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WOMEN AND "WATER FOR HEALTH"

A KENYA PROGRAMME

(DRAFT OF DOSSIER)

MRS MWONGOLA

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## WIIY A DOSSIER

Although the "Water for Health" project has been making encouraging progress in an important field little documentation is available. Donors and supporters - both here in Kenya and abroad - have not been kept sufficiently informed of developments. So, the Co-ordinator of the WFH project concluded that the time had come for the dissemination of news, especially news of the Pilot Schemes. Sharing ideas and experiences with the different communities in Kenya involved - or currently interested - should encourage them. Sharing news with friends overseas should, we believe, broaden their appreciation of the realities of living today in at least one Third World country.

Funds for the study here described were made available by the United Nations Organisation for Human Settlements (HABITAT). So, the Steering Committee of Water for Health requested the African Medical and Research Foundation (AMREF) to undertake the work.

This report must not be considered as a systematic evaluation of the project and its many different programmes. As funds become available so a detailed examination will, it is envisaged, be undertaken. But the dossier will, we hope, give insight into what is happening in several different components of the project, indicating their present status and possible future developments.

### Terms of reference for AMREF

We were asked not only to write an account of the Water for Health project but also specifically to look at :

1. The social situation and priority needs of the community concerned before the WFH input.
2. The immediate consequences and benefits deriving from the WFH intervention.
3. The anticipated longer term consequences and benefits, distinguishing those individuals and groups likely to be principal beneficiaries.
4. Social and cultural changes in terms of community cohesion and self-reliance which have been given impetus by WFH intervention.

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## INTRODUCTION

The Water for Health project began in 1977. Initially it was launched through the National Council of Women of Kenya (NCWK) by concerned women who attended the Mexico Conference of 1975. They interested UNICEF (New York) who agreed to back the Kenya scheme as a test project hoping that success in Kenya would lead to replication elsewhere in the developing world. One provision of the project is that two thirds of the beneficiaries must be women, for one aim is to minimise the burden of water gathering so that women may contribute more effectively to the progress of their national economy.

In February 1980 the Management decided to establish its own Managerial Committee and to assume the title "UNICEF/NGOs Water for Health Project" to give the project an independent organizational status and so a mandate for its operations.

Fundamentally the project was a deliberate response to the problems arising from water shortages faced by Kenya's rural population. The project aimed to reduce the burdens and hard work involved in gathering water from distant sources. To meet this project objective, it quickly became clear that active participation was needed not only by women's organisations but by all NGOs interested in water and health projects in rural communities whether affiliates of NCWK or not. The major task, then, was to mobilize and coordinate activities old and new by NGOs working in this field. The directing group appreciated that it was not venturing into this field alone. Fortunately it had the backing of the Kenya Government including the participation of various Ministry personnel in the steering, advisory and task-force committees. This arose because the objectives of the project are in line with those of the Kenya Government's "National Plan" for the provision of water and health services to Kenya communities as specified in the 1979/83 Development Plan.

### Broad Objectives of the Water for Health Project

- To support the Government's efforts to secure water for all by the year 2000, through mobilizing local NGOs and communities to take appropriate action.
- To assist families to use water as a tool for solving health problems within their environment.
- To provide water and to promote health through integrated efforts and so to avoid duplication and wastage of resources, manpower and time.
- To relate to relevant Government Ministries and other NGOs dealing with water projects, through consultations, joint undertakings and experience sharing, in order

to avoid duplication of activities and efforts; and, thereby to foster collaboration and coordination through the Steering Committee.

- To establish one pilot project in each province as a learning focus for Water for Health, one project to be a peri-urban project in Kibera, Nairobi.
- To share the experiences of the Kenyan model both regionally and internationally - according to the original aim of 1975 when Kenya was selected, through articles and publications in regional and international magazines, journals, etc.

Pursuing these objectives the project has since 1977 supported a total of 82 water projects spread over Kenya, namely :-

- 35 water tanks
- 40 other water projects
- 8 pilot projects.

*other activities*  
The project has also provided seedlings and fertilizers for 30 different farming groups during the period 1979/80. The principal objective here is to help the families fight malnutrition through improved crops and increased yields. A second objective is to enable families through the acquisition of functional literacy to produce foodstuffs sufficient for home consumption and some for sale, thereby improving their standard of living. Progress in the realisation of these objectives is discussed in the review of individual projects.

Devices embodying appropriate technologies also have their place in this project. They have been introduced simultaneously with water projects and include UNICEF designed jikos - charcoal and wood braziers that can be used both for cooking and for warming water so saving fuel. Women's work could become much easier if these devices were widely used in particular communities where they are appropriate.

Since its inception the project has funded the construction of wells, especially in the arid and semi-arid areas - including Turkana in North Western Kenya, and Kibwezi in Eastern Kenya - which are faced with long periods of drought and then suffer acute shortages of water both for human and animal consumption. The project has also been responsible for the construction of water storage jars and has also initiated small projects in the rural areas e.g. Voi, enabling women to learn how to make the jars themselves at minimum cost. The smaller jars are used both for collection and for storage.

So, though this project was started by women, increasingly it benefits the whole community; at least one community in every province has, in its own unique way, benefitted from the project. Now it is hoped that as funds become available the benefits can be spread to the many hundreds of smaller communities not so far reached.

#### Women, Water and Development - Some Recent Trends in Kenya

For a long time the potential contribution of women to development in Kenya was not given much serious consideration. When 1975 was declared by the U.N. to be "International Women's Year", and the period 1975 - 85 the U.N. "Decade for Women" in Equality, Peace and Development, a new stimulus was provided. Organizations uniting women were encouraged and Kenya women progressed from being merely immersed in household tasks to involvement in decision making in community and national affairs. Rural women have also become more involved in income generating activities seeking to improve their livelihood.

Women's projects in the rural areas are coordinated by several organisations. Maendeleo ya Wanawake (Women's progress'), Women's Bureau, National Christian Council of Kenya, Young Women's Christian Association, Mothers' Union, and others all have flourished in recent years. Small commercial projects including chicken keeping, goat keeping, pig rearing, communal farms, mabati groups (for home improvement) have sprung up in many areas.

With sustained Kenya Government backing and international support, women in the rural areas are beginning to re-examine their situation and to adopt relevant strategies which not only serve to bring them together but also attract their men folk. Water projects have been particularly important in this development process.

Water is the most essential basic human need and water collecting is exclusively a woman's job. We need safe water for drinking, sanitation, food preparation, livestock maintenance and crop production. Most of Kenya lies in low high rainfall zones and with such competing needs water is scarce, especially in many rural communities. Procuring water, then, becomes a major task of women in these areas. Recently we have begun to see men carry water for sale using bicycles or donkeys; water collecting is a female job. Women have for centuries drawn water from the rivers carrying it on their backs or heads. Girls grow up knowing that this is their job. Water carrying is frequently a back breaking labour. Women draw water often 3 to 6 times

a day walking whatever distance they must, even up to six kilometres. They must also collect firewood, rear and socialise their children, care for the old, deal with all family sicknesses, and do all the chores identified as "female tasks" participating in communal labour in villages, etc. It is not therefore, surprising that when there are nutritional deficiencies women and their children are normally the worst hit.

Women in Kenya are not privileged. On the contrary, with low rainfall, small plots of land and the increasing demands of their situation, their status is always precarious and can only progress if encouragement and new projects serve to help improve their future. To release women from unnecessary toil is to unleash a potent force for social, human, and, in particular, family development. The essential ingredient is attractive and innovative programme suggestions and inputs appropriate to the fundamental needs of their communities.

#### Water and the Health of Communities

The relationship between water and health is crucial. People normally settle near water sources, and cultivate near rivers e.g. the people of Kiboino in Baringo District all cultivate along the River Cheploch in Kerio Valley. There they also build their cattle bomas (pounds) near the water sources. Where there is scarcity of water, we have found, its quality does not matter, people use contaminated water because they have no alternative source. Studies in Kenya have repeatedly shown that educating people on better health where water is lacking is a frustrating exercise. Areas where the life is poor and water is scarce usually cannot be otherwise. This we found in Kibera and Kuinda village and elsewhere. These communities are the first to be hit by epidemics and a community-based health care programme can only be effective if reinforced by improvements in the community water supply. Without improved hygiene which depends upon water - a reduction in communicable diseases is nearly impossible. Many eye diseases proliferate due to the defective hygiene of poor pastoral and nomadic communities in Kenya where water is scarce throughout the year. Diarrhoeas and vomiting are common childhood sicknesses associated with poor hygiene. Skin infections are largely water related.

#### Water and the Socio-Economic Development of a Community

To measure in monetary terms the benefits accruing within a given community, from water improvement is a difficult exercise. But many social benefits which are essential components of a community's overall development normally follow. For example community participation in a successful water project increases confidence, develops

local initiative and leadership, and strengthens emerging institutions. Village water committees frequently arise from such community based programs and then move on to other project. Health improvement in a community contributes both directly and indirectly to socio-economic development. A healthy and productive workforce is a pre-requisite for economic improvement. Reduction in the total time devoted to water gathering by making water more easily available can stimulate productive activities such as kitchen gardening and the production of food crops for home consumption and for sale, so, helping to improve nutrition and also to generate income within the community.

Water for Health: A Review of Selected Projects

We review three pilot schemes felt to be representative of what is happening in rural areas, and one peri-urban scheme. Two other NGO assisted projects, Kuwinda village project of St. Barnabas Church, and Kasingau project in Taveta District are also described, though in less detail.

Pilot Schemes: Purpose and Objectives of the pilot scheme

The objectives of the eight pilot schemes of the Water for Health project are:

- To serve as a forum for the NGO(s) to learn from each other by exchanging technical know-how on how best the water link could be used to change the lives of human beings for the better, either socially or economically.

It is hoped that these pilot schemes, one in each province, will serve as learning centres not only for communities around but also for extension workers; and through them the integration of services should have been evidenced in order to avoid duplication of efforts.

Nqusuria Pilot Scheme - Baringo District - Rift Valley Province - Baringo District - Background Information

Area : 10,703 sq km. of which 165 sq km is covered by lakes.

Population : 202,642. (1979 census)

Population per sq km: 50 people per sq km (in low south of Baringo), but in other areas can be as low as 3 people per sq km.

Temperature : 25°C - 30°C South of Baringo  
30°C - 34°C North of Baringo.

Relief : South western area - "High Potential" zone.  
Kerio Valley - "Medium Potential" zone but under exploited.

Marigat - South - Scattered patches cultivable.  
 Tugen Hills - Mountains, valleys and rugged terrain.  
 Western Pokot and Eastern Slopes of Tugen Hills -  
 "Low Potential" zone and badly eroded.

Rainfall - Varies from 1000-1500 mm in grasslands  
 to 600 mm in semi-arid areas.

Family size - Average size per household is 5 persons  
 and almost every married male has 2 wives.

### Economic Base of Population

Livestock farming is the main source of livelihood  
 with, in Kerio valley, also crops such as cotton,  
 groundnuts, and finger millet. Livestock farming -  
 families on average sell 4 sheep, 12 goats, and  
 4 cows annually.

Cash returns are approximately (1982)	<u>KShs</u>	<u>US\$</u>
Sheep	75	7.5
Goats	100	10
Cows	500	50

This gives an approximate annual income of \$67.5 for  
 an average household.

### Project Background

The Ngusuria project is in Kiboino Sub-location,  
 Kabarnet Division. The population is predominantly  
 Tugen though there are also Pokot and Njemps. The  
 Tugen are agriculturalists, the Pokot and Njemps  
 are pastoralists.

Although the Tugen have their own traditional customs  
 governing water usage, water storage, protection  
 and acquisition, water is a scarce commodity and  
 valued more than any other. The little each house-  
 hold gathers is well utilised as it is hard won.

Water collection forms the most important task of  
 women. The woman wakes up at 4.30 am to fetch  
 water often returning only at midday because of the  
 distance involved. Water is normally carried on the  
 back in two gourds inside a basket, and is used for  
 cooking, washing and other household tasks. Clothes  
 washing is done at the river to avoid taking more  
 water home. Bomas for cattle are sited by the river  
 as otherwise quantities of water must be carried  
 uphill for the cattle.



Agriculture is also practiced near the river Cheploch; uphill soils are usually too dry, though during the rain season groundnuts and beans are grown in the hill areas. Water in this community is, therefore, the crucial need and conditions the activities of daily living.

#### Rural Water Supply and the present Water Situation in the District

In the District the water shortage is described as chronic. There are a few permanent sources but the problem of soil erosion makes difficulties. Some of the seasonal streams, it is observed, would be permanent sources of water if there was proper soil conservation with dams and weirs. Because the situation is so bad, the Government and the people of the district, have through self-help projects completed several water projects.

#### Projects Completed Through Self-Help

Poi Water Project	Kasok Dam
Baringo East Dam	Kapkelwa Dam
Majimoto Water Project	Sacho Water Project.

The Ngusuria Water Project is not listed above but progress is being made and it will be listed in the District Rural Water Supply Programme, Phase V.

#### Project Status - Ngusuria

The project started solely as a water project designed to serve about 2000 families in six villages of Kiboino Sub-location. Soon it was realised that the community had many pressing needs, water being just one of them. The health situation was poor with the nearest Health Centre six km. from Kiboino. The women paid high prices for grinding maize and other cereals as well as travelling long distances to the mill. Cattle were dying of tick borne diseases most of which are preventable by dipping. Soil was being eroded leaving poor and unproductive land. Agricultural practices were poor and therefore a low nutritional status characterised many families. Primary school children had to draw water from the river for the school or do without water since water storage facilities were not available.

The community, Water for Health and other NGOs involved, realised that a community with so many competing needs, must adopt a holistic approach. It was therefore decided that because no one sector could solve all developmental problems and needs, the first step was to mobilize all related Government sectoral representatives.

first step

In November 1981 a workshop was organized to discuss relationships between water, health, poor agricultural practices, poverty, illiteracy, etc. A plan of action was prepared for phase 1 of the project with the following components:

- Water supply - catchment and storage tank
- Mobile clinic
- Posho (maize) grinding mill
- Demonstration farm
- Cattle dip.

### Components-Implementation

#### 1. Water Supply

A water catchment site has been selected and a weir completed with protection-the responsibility of the Ministry of Health. Work has begun on a water tank which, when completed, will hold 20,000 gallons of water; funds for the materials for the tank have been provided by WFH, the community contributing the labour, which is mainly breaking rock for the foundation of the tank. The tank was due to be completed in June 1982.

#### 2. Health Clinic

With community funds from Water for Health a small wooden house has been built for the mobile health clinic. This has already started operating, calling every 28th of the month. A total of 120 children were attended on the first day coming from within a radius of 16 kilometres.

Health needs are numerous. The community feels that this facility one day a month is inadequate and would like a full health clinic with normal storage facilities for drugs and a full-time staff. This has been agreed in principle with the Ministry of Health but several conditions have to be met e.g. housing for permanent staff, better storage facilities, refrigeration etc. Funds are being sought for these purposes. The water pipes have not yet reached the Health Centre but the work is progressing. Water for use in the Health Centre is brought by the community. A tank for storage at the H.C. has been offered by WFH.

#### 3. Posho Mill

The posho mill is the brain child of Kiboino women. They have a great interest and purchased the mill on a hire-purchase basis making monthly repayments from the little money they get from grinding maize for other villagers. This would normally cost

Shs 5.50 per debe (20 litre tin) of maize. The women also want to buy maize from the Kenya Maize Marketing Board so that after grinding they can sell flour and so raise their economic status. At present they cannot make use of the mill through all the year but only when maize is available. Currently they do not seem to have learnt that the mill could be used to grind other cereals including millet.

#### Observable Benefits

- Women no longer travel long distances carrying their maize to have it ground.
- Money that was previously used to buy maize flour from the shops will be saved and probably used for other productive activities.
- Women of Kiboino are brought together and the community now appreciates the tangible benefits of the project. Those who were non-members are now joining.
- Women now have confidence in their undertaking because of its observable success.

#### 4. Demonstration Farm

About 4 acres of land has been leased for a five year period to be used as a demonstration ground utilising better agricultural methods, introducing new crops, and to be used as a nursery for citrus fruits and other trees, etc. Water has not yet reached the farm and, with the unreliable rains, crops already planted are, unfortunately, threatened by drought.

Most importantly, perhaps, the community will learn better timing for crops sowing, weeding and harvesting. Normally a farmer does not plant until rain has already started. Often the drought season comes along with the crops not ready for harvest.

This farm will help about 252 farmers who would normally be without agricultural advice. There is only one agricultural field educator in the area. Transport facilities are very limited and households so scattered that in a year he might only reach one quarter of the farmers.

Various crops have already been planted:

- Groundnuts
- Severe sorghum

For demonstration purpose the crops have been treated in three different ways :

- with goat's manure
- without manure or fertilizer
- with fertilizer.

Good quality dairy goats have also been introduced since livestock keeping is one of the chief sources of income in Kiboino. WFH has contributed KShs 18,000 for the purchase of 30 goats. An additional 10 Aglonubia and Toggenburg goats have been donated. Work on building a goat boma (pound) will soon commence. KShs 4,000 has been collected from the community for fencing and other work. Labour will be provided by the community. Napier grass and buffalo grass have already been planted to feed the goats.

#### 5. Cattle Dip

Tick-borne diseases, in particular East Coast Fever, kill cattle in Kiboino. The need for a cattle dip was recognised and its construction achievable. With Ministry of Livestock assistance the dip has now been completed. The community contributed Shs 10,000 for the dip. Over 1,000 cattle regularly utilize the facility. Since piped water has not yet reached the dip the community members gather water for use in the dip though at times the Ministry of Livestock provides a tanker of water. The dip serves not only the people of Kiboino; but herds from 6 kilometres radius. The nearest dip is 10 km. from Kiboino.

#### General Observations

The economic and social benefits deriving from such a complex project are difficult to assess, especially when the project has only been running for one year.

Water projects elsewhere have also been known to make slow progress initially. Too often they are impeded by central administration rules and exemplify a "top down" approach to development. The Ngusuria project, embodying community participation in decision making and also in contributions both of cash and labour, is almost unique. Community participation in any project is the essential means to ensure project continuation when the funding agencies pull out. At Ngusuria new spheres for community action have been explored and a model developed which confirms that participation in one project can generate confidence leading to participation in others.

change →  
New leadership has emerged in Ngusuria. The community has found/its surprise that the most ordinary people can share responsibility for serious decision making in community affairs. Amongst the Tugen there has always been a tradition of strong leadership but previously the leadership base has been widened to include "outsiders" now included in the membership of the Ngusuria Development Committee. New structures like this can provide a firm base for other development activities.

There is, however, a danger of creating dependency - here as elsewhere - unless a clear cut agreement is soon reached on the level of community contribution. If a reasonable balance between community contributions and outside assistance is not maintained, the independent attitude of the community of Ngusuria might be eroded.

### Future Plans

Some suggestions regarding "needs" presently met and unmet may be useful. The people interviewed talked especially about their frightening health problems; mothers delivering at home with use of unhygienic equipment, problems increased by the distances of health centres, increasing incidence of diseases like tetanus, etc. Such problems cannot be solved in a day, and any solution attempted must utilise economical methods. A single mobile clinic is not adequate to serve/enormous area, nor would even a well equipped health centre suffice. Interviews with old mothers confirmed that this community for long has been utilising the services of traditional birth attendants. If given relevant training these TBAs could give invaluable service to this community.

→ Every community has its own customs, habits and practices, and these should be respected. But this project is mainly concerned with raising both the economic and health status of the community. Poor health is often a consequence of bad and inappropriate habits. The health education component needed in the Ngusuria project has not been determined but the need is there. For instance, pit latrines should be introduced. In almost every household visited there was no latrine. Epidemics spread quickly when poor sanitary habits such as indiscriminate faecal disposal, predominate. Field educators from relevant Ministries should encourage community members to seek training to enable the community by itself to solve many of its problems. In other communities in Kenya this approach has succeeded and surely would be valuable in Ngusuria.

→ When funds become available more appropriate productive activities for women can be undertaken. To date only

the posho mill and the demonstration farm can benefit women directly. Other short term productive activities need to be explored to improve the incomes of mothers and their families. Funding will be needed as the project in Ngusuria seeks to improve health through training TBAs, changing habits by means of health education on a continuous basis, and also to implement income generating and effort saving projects for women.

### Taita Taveta District - Background Information (Coast Province)

**Total Area :** 16,974 sq km - most of this area is now devoted to the game reserve and "Tsavo East" and Tsavo West" National Parks.

**Agricultural Land :** 1930 sq km only.

**Climate :** Temperate

**Relief :** The district falls into two zones:  
The upper zone - Taita Hills, the Segalla and Kasigau ranges with cultivated slopes and valleys.  
The lower zone - national parks and game reserve.

**Rainfall :** Heaviest on hills; low and inadequate in the low plains.

**Population :** Predominantly Wataita, Wataveta with some Kamba, Kikuyu and Luo. 1979 Census - 149,000 - an increase of 39,000 from the 1969 Census.

Population increase is estimated at 2.8% per annum. Distribution varies with rainfall which forces 70% of population to concentrate in the upper zone which has agricultural potential and fertility.

#### Sources of Livelihood

On the hills people keep goats, cows and poultry for domestic use. Cattle for commercial purposes are normally kept in ranches. Tomatoes and other vegetables are sold through cooperative societies to Mombasa market.

#### Water Situation in Taita-Taveta

The district has some small projects but resources are inadequate and population dispersed so that it has not been possible to centralise the supply of water. The

To sustain the momentum of development in Ngusuria inputs are needed in particular for training - using the low cost Kabarnet District Training Centre - and also for initiating more women's group income generating activities. It is anticipated that for this purpose Water for Health will need to expend at least Shs100,000 (approximately \$10,000) in the project period 1982 to 1985.

semi-arid areas of the district lack water. Most of the existing supplies are found in the Taita and Segalla Hills, Taveta and Kasigau.

There are three rivers in the district, Voi, Lumi and Tsavo. The Voi river is dry during most of the year. The River Lumi near the Tanzania border normally supplies Taveta with water throughout the year.

#### Self-help Water Project - Kasigau Water Catchment

This self-help water project has received assistance from Water for Health for rehabilitation purposes. Though a rural project, it will, when completed, serve 2,000 people and Kasigau Market, Moi Secondary School, Kasigau Health Centre and the Chief's office.

The project was started by the County Council in 1952. The piping was laid from a very high source but most of the pipes are now rotten and have disintegrated. The rehabilitation process started in 1975/76. A water reservoir was built and a tank started but this was never completed.

To speed up the rehabilitation process, WFH donated pipes. The project has a good source of water but because this is contaminated with "B. coli" it needs treatment. Nevertheless the health centre is using the water and supplying limited amounts to Rukanga village where there is no communal stand post. Moi Secondary School is also utilising the water. A storage tank was donated to the school by Water for Health.

#### Future Plans and Funding Requirements

Utilization of the resources made available by WFH was delayed because the essential community organization was lacking. Materials donated for rehabilitation of the existing scheme were not quickly used because the community was not involved by the county council and these materials were controlled by that authority. The continuation and effectiveness of the project will depend on whether the community feels the scheme and water are theirs, and it is not simply a county council scheme. Support for the rehabilitation of the project will come from the community as people are organized for that purpose. Additional material should only be given in response to requests from the community. The community would then need to elect a committee to be responsible. Effective organization might then emerge that would act as a lever for other development projects. This may involve organising a workshop to sensitise the formal leaders who would, in turn, act as link agents.



with the community for future development undertakings. The problems arising from community organisational structures are complex. We feel that the water project needs to be supplemented by a study of these problems leading to recommendations for appropriate community action.

### Wongonyi Pilot Scheme

The Wongonyi Project is located in Mbololo location of Taita Taveta District. The project is intended to benefit about 15,000 people.

Water needs and plans have been discussed from 1952 but no scheme had been realized. The local women's activity made it possible for the Wongonyi Project to be realised because the women were organised and also had been responsible for other development projects in the district. More motivation came from a workshop organised in April 1981 by WFH. This brought together community leaders, local administration personnel, church leaders, representatives of Ministries, for discussions on encouraging and assisting communities on their water plans.

Self-help activities in the location were not new; what the community needed was encouragement. The Mjomba Secondary School was one planned scheme; the school will be one of the beneficiaries of the Water for Health project.

Water has for long been a problem in the district. The Taita Hills are so steep that though there are many possible small sources it is difficult to reach them. Transport of water is a major problem. In some areas people transport water by train. Mbololo is connected to Voi - the district/by only one Landrover. This leaves in the morning and returns in the evening; if you miss it you must walk !

### Phase 1 Components

1. The cattle dip - Work is now in progress
2. Water supply - A suitable source in Mbololo forest has already been identified and the tank is being built. Implementation is held back by lack of funds. Although the people have not been able to complete the work, their enthusiasm and willingness to work on the project are encouraging.

### Mrangi Community Development House

The building is not yet completed but work is in progress. When completed it will incorporate several activities -

- A mobile MCH clinic to serve the whole of Mrangi. (Health facilities are few.) The nearest health facilities are Ghazi Dispensary (10 kilometres from Mrangi) and Mwambwe Health Centre (also approximately 10 km over the hills.)
- An office for those who will work in the MCH clinic.
- A Social Hall for community meetings.
- Adult literacy classes, in reading and writing English, Swahili and Kitaita, will be given.

The funds for the hall have been mainly raised by the Adult Education Group. A sum of KShs 4,000 has been raised by voluntary casual labour. The other organisations have contributed KShs 800 for the project. The community hopes to extend the hall for other uses when it is completed.

### Water Jar Demonstration Unit

→ The women have already started planning to improve water storage in the community. A demonstration unit has been offered by the International Gospel Mission in Mbololo. Women can then learn how to make UNICEF designed storage jars for their own use and, possibly, for sale.

### Voi Irrigation Farm Project

Womens groups in Taita are active socially and politically. In Kenya it is acknowledged that to secure the support of women is essential for political success. Both in the rural areas and in Voi Town, Taita women's groups have played roles in many development activities. They are particularly involved in activities that may generate income. Groups have tried establishing shops, building houses to rent, organising mabati groups (which together buy iron sheets for roofing and allocate these in turn by a ballot), group farming, producing for sale water jars, poultry keeping, dairy goat projects, etc. So a demonstration farm is just an extension of present interests.

The 20 acre demonstration farm is the concern of 41 women's groups. The land was allocated to them for ten years to side demonstration crops of new or better

foods which could then be grown on their own farms.

A tank has been built and work on the pipes and the pump is making progress. The community provided the labour for clearing the land, building the tank, and will be involved in borehole construction and fitting the pipes. The tank, pipes and pump have been provided by Water for Health.

A British VSO (Voluntary Service Overseas) volunteer has been acting as technical adviser. When he leaves the women hope they will have learnt how to maintain the pump and equipment without outside assistance.

#### General Observations

When completed, the water project will benefit this community substantially. The Primary Schools, where children now draw water for drinking from streams, walking downhill and returning already thirsty, will be immediate beneficiaries. Households too, will benefit. What can a mother do with the small amount of water she has been able to carry many kilometres, or with water brought in occasionally by train or other public transport? To estimate the full success of the project, however, we must wait for its completion.

#### Future Plans and Funding Requirements

The demonstration farm faces several problems. Local women have a hand in many other projects. Competing for their efforts is "Food Manufacture Ltd., a bread-baking project to begin operating shortly. At times they have not been able to give the farm as much of their time as it requires. Immediate returns anticipated from bread selling put group members into a dilemma. Advice is needed not only on how to organise "Food Manufacture Ltd" but also on how to run their various project using the time that is available effectively.

Short term benefit proposals seem attractive rather than long term community benefit projects. Perhaps a workshop focussed on "project management" would clear some problems. For the women's groups to work co-operatively a scheme of division of labour, embracing both those living near to and far from the farm, needs to be organised, otherwise some women may feel they are being exploited.

The principal activities planned for the Mrangi Community Development House are the MCH Mobile Clinic, and Adult Literacy. Each is vital for the development of Mbololo. The community takes pride in the house. We felt, however, that the Ministry of Health mobile health clinic might soon prove inadequate to meet the health needs of people from

such a wide area, and that the introduction of a community-based primary health care programme may need to be considered. Usually health needs in communities are not clearly perceived but education to increase awareness can clarify perceptions of needs. Community Health Workers elected by the community might, after training, bring more clarity and community cohesion.

Funds available - with safeguards - at the right moment can accelerate community progress. We feel that financial assistance will be required for :

- Leadership training, including workshops on project management and maintenance.
- Introduction of a community-based PIC scheme.
- To overcome unanticipated and urgent needs, e.g. spare parts, and additional supplies.

### Gatundu Pilot Scheme - Central Province

#### Background - Kiambu District

Population : 1969 Census - 1979 Census  
475,576 - 685,555  
An increase of 209,979 in ten years !

Population Projection for 1983 - 758,000

Area : 2,578 sq km.

Annual rainfall : Varies from 500 mm in drier areas in south east (Munyu and Ngoliba) and south west (Ndenja and Karai), to 1500 mm in the north (The low rainfall-low potential zone occupies 22% of the total area).

The high potential zones - with high rainfall - occupy 55% of the district area and include areas of Githunguri, Gatundu, Kiambaa and Limuru and part of Kikuyu. The medium potential zone occupying 23% of the total area and covers most of Thika Division with small parts of Gatundu, Kikuyu, and Limuru Divisions.

Altitude - 2,400 metres in the north to 1,430 metres in the south east.

#### Sources of Income

Agricultural activities, and processing and marketing of farm outputs. Approximately half of the population is involved in these activities. The other half is employed mainly in industries, government and other agencies and the informal sectors, e.g. small shops (dukas); rural crafts - providing materials for building, clothing, etc.

We estimate that to support both the Wongonyi Pilot Scheme and the other projects currently requesting WFH assistance in Taita Taveta District (Coast Province) in the 1982-1985 project period, not less than Shs200,000 will be required.

Approx. 2,000 families live in unplanned shanty dwellings and in service centres and on the smaller trading plots. Their only source of income is seasonal employment in coffee, and tea estates.

#### Water situation in Kiambu District

Water is regarded as a priority in Kiambu. Programmes for water supply by "Harambee" (self-help) efforts include no less than 240 self help projects. Most of these schemes are small and cover sub-locations but some seek to bring water to a whole location. The number of people benefitting from a scheme depends on the progress made which usually depends on the available resources of families.

Women still have to fetch water from a distance of one kilometre or more. Few families have regular water supplies in their homes. Marginal rainfall areas are served by boreholes which are expensive to drill and to equip and often provide insufficient water.

Many self-help water supply schemes are attempted but the groups often lack technical advice on maintenance and also are handicapped by slow implementation. Water projects have been assisted by CARE Kenya, rural development funds, the Ministry of Water Development and also Water for Health.

#### Gatei Pilot Water Project

The water situation in Gatei village was poor. To get any water to their homes women had to walk 2½ km and return climbing a steep hill. We interviewed one mother asking about her situation before and after the water project to try to assess her personal feeling about benefits accruing from the project.

#### Mama Wambui - A Brief Case Study of one Gatei Village Participant and Her Activities

Susan, who is 44 years old, and married, come from a family of ten children. She was seventh in the family and herself also has ten children. One child is in school at Standard Six, two are at home, one is in high school and one working as a teacher in a nearby school. Another is at home after completing secretarial college. Mama Wambui has never had any formal education but can read and write in Kikuyu. She can also understand Swahili but cannot write it.

Mama Wambui and her husband Chege, are farmers. Most of their income comes from coffee beans which they sell at about Shs35 per kg. In all she has

about 2 acres of land and these plots are all cultivated. She has a small piece on which to plant various food crops - maize, beans, potatoes, etc. The piece of land they live on has been subdivided from 11 acres which her father-in-law had. Mama Wambui and her husband Chege normally do all the work on the land but employ casual labourers when the work is too much for them.

#### Daily Activities Before the Water Scheme

Before the Water for Health water came she says she would normally wake at 6.00 am and prepare herself for the new day. Then she would milk the cow and make tea for those children going to school. Then, at around 7.30, she would go to the river. When she was expecting, though, she would hire somebody to get water for her and pay one shilling a debe (20 litre container). She would fetch one debe for household use and three debes for the cows. She would finish water carrying at around 10.00 am and then go to the shamba (field) to fetch feeds for the cows which would take her another hour. Then she would feed the cows and go back home to have her breakfast and soon leave to work in the shamba. Returning home just before 1.00 pm she would hurriedly make lunch for the children. Sometimes she would warm the food of the previous night, but if she had left some food - mostly maize and beans - cooking in the morning she would fry it or she would quickly prepare ugali (maize meal porridge) and sukuma wiki (boiled green leaves). After the children have had lunch and gone back to school she would give water to the cows and then go back to the shamba returning at 5.00 pm. By this time the children were back from school and she would allocate their duties to them. One might milk the cow, and others go to the river for more water. She would then start preparing for supper.

#### After the Water Scheme

She now wakes up at the same time 6.00 am, milks the cow, makes breakfast for the children and sends them to school. Since the water is just outside she fills the cattle trough and then draws a little to wash utensils, and to wash the family's clothing. She normally finishes between 9 and 10 am. Then she goes to the shamba. Asked whether she ever rests at all she said :

"No, no time to rest, but at least I take my time on morning activities. I no longer feel as harassed as when I had no water here".

In the evenings the boys usually fill up the tank outside the house. This is an easy job so one does it whilst the other fetches the cattle feeds and another milks the cow. So her jobs are reduced and she is usually left only with the evening cooking.

#### On the Jiko. ("Appropriate Technology" portable cooking brazier).

She now uses a jiko which was made with help from Karai women. It saves her a great deal of time. She can now warm water to wash the children and at the same time be making food for them. She uses only about three pieces of fire wood in the jiko. The traditional jiko takes more fuel.

#### The maize sheller

Down at the river maize shelling is done by a machine but Mama Wambui says that she cannot use it. Walking down and up the hill consumes too much time. She also likes to use her maize cobs for making fire. So she would be forced to carry these cobs uphill after shelling which would double her carrying work.

#### Benefits of the Water Scheme

She says that the water has brought women together. They have now formed groups which previously they never thought about. These groups, she hopes, will be a forum for seeking better ideas.

Most important of all she says - "I can now grow vegetables right outside my house". These vegetables she has previously been buying for a lot of money. She plans also to keep grade cows - which produce more milk than traditional cattle - and then to sell milk to other villagers !

#### Project Status

This small community water project which was started only in 1981 is now fully operational and serving about 1,000 people. The project has been developed on a self-help basis. Originally the community came together in 1977 as a group of 68 households and registered to undertake a water project. This project was never realized.

In 1980, when Water for Health offered assistance to women in the area, water was stated to be a priority need.



Thirty-two families indicated their wish to leave the original project group and registered to participate in the WFH Gatei Project. Community collections raised Shs7,000. WFH assisted with Shs25,000 for the pumps and the water tanks each holding 550 gallons.

The water is pumped up to the village by a hydram provided by WFH which uses for power the fall of water at the river.

Other appropriate technology devices have been introduced to benefit some families including the energy saving jiko, and the maize sheller. The women are happy with the jiko but feel it is expensive to make, the materials costing about Shs 280. Because some families cannot afford this the women have started organising a contribution scheme to help each family successively to acquire the jiko.

/acquire

Women feel they can do the work of maize shelling faster with their hands than with the sheller. The sheller is far down at the river and taking maize down and then carrying the shelled maize and cobs back uphill consumes too much time.

#### The Community's Future Plans

1. The Gatei women are now in the process of establishing well organised groups so that they can start communal pig keeping, poultry keeping and other income generating activities.
2. The present water pipe system will be extended to reach families that are not yet served.
3. Better use will be made of the water now available to grow vegetables and other food crops which could otherwise not be grown in uphill fields. Some of the households visited have already started to do this.
4. Small scale rural electrification, using the water falls, will also be an experimental project.

#### Future Plans and Funding Requirements

That Gatei village has benefitted economically and, to some extent, socially, could be seen in all households visited. In addition to communal plans to use the water in new ways, individual families also have their plans. Kitchen gardening is becoming popular.

We felt, however, that more inputs are needed to encourage better community health. In the households

The Gatundu (Gatei Village) project has been much visited and admired but to make it the model for Central Province that is our aim, more WFH inputs are essential. We estimate that during the project period (1982-1985) these will cost not less than Shs250,000.

Hygiene

visited we observed that hygiene levels are still low. The project needs to incorporate a health education component. At present there is not much linkage between water development and health improvement. Piped water mainly serves to relieve women of the hard work of carrying it uphill. Better hygiene and food storage facilities, nutrition education and promotion of better child health care practices could make a valuable contribution to family life improvement. Community organization for health action needs to be encouraged. Implementing this would involve the Ministries of Health and Agriculture and require careful planning.

Self-reliance and independence can only come about if the community develops in confidence, and in competence to undertake the crucial maintenance and organizational functions required by this project. If funds become available leadership training for selected key community members could strengthen the foundations of the project.

→ So, assistance with demonstration gardens, health education for home improvement, community leaders workshop for the development of programme ideas and promoting better community organisation all are needed.

Kuwinda Village - Sanitation Project - Langata, (Nairobi Area)

Kuwinda is a shanty village 5 miles from the city centre covering 2½ acres. This land was first occupied by 12 squatters who each contributed money to buy a 40 acre farm from a European settler. Their hopes were shattered when the settler sold his land, including the 2½ acre plot, to another farmer leaving them with no rights over the land they now occupy.

Cheap housing on the plot has attracted many people. A room measuring 6 feet by 6 feet costs only Shs20 a month and can be used to accommodate a family of between 2 and 6 persons. The rooms are mainly occupied by those who cannot afford a home anywhere else in Nairobi. Some of the occupants are night watchmen, some casual farm labourers, and others secure income from various informal and even dubious activities.

Water and Sanitation

Most tenants buy water from a fellow villager who has obtained a city council water connection. This usually costs 15 cents for a 20 litre debe, but is often too expensive for those without reliable sources of income.

The poor sanitary conditions disturbed the Rev. Waweru of St. Barnabas Church, Langata, who immediately - with

no missionary intention - started raising money to improve conditions. He also mobilized the villagers to offer labour for latrine digging and materials for nine pit latrines were provided by Water for Health.

In this settlement young children suffer the most. They do not go to school because the nearby schools make demands - uniforms, etc - which parents of children from Kuwinda cannot meet. Rev. Waweru, using church funds, has managed to erect a two-roomed school for 200 of the young children who live in Kuwinda. No fees are charged.

#### Future Plans and Funding Requirements

1. The nursery school needs water and, for this, a storage tank to provide a separate city council water supply.
2. The nursery school also needs more rooms to accommodate the remaining children.
3. The village needs a full-time social worker to aid those families trapped in particular problems.
4. Some members of the community gather water from pools and puddles for cooking and washing clothes. A community health education component is needed in Kuwinda and, possibly, a slow sand filtration scheme.
5. The basic problem is low incomes. There is need to encourage more and better organisations in the village so that income generating group activities can be commenced. Initially this would require funds.
6. Children finishing nursery school need to be assisted to enter primary schools. This is an additional heavy responsibility for St. Barnabas Church with its limited funds.
7. A compost pit, rubbish disposal and other unitary improvements are needed, but funds are not available.

#### Urban Squatter Pilot Project - Kibera, (Nairobi Area)

##### Background

Kibera is a shanty town 7 miles from the city centre on the south-western side. The Division includes modern residential estates - Woodley, Langata, Golf Course and Nairobi West, with middle class residents but the area

served by the Water for Health project is the old shanty section of Kibera where the jobless and low-income group reside. This comprises six villages - Kianda, Makina, Laini Saba, Lindi, Gatuikira, Silanga and Mashimoni with a population of perhaps 80,000. The whole Division has a population of 143,013 (1979 census).

The houses in the shanty town have walls of mud and wattle and cheap timber supports the roofs. Some have corrugated iron roofs, others roofs made of flattened tin cans. The rental cost of housing is determined by the size as well as the material used in construction. Normally it is in the range of Shs100-300 per month.

The water and sanitary condition in this shanty are very poor. There are water kiosks connected to the city council water main where water is sold at 15 to 50 cents a debe. The amount of water used depend upon the number of persons in the household but averages 3 to 4 debes a day. Use of stagnant water from pools and a lake, by families that cannot afford to buy from the kiosks is all too common.

Pit latrines are shared by all those households that are nearby. Most latrines are in such bad condition that indiscriminate faecal disposal is common, even foot paths being fouled in this way.

### Project Status

#### Main Objective

- To co-ordinate the work of NGOs involved with the urban squatters through improved sanitation, health, water, income generating and energy conserving projects.

At present this peri-urban project includes plans for :

Three water kiosks (one is already in operation.)

Four two-roomed education centres for use by interested NGOs.

Three compost pits in different villages.

Water kiosks (selling points) are planned for two more villages. The beneficiaries are to be women's groups, two of which are made up of traditional dance teams; one Kikuyu - called "Nyakinyua Group" - and one from Kibera Nubian village. Urban communities are difficult to organise, and it has been found easier to work with the already existing structures like the dance groups.

The Nyakinyua dancers are from Saba Saba village and their water kiosk is already operating. Water for Health has assisted the group with Shs 500 as a deposit paid to the City Council of Nairobi to be allowed to sell water. The water is sold for 15 cents a debe and the profit is banked and used for income generating activities like basket making. The group has a 500 gallon storage tank also donated by WFH. Other activities begun or planned by the group include the purchase of 45 acres of land in Gilgil, a garment making work shop, a community hall, and a butchery.

The Nubian group of dancers numbers 60 members. Work is in progress on a kiosk.

The village of the Sulanga Dancing Group is near the lake called Nairobi dam. At present they collect water and wash clothes in the dirty water of the dam. The site for a kiosk has been selected. Work has also been started on a community hall which could accelerate women's development activities but funds to complete the building are lacking.

Kibera' also has already one Education Centre run at present by a Danish Volunteer with Danish assistants. It is in full operation. Kibera mothers come every week for nutrition education and demonstrations; also for maternal and child health and family planning clinics, and for homecraft classes mainly concentrated on dress-making, but also for UNICEF water jar making demonstrations. The two-roomed house was erected with assistance from the Danish Women Association. The problem of health and hygiene is paramount in Kibera. Water for Health decided to concentrate its efforts on reducing this problem. Efforts have therefore been made to get the various Ministries to assist the women's groups. The District Administration allocated the plot for WFH to concentrate on these activities.

Women's groups with members living below the poverty level needed to improve their incomes if this project was to succeed. A sewing and handcraft group was formed and its homecraft classes have become very popular; the centre has to keep mothers on the waiting list. Sewing materials are provided free but the mothers are encouraged to buy what they have made as evidence of their work in the Centre. This has helped attract more women into the Centre.

The mothers are especially interested in activities that will help to make them self-reliant. Integrating the various educational components into a comprehensive community development plan is clearly important. This is, of course, the need not only of the Kibera project but also of other projects.

### General Observations.

The importance of the Kibera project may lie in what it has to offer as a learning example for other urban areas and, perhaps, in particular to disillusioned social workers within the shanty town areas of Nairobi. Community organization in Kibera is a difficult job! WFH has made a partial break-through because it has been working with existing well organized and established groups. Selecting strategies for the expansion of development activities is, however, a complicated process and must seriously affect project implementation. The facilities already provided - like the MCH clinic - should draw attention to the needs of Kibera and similar shanty town villages. More publicity for these facilities and the progress made could, we feel, both encourage support and raise morale in the villages and in similar programmes.

Plans to carry out further surveys of the Kibera urban squatter area are underway. These will help the project leaders to understand the problems of urban living. They will be able to plan according to the needs of these families, and be aware of groups or individuals who, if mobilized, could act as link agents, and others who have the potential for running projects independently. Funds will be required for the new kiosks and education centres and to support the activities mentioned as well as for surveys and leadership training.

The Kuwinda village (Langata) and the Kibera Urban Squatter Pilot Project both focus upon problems of low-income urban shanty town living. These problems are extremely serious with disease and death following close upon social and family disorganization. They are also problems difficult to break through. We estimate that for the 1982-1985 period not less than Shs400,000 will be needed to make the progress that is our goal.

### Water for Health - the Future

Kenya is a dry country. It has no major river. The highland areas with reasonable soils and satisfactory rainfall have population densities that are among the highest in rural Africa. These densities are far beyond their "carrying capacity" given present cropping and livestock patterns, and current limited utilisation of resources.

To be the lubricant that makes development possible, all water must be used intensively and intelligently. For the dissemination of methods of better water use and more productive technology, systematic encouragement of appropriate initiatives in the villages and the impoverished urban sections, must be reinforced. These

initiatives must be promoted by community education; education of forward looking citizens in cultivation and growing new crops, in improved husbandry, self-care for family health, better budgetting, income improvement, co-operation, and of course more efficient community organization. The basis for such programmes is leadership.

The WFH project has this broad, developmentally - oriented focus. Water is the basis of life and so of residence patterns, but as water - of good quality - is regularly available people, and in particular women, are freed to take the next steps in the improvement of their lives. For this they need some "seed" money and some skilled, informed and experience-based advice. Then, all the resources available to them, from sunshine to animal power, can be used in new ways to speed up "development" - by which is meant "the development of people for fuller living".

Water for Health would like to reach out to as many NGOs as possible. To date this has not been possible mainly due to limited resources both technical and financial. However, recently the project has tried through training programmes, seminars, and workshops to extend information to the outstanding NGOs, that will assist them in their projects.

To underpin this activity WFH hopes, when the time is appropriate, to set up a reference centre where water, sanitation, health and other materials can be made available for use by NGOs and interested Government agencies. For this purpose a room has been made available by Kenya Ministry of Water Development. The Co-ordinator has begun contacting organisations, asking them to assist with books and educational materials. Additional funds will have to be sought for the effective running of the centre. A part-time - eventually full-time - librarian will be able to advise on research and development activities to be undertaken by the reference centre. "Development Education" is essential for this type of project. WFH staff feel obliged to offer such education to NGOs if a broad and resourceful view of development is to be propagated. Sensitization of communities and their leaders requires skills that many NGOs do not at present possess. With additional funding such vital services, crucial to development of many kinds of projects, could be better developed.

Water for Health is uniquely conceived and geared to promote - through women's groups - just the kind of innovation that can in these days initiate a peaceful revolution.



### Funding Water for Health

The Water for Health project has, so far, largely been carried financially on the shoulders of other organisations especially Maendeleo ya Wanawake (women's progress), UNICEF, and the Ministry of Water Development. All wish to help but cannot increase - and, in most cases, continue to give the exceptional support we have received previously. We must, in future move towards standing on our own feet by having our own funding sources if we are to extend and increase our impact as we have indicated. To ensure our future, engage first-class staff, consolidate our relations with our consultants, etc. current estimates show we need a minimum of Shs1,000,000 (approx \$100,000) over the next three years for our central operations. We are confident that old friends and new friends will, with their support, encourage us in this endeavour.