 1 in 50, of all packages delivered to it from the repacking firm for the following:

- (i) quantity of the drugs;
- (ii) labelling and marking of the drugs;
- (iii) quality control (laboratory testing) of the drugs.

3. District Hospital

The various tasks at the district hospital level can be grouped by MOH tasks; district hospital stores tasks; district pharmaceutical technologist tasks; and district RHF supervisory team tasks.

a. Medical Officer of Health (MOH)

The MOH, at the beginning of January each year will prepare the 'Annual Package Rations Required' sheet for each RHF and the whole district. During the ensuing year, this is sent to CMS. An illustration is provided in Appendix 1.

The MOH or deputy will prepare the S11 form in triplicate well in advance every three months and dispatch it (original and first copy) as a reminder to and check for CMS of the next three monthly delivery date for Package Rations I and II.

c. District Pharmaceutical Technologist (PT)

. As soon as the MOH has prepared the 'Annual Package Rations Required' sheet (see appendix 1) the PT will draw up the transport timetable for Package Rations to RHF's. This timetable must be endorsed by the MOH or Hospital Secretary. Copies of the timetable are given to the MOH and other members of the District Health Team, so that they may coordinate their visits to RHF's with the deliveries of Package Rations.

Copies of the timetable should be also sent to each RHF.

The PT arranges the S11 for the Package Rations to be sent to each RHF. He keeps the pad S22 with copy 3 and the file for deliveries (S11 - 1 copy, countersigned by the RHF 1/c).

The PT must personally make all withdrawals of Package Rations from the district hospital stores. He signs and dates the stock card giving the name of the RHF to be supplied. He must make sure each Package Ration has not been opened.

The PT receives all excess stocks of essential drugs sent back by RHF's. Since these stock will become part of the district hospital drugs the PT is responsible for arranging respective credit/debit notes.

d. District Rural Health Facility Supervisory Team (DRHFST)*

The District Rural Health Facility Supervisory Team includes those members of the district health team who are responsible for providing regular guidance and supervision to the RHF staff.

The DRHFST members will guide and supervise the RHF staff in performing their clinical diagnosis and prescription tasks.

The DRHFST will check:

- (i) the file for receipts of Package Rations (S11 - 2 copy) kept by the RHF 1/c against the file for Package Rations deliveries kept by the district PT;
- (ii) the file for receipts of other supplies (Pad S11 - 3 copy) kept by the RHF 1/c against the file for deliveries of other supplies kept by the district hospital;

- (iii) the stock card for Package Rations and the stock cards for each essential drug;
- (iv) the safety reserve;
- (v) the antibiotics and sulpha record books against the stock cards and physical stocks.

4. The RHF Officer in Charge (I/C)

The RHF will always hold one Package Ration as a safety reserve.

The RHF I/C like any good manager, must work within his budget - in this case his budgeted Package Ration of essential drugs.

The RHF I/C is the only person who can countersign S11 for Package Rations received; he must refuse to accept any Package Ration that appears to have been already opened.

The RHF I/C is responsible for opening each Package Ration. He must ensure the previous reserve Package Ration is brought forward to be opened before any more recent Package can be opened.

The RHF I/C is responsible for recording the stock of Package Rations; and of essential drugs in the Package Ration. At the end of each month he counts the physical stock of essential drugs (excluding reserve Package Rations) and enters the stock in column 'Balance' of the stock cards. He calculates the monthly consumption and enters it in the column 'issued'. He checks the consumption of antibiotics and sulphas against the antibiotics and sulpha record books.

The RHF I/C returns every three months all excess stocks of essential drugs to the district PT.

* As soon as the RHU concept is implemented and fully operational some of the DRHFST tasks are to be carried out by the RHU Health Center Headquarters team.

Appendix 1

Annual Package Rations Required:

Example Ration Package Type I (3,000 Diagnoses/Month)

<u>Name</u>	<u>New Diagnoses Per Months 1980</u>	<u>No. of Package Rations/Quarter</u>	<u>Quantity and Interval</u>
H.C. A.	2,500	1 x 3	One, monthly
B.	1,200	1 x 1.5	One, every two months
C.	4,500	2 x 3	Two, monthly
	Quantity Total	10.5	Per quarter
H.C. Ration Packages/Year	42		Type I
District reserves at end of last quarter were: 9 packages I			District reserves needed is three months supply: 10.5 packages I
Annual total	42		
Increase district reserve	2		Add: 1.5 packages
Grand Total	44 for 1981		

Ration Package Type II (2,000 Diagnoses/Month)

<u>Name</u>	<u>New Diagnoses Per Month 1980</u>	<u>No. of Package Rations/Quarter</u>	<u>Quantity and Interval</u>
Disp. D.	900	2 x 1	Two, every three months
E.	1,800	3 x 1	Three, every three months
F.	1,200	2 x 1	Two, every three months
G.	3,200	6 x 1	Six, every three months
H.	2,600	5 x 1	Five, every three months
	Quantity Total	17	Per quarter
Dispensary Ration Packages/year		68	Type II
District reserves at end of last quarter were: 22 packages II			District reserves needed is three months supply: 17 packages II
Annual total		68	
Decrease district reserve		5	Subtract: 5 packages
Grand Total		63 for 1981	

Signed:

MOH/District

Date:

Annual Package Rations Required

The MOH, in January of each year will establish the 'Annual Package Rations Required' sheet for each RHF and the whole district during the forthcoming year.

The new diagnoses per month in 1980 will be based on the number of new attendances during the previous year.

For reasons of economy in packaging, health centers/sub-centers will receive Packages for 3,000 new attendances. In each case there is a reserve of 25% in the Package. If the average of new attendances is more than this, e.g., more than 3,750 (I) or 2,500 (II), then a second Package must be provided. Every RHF will, in addition, have one reserve Package to meet possible emergencies or transport breakdowns, not for routine use.

Where the annual requirements are divisible by four (see Package type I) equal quantities (e.g. II Packages) will be sent by CMS every quarter. Where the annual requirements are not divisible by four (see Package type II) CMS for the first quarter will send the extra packages (in the example 18 packages) and in the other quarters the remainder equally distributed (e.g. 15 Packages).

HEALTH INFORMATION SYSTEM AND EVALUATIONA. Health Information System: Health Information Requirements1. Baseline survey:

The following items are illustrative only. In many instances, baseline data could be gathered by using probability sampling techniques (e.g., data on economic circumstances and practices). More precise information needs, methods, and procedures will be developed during the first year of the project. Surveys will be undertaken in the target divisions and in suitable "control" areas as well.

a. Facilities

- staffing
- condition of buildings, water supplies, housing
- vehicles, equipment and supplies
- stocks of drugs, storage, record keeping
- capacity for maintenance of buildings, vehicle and equipment

b. Population characteristics

- demographic features: age, sex distribution, migration trends, birth, fertility, death rates, and size of families
- organizational and structural characteristics
- communities as organizational entities
- community institutions and practices

c. Health Status

- incidence of disease by age, occupation, education and sex
- prevalence of disease by age, occupation, education and sex
- mortality rates by age, occupation, education and sex
- nutritional status by age, occupation, education and sex
- food consumption and feeding practices

d. Health practices and knowledge

- concepts of illness and disease origination
- personal hygiene
- waste disposal
- source and storage of water practices
- food preparation and storage practices
- family planning methods

e. Environmental conditions

- availability and quality of water
- availability and types of food consumed
- presence of vectors and conditions for their maintenance and proliferation
- land use and practices involving care of animals

f. Economic circumstances and practices

- principal occupations
- household income
- breakdown of hours spent in various occupational (including household) activities and tasks
- allocation of household budgets

g. Utilization patterns and costs

- utilization of static facilities by type of facilities and types of services
- utilization of mobile units by type of services
- origin of patients, transportation modes and costs
- utilization of services of private practitioners and costs per type of services

h. Cost Analyses

- static facility
- mobile units
- patient travel
- private sector
- equipment/vehicles
- services by type

2. On-going health information collection:

Identification of items of information requiring continuous collection presumes the eventual institutionalization of a system of record keeping, storage and analysis. Such a system will be developed by the end of the second year of the project, and will be refined and expanded throughout the course of the project. An illustrative list of items of informational needs is given below:

a. Clinical services management

- utilization of services
 - . number of patients
 - . diagnosis of illness
 - . treatment or service rendered
 - . referral procedure

- origin of patients

- . distance, referral origin, and means of transport
- . follow-up, revisits, etc.

b. Administrative services management

- staffing according to norms and utilization and deployment according to facility and function
- planning new construction or acquisition, improvement, upgrading, and maintenance
- equipment by time of acquisition, type, deployment, and maintenance
- drug supply by type and quantity
- other supplies by type and quantity including petrol
- transport-type, number, deployment and utilization of vehicles by purpose, maintenance, petrol consumed and mileage

c. Monitoring of costs

- costs of drugs dispensed at static facilities and CHWs
- costs of supplies
- personnel costs by function - delivery of services, training, supervision, etc.
- costs of other recurrent cost items at static facilities
- maintenance costs of facilities, buildings, and vehicles

d. Trends in morbidity and mortality

- incidence of disease by numbers and types
- prevalence of disease by numbers and types
- principal causes of mortality
- births
- prevalence of malnutrition
- adoption and utilization of family planning methods

3. Special periodic studies and surveys

During the course of the project numerous special studies and surveys will be conducted to provide quantitative and qualitative information concerning certain processes and outcomes. These studies will be conducted regularly and most particularly prior to each of the in-depth evaluations and appraisal exercises. An illustrative set of such studies and surveys is briefly described below:

- a. Training: Special studies of the curricula, training processes and outcomes of training of community sensitization and CHW training teams, RHU staffs who supervise CHWs and TBAs, and the training of CHWs and TBAs.
- b. Delivery of services and supervision: Periodic studies of the diagnosis, treatment, referral, nutrition monitoring, health prevention, promotion and education activities of RHU staff, CHWs and TBAs; and of the effectiveness of supervision and support of CHWs and TBAs on the part of RHU staff.
- c. Community attitudes and practices: Periodic studies of community attitudes towards the acceptance and support of CHWs and TBAs; special studies of community initiatives taken toward preventive and promotive health programs and the role of CHWs in motivating and assisting in project undertakings.
- d. Coordination: Periodic studies to assess the effectiveness of coordination between NGO and Government activities in expanding the primary health care delivery system in Kitui District; also, studies to assess the effectiveness of intersectoral coordination among development activities of Government ministries (Health, Agriculture, Water Development, Works, etc.) at district and divisional levels; the latter will require a close look at the activities of both district and divisional development committees.
- e. Management: Perhaps most crucial to the entire project is the effectiveness of the management system whereby primary responsibility is placed on the Rural Health Management Team, Medical Officer of Health, PMO, DC and Second Clinical Officers. Special studies will address the interfaces between and among them to assess the effectiveness of system-wide management and organization.
- f. Outcomes and effectiveness of the system: Periodically during the course of the project trends of utilization, morbidity, mortality and other data will be analyzed to assess the success of the project. An end-of-project survey covering items in the baseline survey will establish a comparative base for preparing final project evaluation and recommendations.

- g. Effectiveness of drug supply system: The MOH new system for supplying drugs to RHUs and CHWs must work effectively. Periodic studies evaluating the effectiveness of the new prepackaging and distribution system will be conducted at all levels of the system, i.e., CMS, district hospital, HC/Hs, dispensaries and CHWs.
- h. Other studies: e.g. the role of traditional health practioners in providing health care in Kitui District to ascertain potential for integrating Western and traditional health practices.
- i. Studies of other PVO and private sector primary health care delivery projects for the purpose of acquiring data to serve as a basis for policy dialogues with government concerning its adoption of alternative financial mechanisms (fees for services, direct payment for drugs, etc.) resulting in the assumption of a larger share of health care delivery costs on the part of the private sector.
- j. Special studies evaluating the cost effectiveness of the deployment and use of mobile units as a mechanism for monitoring, supervising and otherwise supporting the activities of CHWs.
- k. Studies of educational and other characteristics of CHWs and how these relate to CHW performance in field with an eye to adjusting CHW training periods and content to meet needs; do same for training of Health Center/Headquarters and RHU Staff.

B. Evaluation: Indicators for Assessment

1. First Phase

The first phase (and second phase) will review the following project outputs at the expected levels at the end of the third and sixth years of implementation.

a. Establishment of Rural Health Management Team in Kitui.

(1) Composition

- Medical Officer of Health as overall Project Coordinator
- Assistant Medical Officer of Health as day to day project manager
- Curriculum Development Officer
- Statistician
- MCH/FP Officer
- Nutrition Specialist

(2) Operationalized

Job descriptions, schedules of duties and written operational procedures in force.

(3) Behavioral Characteristics

The team is functioning according to prescribed procedures.

b. Operationalized Rural Health Units

(1) Physical Standards

RHUs are up to physical grade.

(2) Staffing

RHUs are staffed with minimal number of trained and qualified personnel (see recommended staffing pattern for rural health facilities).

(3) Equipment for RHUs

Equipment, vehicles and supplies in operating condition. (See Annex H for recommended equipment, for RHUs.)

(4) Logistics

Operating procedures and financial authorities from Ministry, constant supply of drugs and other disposable supplies, and maintenance of equipment and vehicles.

c. Community Health Workers

(1) Training

CHWs trained and working in communities in the three divisions.

(2) Maintenance for CHWs

Trained CHWs are adequately maintained and otherwise supported by the communities they serve.

d. Communities Integrated Within Project Outreach

(1) Program for Sensitization

Sensitization teams established. Training manuals, schedules for community meetings, and plans for follow-up activities by team members are carried out.

(2) Sensitization

Communities participating or have participated in sensitization activities.

(3) Preventive and Promotive Activities

All communities with CHWs actively participating in preventive and promotive health development activities.

e. Established Training and Management Team for Health Workers

(1) Training and Management Team

Established and operating five person team for each division to handle training, supervision and evaluation of CHWs, RHU staff and TBAs.

(2) Training Program

Established and operating program for each division for training, supervision and evaluation of CHWs, RHU staff and TBAs

f. Integration of Non-Government Organizations

(1) Development Strategy

An operationalized strategy for role of NGOs in GOK's public health program promulgated.

(2) Working Committee

Established committee in each of three divisions comprised of RHU, district and NGO officials to coordinate NGO/Health activities.

(3) Relationship With NGOs

Established procedures relating to working relationship between GOK health program and specific NGOs in the district.

g. Integration of Inter-Governmental Agencies

(1) Working Committee

Divisional Development Committees operating in three divisions to insure coordination among local leaders, District Development Committee (DDC) and MOH health activities.

(2) Procedures

Established procedures and administrative mechanism for integrating community health activities with program of other Government and local community entities.

h. Drug Distribution

Established system for drug distribution, management and resupply below the district level through dispensaries and CHWs for use by the clients of the primary health care system.

i. District Health Information System

(1) Procedures

Established system for data collection, record keeping, and report writing. Protocol identifies specific reports, target audience for reports, need for specific data and frequency of report preparation.

(2) Implementation of System

Procedures established for routine data collection by CHWs; RHU staff trained to maintain continuous accurate data.

(3) Analysis of Data

Statistical Officer, a member of Rural Health Management Team, analyzes data, prepares reports and ensures distribution to local, district, provisional and national officials.

In addition the above evaluations will: 1) examine important assumptions, explicit and implicit, that underly the basic project design; 2) verify the validity of assumptions; 3) identify other external factors that may influence the course of the project; and 4) assess the continuing validity of the GOK's commitment to implement the RHU concept and a community-based health system.

2. Second Phase

Emphasis for this phase of the evaluation is on indicators of end-of-project status to verify achievement of project purpose. However, the evaluation team will also review outputs noted above and other factors not yet identified. The evaluators will seek additional guidance from the project paper, the mid-term evaluation, other relevant information in the logframe, and their experience and knowledge of primary health care systems to identify evaluation criteria additional to the following:

Purpose Statement

To establish a more effective rural primary health care delivery system in Kitui District.

End of Project Conditions

1. Delivery of continuous primary health care to 70 percent of the population in the divisions with a CHW component.

a. Static Facilities

Up to 30 percent of the population in Near North, Eastern and Southern divisions served by static facilities. This is based on the MOH fixed catchment area of 6 km. radius from each static facility.

b. CHWs

An additional 40 percent of the population in the same divisions (an area within a 6 - 25 kilometer radius of the static facilities) is receiving adequate primary health care services through CHWs.

c. Mobile Health Units

Another four percent of the population who are not served by the CHWs or static facilities are receiving intermittent primary health care through mobile health units.

2. Patients are effectively screened and referred upward through the system for secondary and tertiary curative health services as necessary.

3. Primary health care system is generally efficient and effective in serving the population, fully acceptable and supported by the community and operates at reasonable costs to Government and beneficiaries.

4. Health services, family planning and nutrition activities and other developmental activities are integrated into a single, primary health care program that includes preventive, promotive and curative health care services.

5. Rural health planning and services from district level are decentralized to rural health unit level and Government, non-Government, private and traditional health resources are integrated in a complementary manner.

6. Training, planning, administration, management and general policy making are institutionalized at the district and rural health unit level.

7. CHWs are effectively identifying diseases such as malaria, skin diseases, diarrhea, and conjunctivitis and prescribing drugs or referring patients to static facilities for further treatment. CHWs render first aid and are providing necessary dressings and antiseptic solutions. CHWs are providing health instruction, family planning advice, non-prescription contraceptives and basic nutrition education.

Assumptions

The evaluation will verify the validity of important assumptions underlying the basic hypotheses and identify other factors, not anticipated at the time of the project design, that favorably or adversely effect achievement of project purpose.

TRAINING FOR COMMUNITY SENSITIZATION
AND COMMUNITY HEALTH WORKERS

A. Training of Health Center/Headquarters Team

The HC/H team will be responsible for motivating communities to participate in the CHW program, select and support CHWs and participate and support preventive and promotive health activities. The core teams for sensitizing communities and training CHWs will vary in composition, but each will include an Enrolled Nurse or Public Health Technician from the rural health facility who will be responsible for technical supervision, in-service training and distribution of drugs to CHWs and for motivating and technically supporting community preventive and promotive health activities.

A team of 10 from each HC/H will be selected for three weeks of training at the Rural Health Training Center in Kararuma, Embu:

- 1 Second Clinical Officer
- 4 Enrolled Nurses
- 1 Public Health Officer
- 2 Public Health Technicians
- 2 Family Health Field Educators

The initial training sessions will train a Second Clinical Officer, 2 Enrolled Nurses, one Public Health Officer, and one Public Health Technician from a given facility. Subsequent sessions will train ten people at a time, drawing personnel from two HC/Hs. In this way, training for staff of each HC/H will be staggered so that sufficient staff remain at the HC/H to provide health services while others are in training.

Training at the RHTC will focus on specific skills needed to facilitate community involvement and train CHWs. Topics will include:

- planning, management, implementation and monitoring of the CHW program;
- community diagnosis, analyzing community organizations and identifying community leaders, motivation of communities and facilitation of development activities;
- actual training of CHWs, promoting their contribution to the base of knowledge and techniques to be used in the community;

- 2 -

- explanation of the goals and objectives of the project in general and the CHW component in particular to the community;
- identification of health needs with the community to assist the community to develop an action program which incorporates a committee responsible for health services and an individual in that community that would have primary responsibility for managing and monitoring CHW activities:
 - additional relevant preventive and promotive, health techniques;
 - identification and coordination of personnel and resources needed to implement activities in other sectors (e.g. water, agriculture, livestock) in order to promote, implement and monitor public health and health development activities at the community level.

Following three weeks of training at the Rural Health Training Center, the trainers will conduct one week of in-the-field training, following up on specific job-related assignments given to HC/H team staff during the training.

One-week refresher courses for each HC/H team will be conducted annually, three days at the the RHTC and two days in the field.

In addition to the training at the Training Center, the Second Clinical Officer (project) will receive on-the-job training in planning, management, implementation and evaluation from the project staff.

B. CHW Training

The purpose of the CHW training is to provide the CHWs and communities with the necessary skills and resources so that the community can meet its primary health care needs. CHWs will initially focus on curative health needs while the community through its designated organization will undertake community preventive and promotive activities which could include public health and health education activities.

There will be a total of two months of training during the first year pre-service and in-service training. Pre-service training of CHWs will be the responsibility of the HC/H Team and will be done in three stages by the following staff:

- 1 Community Nurse trained in family planning
- 1 Public Health Officer
- 1 Enrolled Nurse or Public Health Technician from RHF
- 1 Driver from HC/H

The local Community Development Assistant from the Ministry of Social Services and Culture will participate whenever possible.

Up to 12 CHW candidates from six communities will be trained at one time in a central location within a cluster of communities. Training will be held in a church, a vacant school or other structure or under a tree or canvas or plastic canopy. All training supplies and equipment will be taken to the training site by the training team.

1. First Stage

The first stage will take place about two to four weeks after the final sensitization session. After the communities involved have made all the necessary preparation to support a community-based program there will be ten days of actual training over a two-week period. Training teams will give an extensive orientation on the project's total public health care system focusing on interrelationships of the community-based component and possible intersectoral community activities. CHW trainees will learn a limited number of specific health and nutrition skills which they can immediately practice in the community and they will learn how to do simple community surveys and maintain records. CHW training will be based on baseline surveys conducted by the sensitization Teams and project staff and with cover:

- imparting/sharing among trainers and CHWs specific Western-oriented and traditional health, nutrition and family planning skills;
- logistical and technical support to be provided by Ministry of Health;
- explanation of communication dynamics in a community, e.g., importance of understanding community beliefs and practices in introducing new ideas and use of community organizations;
- conduct of community surveys in order to identify relevance of tasks learned and community needs for future structuring of CHW training;
- in the curative health area, identification of malaria, skin disease, parasite infection, diarrhea, respiratory infections, conjunctivitis and minor injuries; and treatment of these with anti-malaria drugs, skin ointment, worm medicine, oral rehydration fluid (CHWs will be taught to make locally) aspirin or panadol, tetracycline eye ointment and gentian violet;

- in the preventive health care area, prevention of skin diseases, diarrhea and malnutrition by learning basics of good hygiene, how flies carry germs, use of locally available nutritious foods, relationship of nutrition and water to good health.

At the end of this training period CHWs will be provided with a month's supply of five or six basic pharmaceuticals and a first aid kit by the MOH. CHWs will also be given assignments to complete during and after this training in record keeping, individual work plans and conducting community surveys (e.g., food consumption, infant feeding practices, and simple morbidity and mortality).

2. Second Stage

This stage will consist of five days of training over a one week period held about three to four weeks after stage I training. Training content will be based on feedback from the Enrolled Nurse or Public Health Technician at the responsible local rural health facility.

Training will focus on strengthening of existing skills as well as midwifery, family planning and identification of one or two health development areas (e.g. maintenance of community water systems, construction of latrines and income generating activities).

Traditional Birth Attendants will be included in this training stage in order to integrate, share and expand the existing community's knowledge and skills in midwifery and family planning. Training will cover pre-natal through post-natal care, preparation for delivery with emphasis on sterilized materials and hygienic setting, identification and emergency management of delivery complications, and family planning. CHWs and TBAs will learn to use facilities and services for referral of potential family planning users of pharmaceutical contraceptives and for patients having problems with contraceptives. They will further learn and share their own knowledge regarding the importance of child spacing for family health and nutrition and will distribute non-pharmaceutical contraceptives, i.e., condoms, which they will pick up monthly from the nearest RHF when they pick up their drug supplies.

The stage II training content will depend on the needs identified by the CHW and fed back to the staff of the HC/H which will decide in which areas CHWs require more training. The Training Team will also review and advise on assignments given previously to CHWs and will give CHWs additional assignments to complete before their next training session in record keeping, individual work plans and community surveys.

Traditional Birth Attendants will be provided midwifery kits by the MOH at the end of this training.

3. Third Stage

This stage will consist of five days of training over a one week period, about three to four weeks after the stage II training. Training will focus on special health, nutrition and family planning problems related to preventive and promotive health care and intersectoral activities identified as important by the community. Whereas the previous two stages concentrated on developing specific CHW curative, nutrition, midwifery and family planning skills, this phase shifts to preventive and promotive health activities for the community. While the CHW will participate in these activities, the primary responsibility will be with the community for initiating, organizing and sustaining these activities. The HC/H Public Health Officer and the local rural health facility Public Health Technician as well as a community facilitator from the HC/H Sensitization Team will provide technical and motivational support for community health development activities. The Public Health Officer and Technician will conduct much of the training and begin to make their long-term linkages with the community organizations and leaders in order to provide support for the community's public health activities. The Training Team will also identify resources available from other ministries that can be used for the public health activities.

The CHW at this point will be expected to work not only with individuals and families but also various community organizations e.g., women's groups and schools, involved in health education.

4. Visits to Rural Health Facility and Health Center/Headquarters

Following this one month of training, CHWs will be taken on a one day visit to their supporting Rural Health Facility and Health Center/Headquarters to learn first hand the facilities and services available. The Second Clinical Officer (project) will be in charge of the orientation.

5. In-Service Training

A schedule will be established so that on fixed days all CHWs from a cluster will go to their supporting Rural Health Facility monthly to pick up supplies of drugs and contraceptives. During this visit to the dispensary half a day will be used for CHWs to discuss their work, problems and successes with the Enrolled Nurse and Public Health Technician in charge of the CHWs. During this time, CHWs will receive instruction in specific areas of health care.

Also according to a fixed schedule HC/H Rural Health Facility supporting staff will make monthly visits to communities to review CHW activities, provide technical and moral support to the CHWs and communities and provide support for community public health activities.

These activities will provide at least the equivalent of one-month's in-service training and will continue throughout the project.

One vehicle (a four wheel drive 1000 cc. type) with a driver will be assigned to each HC/H and a member of the HC/H Sensitization Team and scheduled to provide transportation for staff at the RHF's to make these periodic visits and to provide continuous community motivational and organizational support.

Divisional and locational technical and administrative officers from other ministries will also be asked to join MOH in these visits.

6. Refresher Course

Five-day refresher courses will be conducted annually at the community cluster level by the Training Team.

7. Visits by Community Members and CHWs to Successful CHW Projects

During the course of the project community members and CHWs will visit other communities with particularly successful community health activities to share experiences.

8. CHW Attrition

A 30 percent loss of trained CHWs is projected. For example, while approximately 12 CHWs would be trained within a cluster, it is expected that perhaps after two or three years only eight might remain. If the Health Center/Headquarter Second Clinical Officer determines that the loss of CHWs in a community is due to reasonable causes and if the community wishes to continue to participate in the CHW program, arrangements could be made to train other CHW candidates in that community.

Recommended Staffing Patterns for Rural Health Facilities (RHF's)

<u>Statis Facility Type</u>	<u>Staff Directly Supporting CHW and Community Activities</u>
<u>Health Center/Headquarters</u>	
2 Clinical Officers (CO)	1 CO
1 Public Health Officer (PHO)	1 PHO
1 Public Health Technician(PHT's)	1 PHT
7 Enrolled Community Nurses (ECNs)	3 ECN
2 Family Health Field Educators (FHFES)	1 Clerk
1 Laboratory Technician	1 PA (mobile clinic)
1 Clerk (Statistics)	1 GA (mobile clinic)
2 Patient Attendants (Ungraded Nurses) (PAs)	4 Drivers
4 General Attendants (GAs)	13 Total
5 Driver	
1 Cook	
<hr/>	
27 Total	
 <u>Health Center</u>	
1 Clinical Officer (CO)	
1 Public Health Technician (PHT)	1 PHT
4 Enrolled Community Nurses(ECNs)	1 ECN
2 Family Health Field Educators (FHFES)	
1 Clerk (Statistics)	1 Clerk
	<hr/>
	3 Total
2 Patient Attendants (Ungraded Nurses) (PAs)	
4 General Attendants (GAs)	
1 Driver	
1 Cook	
<hr/>	
17 Total	

Dispensary

1 Enrolled Community Nurse (ECNs)	1 ECN
1 Public Health Technician (PHT)	1 PHT
1 Family Health Field Educator (FHFE)	1 PA (Records)
1 Patient Attendant - Ungraded Nurse (PA)	<hr/> 3 Total
1 General Attendant (GA)	
<hr/> 4 Total	

ANNUAL ESTIMATED SUPPORT FOR COMMUNITY-BASED (CB) COMPONENT
BY HC/H AND LOCAL RHF
 (IN PERSON YEARS)

<u>HC/H</u>	<u>CS</u>	<u>CHWT</u>	<u>RHUT</u>	<u>CHW/Community Support Inservice Training</u>	<u>Planning Mgt of CB Component</u>	<u>Total Person Years</u>
SCO	.16	.15	.05	.15	.40	.91
EN/CN	.16	.30	.05	.30	-	.81
PHO/PHT	-	.30	.05	.30	-	<u>.65</u>
Paraprofessional Total						2.37 person years
Driver	.16	.30	.05	.60	-	1.11
 <u>RHF</u>						
EN/PHT	<u>.06</u>	<u>10</u>	-	<u>24</u>	-	<u>.40</u>
Total Paraprofessional						<u>.40</u> person years

Total Estimated Paraprofessional Staff needed per year to provide direct field support to CHWs and communities

$$\begin{array}{l} \text{HC/H} \quad 3 \times 2.37 = 7.11 \\ \text{RHF's} \quad 13 \times .40 = 12.31 \text{ person years} \end{array}$$

Total Estimated Incremental Paraprofessional Staff needed for CHW component as per p. 57 of Project Paper excluding Assistant Medical Officer of Health - 12

Note: Data based on maximum CHW field activities as per attached table.

1	2	3	4		5	
<u>BY RHF</u>			(average)		(average)	
			<u>1st Phase</u>	<u>2nd Phase</u>	<u>1st Phase</u>	<u>2nd Phase</u>
3. CHW Support and inservice Training by RHF	CHW Visits to Dispensary, 12 per year RHF EN/PHT visits to CHWs and communities	ECN/PHT	15 days	30 days	6% ea.	12%
		ECN/PHT DRIVER	15 days	30 days	6%	12%
			50 days	150 days	20%	60%
4. Training for District and Divisional Development Committees	Initial one-day seminar Semi annual one-day workshop	DMT (Trainers) (3 people)	(average) 10 days/yr.		4% per year	
		Trainees	(average) 2 days/yr		1% per year	
		<u>Total Trainees</u>	<u>2nd Yr.</u>	<u>Subsequent</u>		
5. Family Planning	8 week training by NFWC or INTRAH	2 COs 2nd yr.	2 x 40	0	16% 2nd yr. only	
		40 ECNs, 10				
		2nd & subsequent years	10 x 40	10 x 40	16% each	
			480	400		
6. Long term training	2 MPHs (3 person years)					
7. Short term training	40 person months observational courses					

KITUI RURAL HEALTH PROJECT611 (e) CERTIFICATION

I, Allison B. Herrick, the principal officer of the Agency for International Development in Kenya, having taken into account, among other things, the maintenance and utilization of projects in Kenya previously financed or assisted by the United States, and the demonstrated capacity and willingness of the Government of Kenya to provide budgetary support for recurrent and development costs incident to the health sector, do hereby certify that in my judgement the Government of Kenya has shown both the financial and human resources capability to effectively maintain and utilize the assistance provided under the Kitui Rural Health Project.



Allison B. Herrick
Director

25 September 1981
Date

AND ORIENTATION OF CDHW IN PREVENTIVE MEDICINE, AND EFFECTIVE SUPERVISION, AFTER INITIAL EFFORT REQUIRES ATTENTION IN VIEW OF IDENTIFICATION OF CONVENTIONAL CURATIVE MEDICINE AS ALMOST UNIVERSAL BIAS OF EXISTING STAFF AND SUPERVISORY PERSONNEL. WILL REGULAR HEALTH SYSTEM BE PREPARED AND WILLING TO ACCOMMODATE REFERRALS FROM CDHW?

4. PROCUREMENT PLANS INCLUDING PROVISION OF MEDICAL SUPPLIES TO LOCAL SITES MUST BE SET FORTH MORE EXPLICITLY. HOW WILL SYSTEM SUPPORT CDHW IN TERMS OF PROVIDING EQUIPMENT, SUPPLIES, EDUCATION/TRAINING MATERIAL, TRANSPORT AND MAINTENANCE?

5. MISSION SHOULD IDENTIFY THE COMMUNITY BODY WHICH WILL HAVE MANAGEMENT AND NEGOTIATING RESPONSIBILITY. UNCLEAR HOW ORGANIZATION WILL FUNCTION AS SYSTEM. (PYRAMID? NETWORK?) LINK BETWEEN COMMUNITY AND UPPER LEVELS OF SYSTEM UNCLEAR. PROSPECTS OF AD HOC GROUP SUCCESSFULLY REPRESENTING LOCAL INTERESTS IN CONTROVERSY WITH MINISTRY-LEVEL PERSONNEL NOT ENCOURAGING.

6. PROJECT CONTEMPLATES BOTH MAJOR COMMUNITY ORGANIZATION EFFORT AND COMPREHENSIVE REORIENTATION OF HEALTH SYSTEM. PROPOSED STAFF AND COUNTERPARTS SEEM MODEST IN COMPARISON TO THIS AMBITIOUS OBJECTIVE. MISSION SHOULD ADVISE SOONEST IF PROJECT IN FINAL FORM SEEMS LIKELY TO EXCEED FUNDING ESTIMATED IN PID. MISSION MAY ALSO WISH TO CONSIDER ADVANCING DATE OF PROJECT AGREEMENT IN VIEW OF AVAILABILITY OF HEALTH SECTOR LOAN FUNDS IN FY 81.

7. AID/W STILL AWAITING IEE. DRAFT REVIEWED BY DR/SDP BUT FINAL SHOULD BE SUBMITTED ASAP. CHRISTOPHER
BT
#8078

UNCLASSIFIED
Department of State

INCOMING TELEGRAM N

PAGE 01
ACTION AID-35

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ACTION OFFICE AFDR-06
INFO AAAF-01 AFEA-03 AFDP-02 FM-02 AAST-01 STHE-01 AFDA-01
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TO SECSTATE WASHDC IMMEDIATE 5744

UNCLAS NAIROBI 25028

AIDAC

FOR AFR/DR/EAP

E. O. 12065: N/A
SUBJECT: KITUI RURAL HEALTH PROJECT (615-0206)

AFDR
RECEIVED
TELETYPE
SECTION COPY

1. THE FOLLOWING LETTER DATED 6 NOVEMBER FROM THE OFFICE OF THE VICE PRESIDENT AND MINISTRY OF FINANCE WAS ADDRESSED TO CHARLES COSTELLO, ACTING DIRECTOR. BEGIN TEXT:

I TRUST THAT YOU HAVE RECEIVED COPY OF LETTER REF. NO. IB/11/2/1 OF 22ND OCTOBER 1981 ADDRESSED TO THIS OFFICE BY THE MINISTRY OF HEALTH, REGARDING THE ABOVE NAMED SUBJECT.

AS WAS INDICATED BY THE MINISTRY OF HEALTH IN THEIR LETTER OF 22ND OCTOBER, KITUI DISTRICT PRESENTS A CHALLENGE IN TERMS OF HEALTH CARE DELIVERY IN VIEW OF THE PREVAILING HEALTH PROBLEMS, THE SIZE OF THE DISTRICT, SETTLEMENT PATTERNS, POOR COMMUNICATION NETWORK AND ECOLOGICAL ZONING IN THE CONTEXT OF ARID AND SEMI-ARID LANDS. THE GOVERNMENT APPRECIATES THE USAID SUPPORT FOR THE IMPROVEMENT OF RURAL HEALTH SERVICES BASED ON PRIMARY HEALTH CARE APPROACH.

THE TOTAL ESTIMATED COST OF THE PROJECT IS US\$12.695 MILLION OF WHICH USAID WILL FINANCE US\$9.38 MILLION AND THE GOVERNMENT OF KENYA US\$3.315 MILLION IN LOCAL CURRENCY. OF THE USAID CONTRIBUTION US\$4.63 MILLION WILL BE IN LOAN FUNDS AND US\$4.75 GRANT FUNDS. THE TOTAL CONTRIBUTION OF THE GOVERNMENT OF KENYA CONTRIBUTION IS APPROXIMATELY 26 PER CENT OF THE OVERALL PROJECT COST.

THE PURPOSE OF THIS LETTER IS TO REQUEST USAID FOR FINANCIAL ASSISTANCE IN THE LIGHT OF THE UNDERSTANDING REACHED BETWEEN GOVERNMENT OF KENYA AND USAID ON IMPLEMENTATION OF THE KITUI RURAL HEALTH PROJECT. END TEXT.

THE LETTER WAS SIGNED BY W. P. MAYAKA FOR THE PERMANENT SECRETARY/TREASURY. COPIES OF LETTER ARE BEING POUCHED.

2. THE LETTER OF 22ND OCTOBER REFERRED TO IN THE TEXT WAS HANDCARRIED TO AID/W BY JACK SLATTERY. HARROP

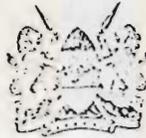
MINISTRY OF HEALTH

Project 615-0206

Telegrams: "MINHEALTH", Nairobi

Telephone: Nairobi: 27351

When replying please quote

Ref. No.11/2/1
and date

AFYA HOUSE

CATHEDRAL ROAD

P.O. Box 30016, NAIROBI

.....22nd October 1981

USAID DISTR(10/23/81)JM

ACTION: HNP

(DUE:11/2)

INFO:O/DIR;PRG;PRJ;CONT;CHRON;RF

Permanent Secretary,
Vice President's Office and
Ministry of Finance,
P. O. Box 30007,
NAIROBI.

KITUI DISTRICT RURAL HEALTH DEVELOPMENT

As you are aware, the Ministry of Health submitted a proposal to US AID Kenya requesting specific assistance under the ASAL Development project to meet the basic health needs of the people of Kitui District. The major elements of this proposal consisted of building 2 new rural health facilities and improving as well as upgrading some of the old ones; development of at least two community-based primary health care delivery systems, development of two nutrition rehabilitation centres; and data gathering and analysis for monitoring and assessing the impact of health service activities and for coordinating rural health activities.

Since then the Ministry of Health and the US AID office in Kenya have held several consultative meetings in respect of the proposed project and as a result a broad understanding has been reached on various aspects pertaining to the project design. The Kitui District Development Committee and some of the Non-governmental organisations like the local church organisation and the African Medical Research Foundation were also involved in the discussions regarding the project and their views have been taken into consideration in the project design.

The project among other things, includes the development of primary health care in three divisions of the district. Of particular interest in this project is the community based health care component. This is a new concept and the Ministry of Health will participate fully in training community based health workers. In the past this relatively new approach to community health care has been established by non-government organisations especially church groups.

The project will now include upgrading 13 rural health facilities and construction of two new ones as well as a district drug store, office building, staff housing and workshop/garage. Other inputs will include provision of equipment for the above facilities and 16 vehicles. The static facilities will be linked by 2-way radios. The project has also a provision for training four Ministry of Health officers to masters of Public Health level.

The purpose of this letter is firstly to keep you informed of the progress being made in respect of the proposed Kitui Rural Health Project and secondly to request you to renew the Government's request to US AID for financial assistance in the light of the understanding so far reached between this Ministry and US AID office in Nairobi.

Kitui District presents a special challenge to this Ministry in terms of health care delivery in view of the prevailing health problems, the size of the district, settlement patterns, poor communication network and ecological zoning in the context of arid and semi-arid lands. It is for this reason that Ministry appreciates the US AID support for the improvement of rural health services based on primary health care approach.

The Ministry has recently been engaged in an exercise to improve the management of drug supplies to rural health facilities in two pilot districts. The improved system of drug supplies will be of particular importance to the success of Kitui Rural Project which has a new component of community health workers. On the whole the project is in line with the national Integrated Rural Health/Family Planning Programme which is ripe for implementation soon.

W. KOINANGE
W. KOINANGE
DIRECTOR OF MEDICAL SERVICES

✓c.c. Director,
US AID Mission to Kenya,
P. O. Box 30261,
NAIROBI.

Kitui Rural Health

OFFICIAL FILE

REPUBLIC OF KENYA

Project 615-0177

OFFICE OF THE VICE-PRESIDENT AND MINISTRY OF FINANCE

Telegraphic Address:
FINANCE-NAIROBI
Telephone: 334433
When replying please quote

Ref. No.EA.9/03
and date



THE TREASURY
P.O. Box 30007
NAIROBI
KENYA

19th February, 1980

USAID DISTR(2/21)JM
ACTION: HNP-W/ATCH
(DUE: 3/3)
INFO: DIR;A/D, DIR; PROG; CONT;
AGR;M&E; CHRON; RF

ANNEX N

The Director,
USAID (K),
P.O. Box 20261,
NAIROBI,

(Att: Mr. Jack Slattery)

ACTION COPY

Action taken: Doing SW
for Kitui
No action necessary:
JS 2/25/80
(initials) (JS)

Dear Sir,

Re: ASSISTANCE FOR IMPROVING THE RURAL HEALTH SERVICES IN KITUI DISTRICT.

Attached hereto please find a proposal for aid from the Ministry of Health for Improvement Programme for Rural Health Services in Kitui District for your perusal and consideration. The project is accepted to us.

Yours faithfully,

Z.N. Nyarango
for: PERMANENT SECRETARY/TREASURY

KITUI DISTRICT ARID AND SEMI-ARID LANDS DEVELOPMENT PROJECT

1.0 INTRODUCTION

1.1 Two of the major goals of the Rural Health Services Programme, as stated in the Health Development Plan (1979-83) can be summarized as:-

1.1.1 Improvement of existing but inadequate facilities along with continued and increased training of paramedical personnel so as to be able to staff rural health facilities and increase service levels, and

1.1.2 Increasing emphasis on the promotion of community based participation in the delivery of health services, with expanding efforts placed on the cooperation and coordination of both Government and Non-Government agencies.

1.2 In order to achieve these goals, the MOH is taking an "Integrative" approach. Briefly, when we talk about "Integration" we refer both to the creation of a strong and tangible inter-relationship, both functionally and ideologically, between the various divisions within the MOH as well as the establishment of interorganizational procedures involving problem formulation, action planning and implementation policies within the context of rural development.

1.3 It is realised that by extending health services primarily from static facilities only about 25-30% of the rural populace is effectively reached. Efforts are on the way in the Rural Health Development Project to undertake a case study during the months of June-August 1979 to study in more detail the utilization of Rural Health Services. It is in this policy framework and the proposition that health cannot and should not be viewed in isolation from other sectors that the following comprehensive proposal is made:

2.0 Specific Rural Health activities in Kitui District.

The following outline, in order of priority, represents rural health service activities which are planned in coordination with the general policy guidelines provided for the development of Arid and Semi-arid Lands (ASAL).

The classification of Kitui District as falling in ecological zones IV and V conforms with the Ministry of Health's Rural Health Service Delivery Zone "Marginal", which identifies in some detail the importance of developing health services which takes account of ecological, social, economic and cultural characteristics.

2.1 Rural Health Facilities Programme.

Based on a recent analysis of rural health facility coverage in terms of population/health facility ratio, and population/area coverage ratio, Kitui District qualifies for the following number of Rural Health Capital Development Project.

2.1.1	Health Centres to be improved:	3
	Dispensaries to be improved:	4
	New dispensaries:	2
	Dispensaries to be improved and upgraded:	2
	Total	<u>11</u>

The total estimated costs for this component approximate 20.59 mill. Ksh. (see appendix I).

The programme implies that the facilities will be fully staffed according to MOH norms, provided with necessary equipment and transportation facilities including mobile health units for health centres.

2.1.2 The selection of projects is made in accordance with the operational and managerial framework for Rural Health Units, which aims at strengthening the basic infrastructure in order to enhance the operational capabilities of local health personnel. Since these centres are designed to serve and coordinate government and non-government out-reach health services, the focus on renovation of existing facilities is commensurate with the Ministry's policy as outlined in sections 1.1.1 and 1.1.2 as stated above.

2.2 Community based primary health care:

2.2.1 The MOH proposes the inauguration of a community based "village health worker" system within at least two selected rural health units in the district, that can both supplement the existing static based programme, as well as serve as a model of a possible approach to a national system of village health workers

This concept is in conformity with Kenya's and WHO's recommendations for increased emphasis and promotion of primary health care.

2.2.2

In conjunction with this component and as a follow-up of the case study outlined in section 1.3, it is hoped that the Kitui ASAL - programme can contribute to the MOH initiating rural health service impact studies. To this effect, the Ministry is proposing to second an Assistant Medical Officer of Health (Rural), to the district to be responsible for participation and coordination of both government and non-government institutions.

However, it is realised that MOH is not equipped to undertake such activities in isolation and assistance in providing baseline and monitoring data is strongly requested. It is assumed that such data and information be gathered as part of the overall district development programme.

2.2.3

Programme implementation requirements:

Identification of feasible community structures (100-400 households/community).

Establishment of community health committee (7-10 people selected by the community. Each member responsible for a particular function in the community (i.e. public health, water)

Establishment of community health team (public health officer, enrolled community nurse, community development assistant, agricultural extension assistant, family field health educator)

The team will participate in establishing selection criteria for community health workers, train the CHW's and be responsible for technical support and supervision.

Establishment of community health fund

Selection, training and deployment of community health workers (primary health care workers)

The total population of the two selected rural health units (Kauwi) Kathito and Mutito (Mdoal) is estimated to be 60,000 and 50,000 respectively (1978). It is anticipated that a total of 75 "communities" will have to be identified to cover the two rural health units.

Total estimated costs for this component approximate 735,000 Ksh. to establish and maintain the community health fund, miscellaneous expenditure for use by primary health care workers and the community health committee and the procurement of one landrover for use in each of the two study areas. It is anticipated that these funds will sustain this programme for a period of 30-36 months.

2.3 Development of nutrition rehabilitation centres

With reference to the overall objective stated in section 1.2, integration of NCH activities with those of other government and non-government organizations as well as the possible and potential linkages with the proposed Kitui community primary health care system, assistance is requested for the establishment of two Nutrition Rehabilitation Centres.

2.3.1 It is realised that nutrition problems are not necessarily medical problems and is believed that by identifying those at risk, particularly children, that it will be beneficial as a long term strategy to educate specific target groups on nutrition issues.

Briefly, we are thinking of a small facility where mothers and children are sent upon discharge from a hospital or health centre to learn nutrition techniques as well as basic preventive and hygienic measures. It is also hoped that these centres can function as referral facilities for the community health team and primary health care workers as described above under 2.2

The proposed nutrition rehabilitation centres are intended to be rather simple as far as construction technique is concerned, utilizing basically local and appropriate technology. It is also proposed to provide a mobile nutrition unit to each facility which will be used for out-reach operations.

Anticipated capital development cost for this component is estimated to be around 1.0 mill. Ksh.

3.0 Total project request:

Rural Health Facilities component	20.59 mill.Ksh
Community based primary health care component:	.735 "
Nutrition rehabilitation centres:	1.000 "
Total	22.325 "
US\$ (exchange rate: 1\$ = 7.5 sh)	2.98

KITUI INTERGRATED ARID AND SEMI ARID LANDS PROGRAMME

Capital Development programme 1979-83 Rural Health Services

	79/80	80/81	81/82	82/83
1 Disp. Imp/up: Cost.	1.733			
Equip.	.198			
Veh.	.143			
	<u>2.070</u>			
1 HC Imp:		Const. 1.980		
		Equip. .218		
		Veh. .157		
		<u>2.360</u>		
4 Disp. Imp:		Const. .529		
		Equip. .073		
		Veh. .012		
		<u>.614x4=2.460</u>		
2 Disp. New:		Const. .925		
		Equip. .073		
		Veh. .012		
		<u>1.010x2=2.020</u>		
1 Disp. Imp/Up:		Const. 1.980		
		Equip. .218		
		Veh. .157		
		<u>2.360</u>		
1 HC Imp:			Const. 2.280	
			Equip. .240	
			Veh. .173	
			<u>2.690</u>	
1 HC Imp:				Const. 2.620
				Equip. .264
				Veh. .190
				<u>3.070</u>

Total: Construction:	14.560 Million shillings
Equipment :	1.570
Vehicles :	0.890
<hr/>	
Sub-Total :	16.220
Distance factor: 30% of Construction:	4.370
<hr/>	
Total Cost :	20.590
<hr/>	

Names of Rural Health Facilities to be improved (9)

Proposed new locations for dispensaries (2)

Name of facility	Pres-status	Fut.Status	Year of implementation
Nutito	HC	HC-HQ	1980/81
Nuu	HC	HC	1981/82
Tseikuru	HC	HC	1982/83
Kaui/Kathito	Disp	HC-HQ	1979/80
Kyuso	Disp	HC-HQ	1980/81
Voo	Disp	Disp	1980/81
Kanziko	Disp	Disp	1980/81
Useuni	Disp	Disp	1980/81
Ngomeni	Disp	Disp	1980/81
Kisayani	-	Disp	1980/81
Winziie	-	Disp	1980/81

12.05.1979

BV/tm

5C(1) - COUNTRY CHECKLIST

Listed below are statutory criteria applicable generally to FAA funds, and criteria applicable to individual fund sources: Development Assistance and Economic Support Fund.

A. GENERAL CRITERIA FOR COUNTRY ELIGIBILITY

1. FAA Sec. 116. Has the Department of State determined that this government has engaged in a consistent pattern of gross violations of internationally recognized human rights? If so, can it be demonstrated that contemplated assistance will directly benefit the needy? No.

2. FAA Sec. 113. Has particular attention been given those programs, projects, and activities which tend to integrate women into the national economies of developing countries, thus improving their status and assisting the total development effort? Yes.

3. FAA Sec. 481. Has it been determined that the government of the recipient country has failed to take adequate steps to prevent narcotic drugs and other controlled substances (as defined by the Comprehensive Drug Abuse Prevention and Control Act of 1970) produced or processed, in whole or in part, in such country, or transported No.

through such country, from being sold illegally within the jurisdiction of such country to U.S. Government personnel or their dependents, or from entering the U.S. unlawfully?

4. FAA Sec. 620(b). If assistance is to a government, has the Secretary of State determined that it is not dominated or controlled by the international Communist movement? Yes.

5. FAA Sec. 620(c). If assistance is to a government, is the government liable as debtor or unconditional guarantor on any debt to a U.S. citizen for goods or services furnished or ordered where (a) such citizen has exhausted available legal remedies and (b) the debt is not denied or contested by such government? No.

6. FAA Sec. 620(e)(1). If assistance is to a government, has it (including government agencies or subdivisions) taken any action which has the effect of nationalizing, expropriating, or otherwise seizing ownership or control of property of U.S. citizens or entities beneficially owned by them without taking steps to discharge its obligations toward such citizens or entities? No.

7. FAA Sec. 620(a), 620(f), 620D; No.
Continuing Resolution Sec.
511, 512 and 513; ISDCA of
1980 Secs. 717 and 721. Is
recipient country a Communist
country? Will assistance be
provided to Angola, Cambodia,
Cuba, Laos or Vietnam? (Food
and humanitarian assistance
distributed directly to the
people of Cambodia are
excepted). Will assistance be
provided to Afghanistan or
Mozambique without a waiver?
Are funds for El Salvador to
be used for planning for
compensation, or for the
purpose of compensation, for
the confiscation -
nationalization, acquisition
or expropriation of any
agricultural or banking
enterprise, or property or
stock thereof?
8. FAA Sec. 620(i). Is recipient No.
country in any way involved in
(a) subversion of, or military
aggression against, the United
States or any country
receiving U.S. assistance, or
(b) the planning of such
subversion or aggression?
9. FAA Sec. 620(j). Has the No.
country permitted, or failed
to take adequate measures to
prevent, the damage or
destruction, by mob action, of
U.S. property?
10. FAA Sec. 620(k). Does the No.
program furnish assistance in
excess of \$100,000,000 for the
construction of a productive

enterprise, except for productive enterprises in Egypt that were described in the Congressional Presentation materials for FY 1977, FY 1980 or FY 1981?

11. FAA Sec. 620(1). If the country has failed to institute the investment guaranty program for the specific risks of expropriation, inconvertibility or confiscation, has the AID Administrator within the past year considered denying assistance to such government for this reason?

Kenya has instituted the program.

12. FAA Sec. 620(m). Is the country an economically developed nation capable of sustaining its own defense burden and economic growth and, if so, does it meet any of the exceptions to FAA Section 620(m)?

No.

13. FAA Sec. 620(o); Fishermen's Protective Act of 1957, as amended, Sec. 5. If country has seized, or imposed any penalty or sanction against, any U.S. fishing activities in international waters,

Kenya has not seized, or imposed any sanctions or penalty against, any U.S. fishing activity.

a. has any deduction required by the Fishermen's Protective Act been made?

b. has complete denial of assistance been considered by AID Administrator?

14. FAA Sec. 620(g); Continuing Resolution Sec. 518. No.

(a) Is the government of the recipient country in default for more than six months on interest or principal of any AID loan to the country? (b) Is the country in default exceeding one year on interest or principal on any U.S. loan under a program for which the Continuing Resolution appropriates funds?

15. FAA Sec. 620(s). If contemplated assistance is development loan or from Economic Support Fund, has the Administrator taken into account the percentage of the country's budget which is for military expenditures, the amount of foreign exchange spent on military equipment and the amount spent for the purchase of sophisticated weapons systems? (An affirmative answer may refer to the record of the annual "Taking into Consideration" memo: "Yes, taken into account by the Administrator at time of approval of Agency OYB." This approval by the Administrator of the Operational Year Budget can be the basis for an affirmative answer during the fiscal year unless significant changes in circumstances occur.)

Yes. Taken into account by the Administrator at the time of approval of the Agency OYB.

16. FAA Sec. 620(t). Has the country severed diplomatic relations with the United States? If so, have they been resumed and have new bilateral No.

assistance agreements been negotiated and entered into since such resumption?

17. FAA Sec. 620(u). What is the payment status of the country's U.N. obligations? If the country is in arrears, were such arrearages taken into account by the AID Administrator in determining the current AID Operational Year Budget? Kenya is not in arrears.
18. FAA Sec. 620A; Continuing Resolution Sec. 521. Has the country aided or abetted, by granting sanctuary from prosecution to, any individual or group which has committed an act of international terrorism? Has the country aided or abetted, by granting sanctuary from prosecution to, any individual or group which has committed a war crime? No.
19. FAA Sec. 666. Does the country object, on the basis of race, religion, national origin or sex, to the presence of any officer or employee of the U.S. who is present in such country to carry out economic development programs under the FAA? No.
20. FAA Sec. 669, 670. Has the country, after August 3, 1977, delivered or received nuclear enrichment or reprocessing equipment, materials, or technology, without specified arrangements or safeguards? No.

Has it detonated a nuclear device after August 3, 1977, although not a "nuclear-weapon State" under the nonproliferation treaty?

B. FUNDING SOURCE CRITERIA FOR COUNTRY ELIGIBILITY

1. Development Assistance Country Criteria.

a. FAA Sec. 102(b)(4). Have criteria been established and taken into account to assess commitment progress of the country in effectively involving the poor in development, on such indexes as: (1) increase in agricultural productivity through small-farm labor intensive agriculture, (2) reduced infant mortality, (3) control of population growth, (4) equality of income distribution, (5) reduction of unemployment and (6) increased literacy.

b. FAA Sec. 104(d)(1) If appropriate, is this development (including Sahel) activity designed to build motivation for smaller families through modification of economic and social conditions supportive of the desire for large families in programs such as education in and out of school, nutrition, disease control, maternal and child health services, agricultural production, rural development, assistance to urban poor and through community-based development

Yes, as most recently reported in USAID/Kenya cable Nairobi 19306 dated 10/26/79.

Yes. This project will deliver improved rural health services including maternal and child health/ family planning activities to poor rural families.

programs which give recognition to people motivated to limit the size of their families?

2. Economic Support Fund Country Criteria.

a. FAA Sec. 502B. Has the country (a) engaged in a consistent pattern of gross violations of internationally recognized human rights or (b) made such significant improvements in its human rights record that furnishing such assistance is in the national interest?

Kenya has not engaged in a pattern of gross human rights violations.

b. FAA Sec. 532(f). Will ESF assistance be provided to Syria?

N/A

c. FAA Sec. 609. If commodities are to be granted so that sale proceeds will accrue to the recipient country, have Special Account (counterpart) arrangements been made?

N/A

d. FAA Sec. 620B. Will ESF be furnished to Argentina?

No.

5C(2) PROJECT CHECKLIST

Listed below are statutory criteria applicable generally to projects with FAA funds and project criteria applicable to individual funding sources: Development Assistance (with a subcategory for criteria applicable only to loans); and Economic Support Fund.

CROSS REFERENCES: IS COUNTRY CHECKLIST UP TO DATE? Yes.
HAS STANDARD ITEM CHECKLIST BEEN REVIEWED FOR THIS PROJECT? Yes.

A. GENERAL CRITERIA FOR PROJECT

1. Continuing Resolution Unnumbered; FAA Sec. 634A; Sec. 653(b).

(a) Describe how authorizing and appropriations Committees of Senate and House have been or will be notified concerning the project; (b) is assistance within (Operational Year Budget) country or international organization allocation reported to Congress (or not more than \$1 million over that amount)?

Normal CN procedures will be followed

2. FAA Sec. 611(a)(1). Prior to obligation in excess of \$100,000, will there be (a) engineering, financial other plans necessary to carry out the assistance and (b) a reasonably firm estimate of the cost to the U.S. of the assistance? Yes.

3. FAA Sec. 611(a)(2). If further legislative action is required within recipient country, what is basis for reasonable expectation that such action will be completed in time to permit orderly accomplishment of purpose of the assistance?

The GOK has agreed to take the necessary legislature/administrative actions required for this project and appropriate conditions precedent and covenants will be part of the Project Agreement.

4. FAA Sec. 611(b); Continuing Resolution Sec. 501. If for water or water-related land resource construction, has project met the standards and criteria as set forth in the Principles and Standards for Planning Water and Related Land Resources, dated October 25, 1973?

There will be small self-help projects related to community water supplies which will be reviewed by AID prior to execution.

5. FAA Sec. 611(e). If project is capital assistance (e.g., construction), and all U.S. assistance for it will exceed \$1 million, has Mission Director certified and Regional Assistant Administrator taken into consideration the country's capability effectively to maintain and utilize the project?

Yes. See Annex N of PP for 611 (e) certification.

6. FAA Sec. 209. Is project susceptible of execution as part of regional or multilateral project? If so why is project not so executed? Information and conclusion whether assistance will encourage regional development programs.

This project is considered part of a larger integrated rural health/family planning program to be undertaken by the GOK with multidonor participation.

7. FAA Sec. 601(a). Information and conclusions whether project will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; and (c) encourage development and use of cooperatives, and credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions.

(a)-(f) This project will not discourage these activities but as a government-supported community-based primary health care system is not specifically designed to encourage them.

8. FAA Sec. 601(b). Information and conclusion on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise).

U.S. contractors will be invited to bid for the implementation of this project.

9. FAA Sec. 612(b), 636(h); Continuing Resolution Sec. 508. Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the U.S. are utilized in lieu of dollars.

The GOK will contribute \$3.4 million to this project or about 26% of total costs.

There are no U.S. owned foreign currencies available for this project

10. FAA Sec. 612(d). Does the U.S. own excess foreign currency of the country and,

No.

if so, what arrangements have been made for its release?

11. FAA Sec. 601(e). Will the project utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise? Yes.

12. Continuing Resolution Sec. 522. If assistance is for the production of any commodity for export, is the commodity likely to be in surplus on world markets at the time the resulting productive capacity becomes operative, and is such assistance likely to cause substantial injury to U.S. producers of the same, similar or competing commodity? N/A

B. FUNDING CRITERIA FOR PROJECT

1. Development Assistance Project Criteria

- a. FAA Sec. 102(b), 111, 113, 281(a). Extent to which activity will (a) effectively involve the poor in development, by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology, spreading investment out from cities to small towns and rural areas, and insuring wide participation of the poor in the benefits of development on a sustained basis, using the appropriate U.S. institutions; (b) help develop cooperatives,
- (a) This project is directed at improving the health care of poor rural families.
- (b) N/A
- (c) Community self-help activities related to preventive and promotive health are part of the design of this project.
- (d) Women will be encouraged to participate at all levels of this project.
- (e) N/A

especially by technical assistance, to assist rural and urban poor to help themselves toward better life, and otherwise encourage democratic private and local governmental institutions; (c) support the self-help efforts of developing countries; (d) promote the participation of women in the national economies of developing countries and the improvement of women's status; and (e) utilize and encourage regional cooperation by developing countries?

b. FAA Sec. 103, 103A, 104, 105, 106, 107. Is assistance being made available: N/A
(include only applicable paragraph which corresponds to source of funds used. if more than one fund source is used for project, include relevant paragraph for each fund source.)

(1) [103] for agriculture, rural development or nutrition; if so (a) extent to which activity is specifically designed to increase productivity and income of rural poor; 103A if for agricultural research, full account shall be taken of the needs of small farmers, and extensive use of field testing to adapt basic research to local conditions shall be made; (b) extent to which assistance is used in coordination with programs carried out under Sec. 104 to help improve nutrition of the people of developing countries N/A

through encouragement of increased production of crops with greater nutritional value, improvement of planning, research, and education with respect to nutrition; particularly with reference to improvement and expanded use of indigenously produced foodstuffs; and the undertaking of pilot or demonstration of programs explicitly addressing the problem of malnutrition of poor and vulnerable people; and (c) extent to which activity increases national food security by improving food policies and management and by strengthening national food reserves, with particular concern for the needs of the poor, through measures encouraging domestic production, building national food reserves, expanding available storage facilities, reducing post harvest food losses, and improving food distribution.

(2) [104] for population planning under sec. 104(b) or health under sec. 104(c); if so, (i) extent to which activity emphasizes low-cost, integrated delivery systems for health, nutrition and family planning for the poorest people, with particular attention to the needs of mothers and young children, using paramedical and auxiliary medical personnel, clinics and health posts, commercial distribution systems and other modes of community research.

This project is designed to expand the delivery of primary health care to poor rural families. It will integrate a community-based approach to health with existing health facilities and programs. The project emphasizes low-cost health delivery and includes activities related to curative, preventive and promotive health, nutrition, maternal and child health, and family planning. Paramedical personnel will be utilized along with rural clinics. Government and commercial drug distribution will be encouraged.

(4) [105] for education, public administration, or human resources development; if so, extent to which activity strengthens nonformal education, makes formal education more relevant, especially for rural families and urban poor, or strengthens management capability of institutions enabling the poor to participate in development; and (ii) extent to which assistance provides advanced education and training of people in developing countries in such disciplines as are required for planning and implementation of public and private development activities.

N/A

(5) [106; ISDCA of 1980, Sec. 304] for energy, private voluntary organizations, and selected development activities; if so, extent to which activity is: (i) (a) concerned with data collection and analysis, the training of skilled personnel, research on and development of suitable energy sources, and pilot projects to test new methods of energy production; (b) facilitative of geological and geophysical survey work to locate potential oil, natural gas, and coal reserves and to encourage exploration for potential oil, natural gas, and coal reserves; and (c) a cooperative program in energy production and conservation through research and development and use of small scale, decentralized,

N/A

renewable energy sources for rural areas;

(ii) technical cooperation and development, especially with U.S. private and voluntary or regional and international development, organizations;

(iii) research into, and evaluation of, economic development process and techniques;

(iv) reconstruction after natural or manmade disaster;

(v) for special development problems, and to enable proper utilization of earlier U.S. infrastructure, etc., assistance;

(vi) for programs of urban development, especially small laborintensive enterprises, marketing systems, and financial or other institutions to help urban poor participate in economic and social development.

c. [107] is appropriate effort placed on use of appropriate technology? (relatively smaller, cost-saving, labor using technologies that are generally most appropriate for the small farms, small businesses, and small incomes of the poor.)

d. FAA Sec. 110(a). Will the recipient country provide at least 25% of the costs of the program, project, or activity with respect to which

The low-cost community-based health system supported by this project is considered to be an appropriate delivery system for the rural areas of Kenya.

GOK contribution of \$3.4 million is approximately 26% of total project cost.

the assistance is to be furnished (or has the latter cost-sharing requirement been waived for a "relatively least developed" country)?

e. FAA Sec. 110(b). Will grant capital assistance be disbursed for project over more than 3 years? If so, has justification satisfactory to Congress been made, and efforts for other financing, or is the recipient country "relatively least developed"?

N/A

f. FAA Sec. 281(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage institutional development; and supports civil education and training in skills required for effective participation in governmental processes essential to self-government.

Local community participation is an important feature of this project. Participation is voluntary and community needs, desires and capabilities will be taken into account in project activities.

g. FAA Sec. 122(b). Does the activity give reasonable promise of contributing to the development of economic resources, or to the increase of productive capacities and self-sustaining economic growth?

Yes.

2. Development Assistance Project Criteria (Loans Only)

a. FAA Sec. 122(b). Information and conclusion on capacity of the country to

See financial analysis section of PP which indicates ability of GOK to repay loan element of project at a reasonable rate of interest.

repay the loan, at a reasonable rate of interest.

b. FAA Sec. 620(d). If assistance is for any productive enterprise which will compete with U.S. enterprises, is there an agreement by the recipient country to prevent export to the U.S. of more than 20% of the enterprise's annual production during the life of the loan?

N/A

3. Project Criteria Solely for Economic Support Fund

a. FAA Sec. 531(a). Will this assistance promote economic or political stability? To the extent possible, does it reflect the policy directions of FAA Section 102?

N/A

b. FAA Sec. 531(c). Will assistance under this chapter be used for military, or paramilitary activities?

N/A

5C(3) - STANDARD ITEM CHECKLIST

Listed below are the statutory items which normally will be covered routinely in those provisions of an assistance agreement dealing with its implementation, or covered in the agreement by imposing limits on certain uses of funds.

These items are arranged under the general headings of (A) Procurement, (B) Construction, and (C) Other Restrictions.

A. Procurement

1. FAA Sec. 602. Are there arrangements to permit U.S. small business to participate equitably in the furnishing of commodities and services financed? Yes.

2. FAA Sec. 604(a). Will all procurement be from the U.S. except as otherwise determined by the President or under delegation from him? Yes.

3. FAA Sec. 604(d). If the cooperating country discriminates against U.S. marine insurance companies, will commodities be insured in the United States against marine risk with a company or companies authorized to do a marine insurance business in the U.S.? Yes.

4. FAA Sec. 604(e); ISDCA of 1980 Sec. 705(a). If offshore procurement of agricultural commodity or product is to be N/A

financed, is there provision against such procurement when the domestic price of such commodity is less than parity? (Exception where commodity financed could not reasonably be procured in U.S.)

5. FAA Sec. 603. Is the shipping excluded from compliance with requirement in section 901(b) of the Merchant Marine Act of 1936, as amended, that at least 50 per centum of the gross tonnage of commodities (computed separately for dry bulk carriers, dry cargo liners, and tankers) financed shall be transported on privately owned U.S.-flag commercial vessels to the extent that such vessels are available at fair and reasonable rates? No.

7. FAA Sec. 621. If technical assistance is financed, to the fullest extent practicable will such assistance, goods and professional and other services be furnished from private enterprise on a contract basis? If the facilities of other Federal agencies will be utilized, are they particularly suitable, not competitive with private enterprise, and made available without undue interference with domestic programs?

Private contractors will be invited to bid for technical services provided by this project.

8. International Air Transport Fair Competitive Practices Act, 1974. If air transportation of persons or Yes.

property is financed on grant basis, will provision be made that U.S. carriers will be utilized to the extent such service is available?

9. Continuing Resolution Sec. 505. If the U.S. Government is a party to a contract for procurement, does the contract contain a provision authorizing termination of such contract for the convenience of the United States? Yes.

B. Construction

1. FAA Sec. 601(d). If capital (e.g., construction) project, are engineering and professional services of U.S. firms and their affiliates to be used to the maximum extent consistent with the national interests? Yes.
2. FAA Sec. 611(c). If contracts for construction are to be financed, will they be let on a competitive basis to maximum extent practicable? Yes.
3. FAA Sec. 620(k). If for construction of productive enterprise, will aggregate value of assistance to be furnished by the U.S. not exceed \$100 million? Yes.

C. Other Restrictions

1. FAA Sec. 122(b). If development loan, is interest rate at least 2% per annum during grace period and at least 3% per annum thereafter? Yes.

2. FAA Sec. 301(d). If fund is established solely by U.S. contributions and administered by an international organization, does Comptroller General have audit rights? N/A

3. FAA Sec. 620(h). Do arrangements exist to insure that United States foreign aid is not used in a manner which, contrary to the best interests of the United States, promotes or assists the foreign aid projects or activities of the Communist-bloc countries? Yes.

4. Continuing Resolution Sec. 514 If participants will be trained in the United States with funds obligated in FY 1981, has it been determined either (a) that such participants will be selected otherwise than by their home governments, or (b) that at least 20% of the FY 1981 fiscal year's funds appropriated for participant training will be for participants selected otherwise than by their home governments? AID has complied with this section.

5. Will arrangements preclude use of financing: (a)-(k) Yes.

a. FAA Sec. 104(f). To pay for performance of abortions as a method of family planning or to, motivate or coerce persons to practice abortions; to pay for performance of involuntary sterilization as a method of family planning, or to coerce or provide financial incentive to any person to undergo sterilization?

b. FAA Sec. 620(g). To compensate owners for expropriated nationalized property?

c. FAA Sec. 660. To provide training or advice or provide any financial support for police, prisons, or other law enforcement forces, except for narcotics programs?

d. FAA Sec. 662. For CIA activities?

e. FAA Sec. 636(i). For purchase, sale, long-term lease, exchange or guaranty of the sale of motor vehicles manufactured outside U.S., unless a waiver is obtained.

f. Continuing Resolution Sec. 504. To pay pensions, annuities retirement pay, or adjusted service compensation for military personnel?

g. Continuing Resolution Sec. 506. To pay U.N. assessments, arrearages or dues.

h. Continuing Resolution Sec. 507. To carry out provisions of FAA section 209(d)
(Transfer of FAA funds to

multilateral organizations for lending.)

i. Continuing Resolution Sec. 509. To finance the export of nuclear equipment fuel, or technology or to train foreign nationals in nuclear fields?

j. Continuing Resolution Sec. 510. Will assistance be provided for the purpose of aiding the efforts of the government of such country to repress the legitimate rights of the population of such country contrary to the Universal Declaration of Human Rights?

k. Continuing Resolution Sec. 516. To be used for publicity or propaganda purposes within U.S. not authorized by Congress?

WAIVER FOR VEHICLESSource/Origin and Proprietary Procurement
Waiver for Vehicles

A source/origin procurement waiver from Geographic Code 000 to Geographic Code 935 for all the vehicles indicated below, and a proprietary procurement waiver to obtain the Land Rovers and 1000 cc. Suzukis is requested.

a)	Cooperating Country	:	Kenya
b)	Authorizing Document	:	Project No. 615-0206
c)	Project	:	Kitui Rural Health
d)	Nature of Funding	:	Loan
e)	Description of Commodities	:	Two sedans, four long wheel base 4-wheel drive Land Rovers and ten 4-wheel drive Suzuki utility vehicles.
f)	Approximate Value	:	U.S. \$255,000
g)	Probable Procurement Origin	:	United Kingdom (UK), France and Japan
h)	Probable Procurement Source	:	Kenya, UK, France and Japan

DISCUSSION: Section 636 (i) of the Foreign Assistance Act of 1961, as amended, prohibits AID from financing motor vehicles unless such vehicles are manufactured in the United States. Section 636 (i) does provide, however, that "...where special circumstances exist, the President is authorized to waive the provision of the act in order to carry out the purpose of this act". Additionally, in accordance with AID Handbook 1, Supplement B, procurement of motor vehicles of other than U.S. manufacture requires a waiver. The Handbook provides that a waiver may be granted when necessary to carry out the purpose of the FAA and if, inter alia, there is a present or projected lack of adequate service facilities and supply of spare parts for U.S.-made vehicles. Also, Handbook 11, Chapter 3, requires that specifications for equipment be stated so as not to be restrictive. The authority to (1) determine that special circumstances exist for purposes of Section 636 (i) (2) that there is adequate justification for a waiver under Handbook 1, Supplement B, and (3) to waive requirements on restrictive

specifications so as to permit purchase by brand or trade name, has been delegated to AA/AFR. For purposes of safety, it is extremely important that the vehicles financed under this project be right-hand drive, since by law all traffic in Kenya moves on the left side of the road.

The Government of Kenya has requested AID assistance in improving primary health care delivery services in Kitui District. The above requested Project vehicles are required to provide needed mobility for the Project technicians and Kenya personnel assigned to the Project, who all have to work in areas where roads are usually rugged, unimproved tracks.

The right-hand drive sedans are for use by the Project technicians and short-term consultants, primarily for transport between Nairobi and the Project area. There are no right-hand drive sedans manufactured in the U.S. There are, however, right-hand drive sedans manufactured in other Code 935 countries for which there are adequate spare parts and maintenance facilities in Kenya.

The long wheel base 4-wheel drive/right-hand Land Rovers are for use throughout the Project area by the Project technicians and Kenyan staff to train and supervise community health workers in rural areas, to mobile clinics, and transport personnel. While U.S.-manufactured right-hand drive vehicles normally would have been satisfactory for this Project, it has been determined through experience that the constant shortage of spare parts and non-availability of qualified mechanics to work on U.S. vehicles in rural areas has caused major implementation problems where U.S. vehicles are utilized. The Government of Kenya, through the Ministry of Health, depends primarily on Land Rover vehicles for its transportation requirements. Unless Project vehicles are compatible with the country's maintenance system, adequate maintenance and ability to obtain spare parts in rural areas are virtually non-existent.

Since no manufacturer can supply the Land Rovers except British Leyland, source/origin and proprietary procurement waivers are required. The proprietary procurement of Land Rovers has been previously approved for the Kenya National Range and Ranch Project (615-0157) and On-Farm Grain Storage Project (615-0190).

The small 4-wheel drive/right-hand drive Suzukis are to be used to train and supervise community health workers in rural areas and to monitor activities under the Community Development Fund. The reason for these 1000 cc. vehicles is that the required tasks of the vehicles will be too much for a bike or motorcycle and not enough to justify using a Land Rover. These vehicles are smaller, more manageable, and often do not get

stuck where large 4-wheel drive vehicles do. The vehicles are also cheaper to maintain and operate (average 30 mpg of gasoline) and the spare parts are available in the rural areas. The vehicle would also have no difficulty in fitting into the MOA vehicle maintenance and support system. Since no manufacturer can supply these vehicles except Suzuki, source/origin and proprietary procurement waivers are requested. The proprietary procurement of Suzukis has been previously approved under the Kenya WID Extension Program Project (698-038813) and On-Farm Grain Storage Project (615-0190).

RECOMMENDATION: Based on the justification, above, it is recommended you certify that (1) special circumstances exist to justify waiving the requirement of procurement of U.S.-manufactured vehicles under FAA Section 636 (i); (2) special circumstances exist which justify the proprietary procurement of the Land Rover and Suzuki vehicles; and (3) that exclusion of procurement of the above described Project vehicles from countries included in AID Geographic Code 935 would seriously impede attainment of U.S. foreign policy objectives and the objectives of the foreign assistance program.

WAIVER FOR OCEAN FREIGHT

Waiver of Flag Registry of Vessel
for Shipment of Vehicles

A waiver is requested to expand the flag eligibility requirement for the shipment of the 16 foreign manufactured vehicles, from Code 941 to Code 935.

a)	Cooperating Country	:	Kenya
b)	Authorizing Document	:	Project No. 615-0206
c)	Project	:	Kitui Rural Health
d)	Nature of funding	:	Loan
e)	Description of Commodity- related services	:	Ocean Freight for 16 foreign-manufactured motor vehicles
f)	Approximate Value	:	\$30,000
g)	Probable Source	:	Code 935 Flag Vessels

DISCUSSIONS: The eligibility of ocean transportation services is determined by the flag registry of the vessel. When the authorized source for procurement is Code 941, AID will finance ocean transportation on vessels under flag registry of the United States, other countries in Code 941, and the cooperating country. There are a number of criteria set forth in Handbook 1B, page 7-2, which justify expanding the flag eligibility requirement to allow use of vessels under flag registry of Code 935 countries. One criterion is that eligible vessels do not provide liner service from the shipments source to the destination country.

The 16 vehicles to be financed under this project will be shipped from the United Kingdom, France and Japan. Since there is no U.S. other Code 941 or cooperating country liner flag service from these areas to Kenya, the above justification is applicable.

RECOMMENDATION: On the basis of the above information, it is recommended that this waiver request be approved by the Office of Commodity Management, in accordance with the Handbook 1B, by certifying that the interests of the United States are best served by permitting financing of transportation services on ocean vessels under flag registry of free world countries other than the cooperating country and countries included in Code 941.

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DRAFT PROJECT AUTHORIZATION

Name of Country: Kenya
Name of Project: Kitui Rural Health
Number of Project: 615-0206

1. Pursuant to Section 104 of the Foreign Assistance Act of 1961, as amended, I hereby authorize the Kitui Rural Health Project for Kenya involving planned obligations of not to exceed \$4,630,000 in Loan Funds and \$4,750,000 in Grant Funds over a six year period from date of authorization, subject to the availability of funds in accordance with the A.I.D. OYB/allotment process, to help in financing foreign exchange and local currency costs for the Project.

2. The Project seeks to expand the delivery of primary health care services in rural areas of Kenya. The Project will finance technical assistance; participant training; a Community Development Fund; evaluation services; construction and associated equipment; commodities, including vehicles, bicycles and medical supplies; and radio communication services.

3. The Project Agreement(s) which may be negotiated and executed by the officer(s) to whom such authority is delegated in accordance with A.I.D. regulations and Delegations of Authority shall be subject to the following essential terms and covenants and major conditions, together with such other terms and conditions as A.I.D. may deem appropriate.

4.a. Interest Rate and Terms of Repayment. The Cooperating Country shall repay the Loan to A.I.D. in U.S. Dollars within forty years from the date of first disbursement of the Loan, including a grace period of not to exceed ten (10) years. The Cooperating Country shall pay to A.I.D. in U.S. Dollars interest from the Date of first disbursement of the Loan at the rate of (a) two percent (2%) per annum during the first ten (10) years, and (b) three percent (3%) per annum thereafter, on the outstanding disbursed balance of the Loan and on any due and unpaid interest accrued thereon.

b. Source and Origin of Goods and Services. Goods and services, except for ocean shipping, financed by A.I.D. under the Project shall have their source and origin in Kenya and in countries included in A.I.D. Geographic Code 941, with respect to the Loan, and in Kenya and the United States, with respect to the Grant, except as A.I.D. may otherwise agree in writing. Ocean shipping financed by A.I.D. under

the Project shall, and except as A.I.D. may otherwise agree in writing, be financed only on flag vessels of the United States of Kenya, with respect to the Loan, and of the United States, with respect to the Grant.

c. Other. Prior to any disbursement, or issuance of any commitment documents under the Project Agreement(s) the Cooperating Country shall furnish in form and substance satisfactory to A.I.D.:

(1) An opinion of counsel acceptable to A.I.D. that the Agreement(s) have been duly authorized and/or ratified by, and executed on behalf of, the Government, and that they constitute a valid and legally binding obligation of the Government in accordance with all of its terms;

(2) A statement of the name of the person holding or acting in the office of the Government and of any additional representatives, together with a specimen signature of each person specified in such statement.

d. Prior to any disbursement, or the issuance of any commitment documents under the Project Agreement(s):

(1) To finance contracts for the Technical Assistance Team (excluding the Administration/Procurement Advisor) and construction services, the Cooperating Country

shall, except as A.I.D. may otherwise agree in writing, submit to A.I.D. in form and substance satisfactory to A.I.D., evidence that (i) an Assistant Medical Officer of Health has been assigned to the Rural Health Management Team in Kitui District; (ii) Second Clinical Officers have been assigned to Health Center/Headquarters at Ikutha, Mutitu and Migwani; (iii) Community Health Workers are authorized under Government regulations to dispense pharmaceuticals considered necessary for effective community-level primary health care; and (iv) arrangements are made to establish an improved drug distribution system in Kitui District.

(2) To finance any activities under the Community Development Fund, the Cooperating Country shall, except as A.I.D. may otherwise agree in writing, submit to A.I.D. in form and substance satisfactory to A.I.D., a report describing the activity, method of carrying out the work, cost estimates, and an environmental examination. This requirement will be satisfied separately for each activity.

e. The Cooperating Country shall covenant, in substance:

(1) to provide qualified personnel to the Rural Health Management Team in Kitui and to the health facilities to ensure the continuing and successful achievement of the Project.

(2) to provide sufficient funds for recurrent costs associated with the Project.

(3) to cooperate fully with A.I.D. to assure that the purpose of the Project will be accomplished. To this end, the GOK and A.I.D. shall from time to time, at the request of either party, exchange views through their designated Project Coordinators with regard to the progress of the Project, the performance of the GOK and A.I.D. of their obligations under the Project Agreement, the performance of consultants, contractors and suppliers engaged on the Project, and other matters relating to the Project.

f. The following waivers to A.I.D. regulations are hereby approved:

(1) Based on the justification set forth in Annex P, I hereby approve an origin waiver from A.I.D. Geographic Code 000 (United States) to Code 935 (Special Free World) in the estimated amount set forth in the Annex to permit the purchase of Project vehicles as set forth in the Annex. I hereby certify that (i) special circumstances exist to waive and do hereby waive the requirements of Section 636(i) of the Act, and (ii) that exclusion of procurement from Free World countries other than the Cooperating Country and countries included in Code 935 would seriously impede

attainment of U.S. foreign policy objectives and objectives of the foreign assistance program.

(2) Based upon the justification set forth in Annex P, I hereby approve a nationality waiver from AID Geographic Code 941 (Selected Free World) to Code 935 (Special Free World) in the estimated amount set forth in the Annex, for shipment of foreign manufactured Project vehicles as set forth in the Annex. I hereby certify that the interests of the United States are best served by permitting financing of transportation services on ocean vessels under flag registry of free world countries other than the Cooperating Country and countries included in Code 941.

Signature: _____

Typed Name of Authorizing Officer

Office Symbol

Experience with Other AID-Supported Rural Health Projects

Over the past five years USAID/Kenya and the Ministry of Health have gained important field experience from three Non-Government Organization primary health care activities. These projects, the lessons learned from them, and how these projects have influenced the design of the Kitui Rural Health Project, are briefly described below.

1. Coorindation in Development (CODEL) Kitui Primary Health Care Project (615-0185)

CODEL has been supporting the mobile health activities of the Diocese of Kitui since 1977. In 1979 CODEL and USAID signed a 3-year grant for \$413,000 to expand CODEL's support from one mobile health unit to four, each to cover approximately 16 communities from Catholic Mission Hospitals or centers in northern central, eastern and southern Kitui. This activity provides primary health care to people living in remote areas of the district for whom Government and mission medical services are unavailable. Services are provided monthly on a regular basis and include maternal and child health care; antenatal, postnatal and family planning services; immunizations; health education; and simple curative care. Each mobile health unit consists of a four-wheel drive landrover, clinical equipment, a team leader (expatriate midwife), two Kenyan enrolled midwives, 3 Kenyan ungraded nurses or "helpers", and a driver.

The project has been successful in organizing and maintaining regular health care services to over 60 communities. The Ministry of Health is also operating some mobile clinics but has not been fully successful due to lack of vehicles, funds for gas and oil, staff, poor maintenance of existing vehicles and organization of available resources. The most successful component of the CODEL project appears to be the immunization program where Mission hospital records show a reduction in morbidity and mortality from measles, whooping cough and tetanus. The least successful aspects of the program have been in nutrition, health education, community participation and family planning activities.

Estimates mobile units operating costs appear high, running about KShs.21.58 or \$2.70 (U.S. \$1.00 = KShs.8.00) per patient visit for 1980. However KShs.11.54 or \$1.44 of this cost is fully attributable to vaccines which were provided by the

Ministry of Health. About 84,000 people were treated in 1980 and an estimated 19.6 per cent of Kitui District's population of children under 5 years of age were covered by the project.

Since the MOH has difficulty operating mobile health units and the cost of operating them is high and since mobile unit activities are difficult to coordinate and can provide only intermittent services, the proposed Kitui Rural Health Project is designed with minimal reliance on mobile health units. Mobile units would only be used in areas where static and CHW services are not feasible. Services from mobile units would concentrate on those activities that lend themselves to intermittent visits, such as immunizations, MCH and family planning clinics.

The Diocese of Kitui has an important network of static facilities and a capacity to organize and run mobile units. The Kitui project will integrate these facilities and, through a planned Phase II Operational Program Grant (\$400,000 budgeted in USAID/Kenya FY 83 ABS), will attempt to transfer the CODEL mobile unit operational capacity to the MOH for future operation of mobile health activities only in those areas that cannot be covered by static facilities or CHWs. However, it must be recognized that testing and obtaining actual operational experience in the context of the Kitui Rural Health Project is needed in order to determine the most useful deployment of mobile health units. For example it may be found that mobile health units supporting CHW activities might be very effective.

2. African Medical Research Foundation (AMREF) Kibwezi Rural Health Project (615-0179)

This project is assisting the Ministry of Health in the development of an integrated and comprehensive rural health service system in Makindu Division, Machakos District. AID is supporting this activity with a 3-year grant of \$818,000 which was signed in July 1979.

Under this project the Kibwezi Health Center staff are training and supporting Community Health Workers (CHWs) in the field. To date three groups of approximately 10 CHWs have been trained and are working on a voluntary basis in the communities from which they were selected. CHWs concentrate on preventive and promotive health care and provide minimal curative services. No drugs are dispensed by CHWs. Community members buy drugs at local shops (DUKAS) or obtain them from MOH dispensaries or health centers, if available.

Although AMREF originally planned to train CHWs at the Kibwezi Health Center, they had to train CHWs in the field as the Health Center was not completed as scheduled. Even though the Health Center is now operating, AMREF continues to train CHWs in the field and believes this approach to be more effective since training is then truly in the social and health environment where the CHWs will be working.

CHWs and communities are told at the outset that neither Government nor AMREF will provide monetary support to CHWs. Any remuneration either in kind or cash would have to be provided by the community. The first group of CHWs has been working now for a year without remuneration. The upcoming November 1981 mid-project evaluation should shed more light on the interaction between CHWs and communities.

Community health baseline surveys have been important in determining community health needs and CHW training needs, as well as for tracking morbidity and mortality trends to assess project impact and ensuring, at least initially, community participation. One of the impacts expected from the CHW preventive and promotive health activities is a reduction in the number of outpatients at the Health Center, a phenomenon recently observed by Health Center staff. However, before this reduction can definitely be attributed to CHW efforts, further assessment of project activities and other factors is needed.

USAID/Kenya consulted AMREF throughout the Kitui Project design period to take full benefit of its experience to date. From the MAREF experience, it was found that the development of community-based health systems is a process of interaction between communities and trained health facility staff. Flexibility in design and implementation is essential to ensure that project activities meet individual community needs and stimulate maximum community participation and responsibility for health care. This is especially important in the Kitui Project where, for the first time in Kenya, the Ministry of Health (an additional variable) will be the prime initiator and supporter of a major community-based health system.

The AMREF experience has been especially relevant since Makindu Division is ethnically Akamba, as is Kitui District. Social structures and cultural traditions are similar so that experiences in Kibwezi can be expected to be applicable to Kitui District.

The problem that AMREF is having with community support of CHWs caused the Kitui Health Project design Team to ensure that there are incentives for the community to support CHWs and undertake preventive and promotive health activities. These incentives, as described in Section III.D.18 of the Project Paper, include free basic drugs dispensed by CHWs, a community Development Fund and a special referral chit (based again on AMREF experience) for dispensaries and health centers. While the strategy of the Kitui Rural Health Project may differ from the AMREF project, the objectives for CHWs for both projects are the same, i.e., concentration on preventive and promotive health care to reduce the incidence of disease and illness that requires costly curative care and to expand health services into rural areas. Also the proposed design of CHW training is based on AMREF's experience.

AMREF has just begun using a mobile health unit to support CHW activities. Experience from this activity as well as future developments of present activities will continue to be useful for the implementation of the Kitui Project.

3. International Eye Foundation (IEF) Rural Blindness Prevention Project (615-0203) Phase II

On March 17, 1980 AID provided a 3-year grant of \$1,870,000 to IEF to continue and institutionalize its Phase I rural blindness prevention activities through the Ministry of Health and the Kenya Society for the Blind. Phase II activities are concentrating on the establishment of a capability among rural health works, through the Ministry of Health's rural health delivery system, to identify, refer, treat and prevent eye disease and injuries. In order to increase community involvement, IEF is establishing two community-based eye care projects, one in Western Kenya and one in Meru District, using primary eye care as the major entrée to primary health care. Specific activities involve:

-- Establishing a teaching block on primary eye care and blindness prevention at the six MOH Rural Health Training Centers;

-- Developing eye care training and education materials;

-- Expanding the baseline data on the prevalence of visual loss and its causes among groups not yet investigated; and

-- Promoting the training of graduate and undergraduate medical students and ophthalmic clinical officers in primary eye care and blindness prevention, especially in the rural setting.

From IEF's Phase I activities it was learned that most eye disease and blindness are preventable as are most health problems in Kenya. Although IEF activities treated and screened hundreds of thousands of Kenyan rural inhabitants, IEF realized that unless preventive and promotive programs were established within existing MOH training institutions are rural health personnel trained in primary eye care, there was not assurance that primary eye care would become an integral component of primary health care.

In the recent IEF mid-Project Evaluation, it was found that IEF activities needed to be further coordinated and integrated into MOH Headquarters planning to ensure their support and continuity.

The Kitui Rural Health Project has been designed to make maximum use of MOH training institutions especially the training of Community Sensitization and CHW Training Teams at the Rural Health Training Center. Specific curriculum will be developed for this purpose and would also serve as prototype training for other MOH health workers responsible for community-based programs. The Kitui project will also have a health information system that will link up the MOH health information system so that the MOH can monitor progress and potential replicability.

The Kitui Project will also benefit directly from the IEF Phase II project. IEF plans to conduct its next prevalence survey in Kitui in August 1982 which will provide a baseline for assessing eye disease trends during the course of the Kitui Project implementation. IEF will also be able to assist in developing eye care training programs and materials for MOH rural health staff and CHWs.