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**AMREF**

**SANITATION, HEALTH AND THE  
COMMUNITY IN KIBWEZI**



Ayuka Oendo  
Field Research Officer

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African Medical and Research Foundation  
P.O. Box 30125  
Nairobi, Kenya

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## **AMREF**

The African Medical and Research Foundation (AMREF) is an independent non-profit organisation which has been working for more than 25 years to improve the health of people in Eastern Africa, mostly in Kenya, Tanzania, Southern Sudan and Uganda. AMREF runs a wide variety of innovative projects with an emphasis on appropriate low-cost health care for people in rural areas. Project funds come from government and non-government aid agencies in Africa, Europe and North America as well as from private donors. AMREF is in official relations with the World Health Organisation.

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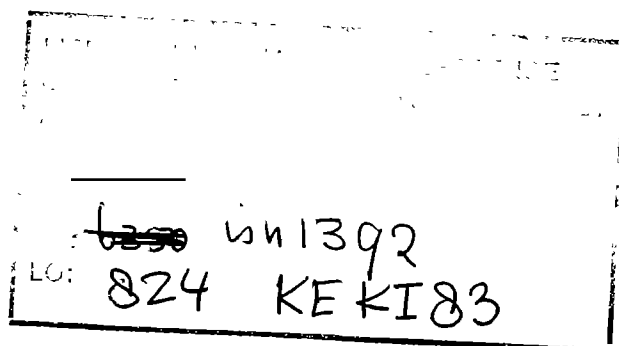
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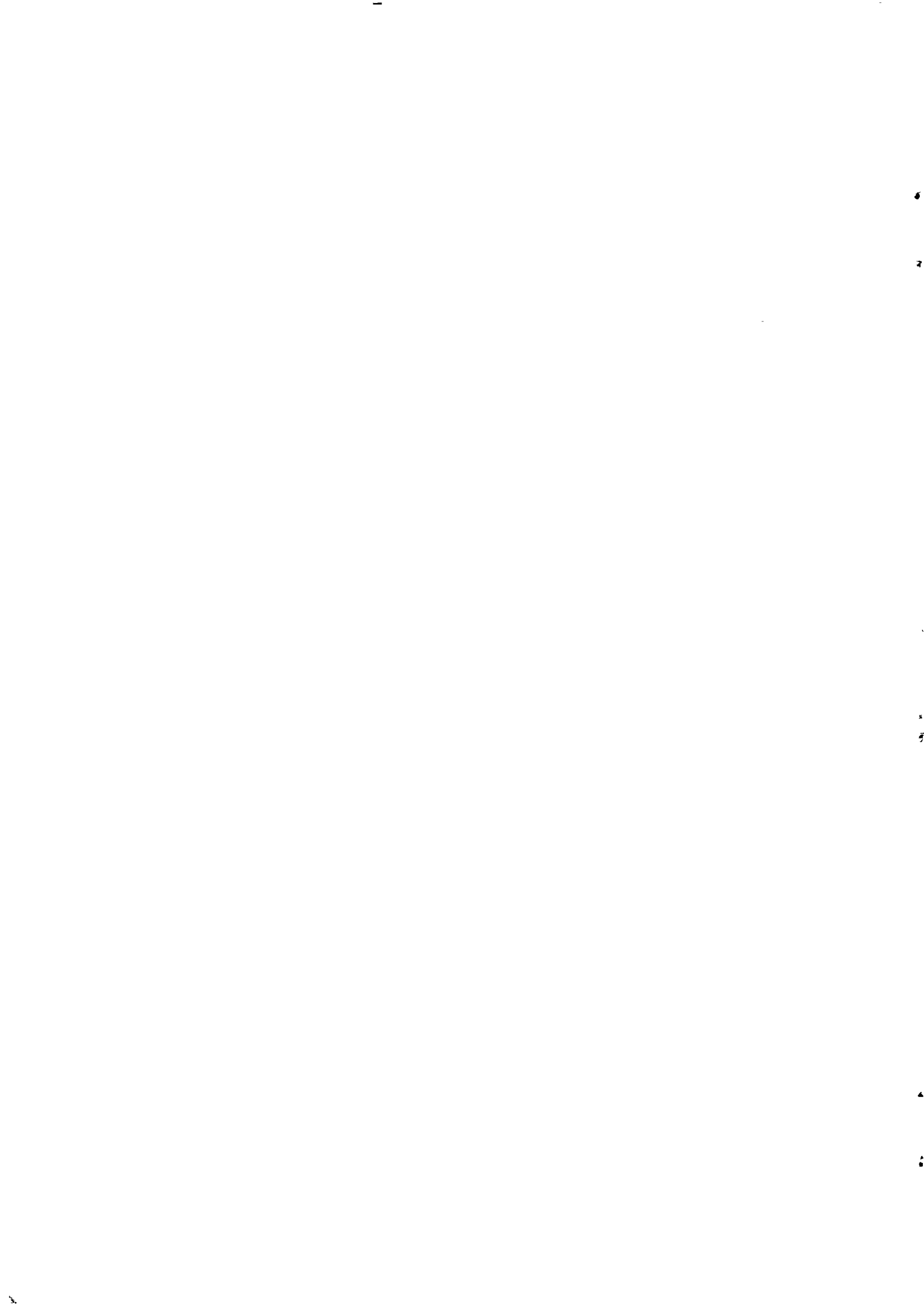
For further information, please contact AMREF headquarters at Wilson Airport, Nairobi.

Postal Address: AMREF, P.O. Box 30125, Nairobi, Kenya  
Telephone: Nairobi 501301  
Telegram: Afrifoun, Nairobi  
Telex: AMREF c/o 22117 Norel, Kenya

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## INTRODUCTION

The availability of safe drinking water in sufficient quantities and the provision of basic sanitation to all people are among the essential components of basic health that is the right of all people. The recommendations and declarations at the Alma-Ata Conference on Primary Health Care underline the importance of sufficient clean water and adequate sanitation to health.

The inauguration of the International Drinking Water Supply and Sanitation Decade by the WHO and UNICEF signified the recognition of the need 'to focus and co-ordinate national and international attention on the water and sanitation needs of the poor and underserved populations of all countries'<sup>1</sup> The health aspects of water and sanitation were seen as the major link between the IDWSSD and the primary health care goals and objectives that are the concern of the WHO.<sup>2</sup>

The African Medical and Research Foundation supports the primary health care principles outlined at the Alma-Ata Conference; it has established a community-based health care programme at Kibwezi. The emphasis that this programme places on preventive and promotive aspects of health means that the promotion of sanitary habits and practices in the villages were to be a major pre-occupation during the implementation of the programme.

The Community Health Workers, who are voluntary health workers in their own villages, are the backbone of the community based health care programme. During their training, emphasis was laid on sanitation both in the homes and at community level. In the homes, proper disposal of excreta, and care in contact with stagnant water, handling, storage and use of domestic water were the most pressing problems. While AMREF involved itself in the efforts to make water available to the community, it also recognized that without improvements in hygiene and sanitation, no amount of improvement in the quality of quantity of water will have a significant impact on the community's health. Sanitation was thus considered to be important to the success of the programme.

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1. Drinking Water and Sanitation 1981-1990. A Way to Health, WHO, Geneva 1981.
  2. Ibid

This study, which was done for six months ending in March 1983, was meant to provide the needed information and insights into the values, attitudes and problems of the community with regard to sanitation. The information would then be used not merely to explain the relative lack of success of latrine promotion efforts, but to enable health planners and extension workers to re-examine their own values and attitudes and problems in communication with rural communities.

#### 0.1 The Area

Kibwezi area was selected for this study. First, this is a difficult area with scant and unreliable rainfall. Diseases associated with unsanitary disposal of excreta and lack of personal hygiene are prevalent. Because of this, it was considered that a study, which would facilitate the promotion of more sanitary excreta disposal habits, was needed so that existing efforts to make water available would have a more significant impact on the health of the people.

Secondly, this is an area of recent settlement. The residents moved from the densely populated (and better served) areas of Machakos and Kitui Districts. This has made adaptation to the difficult environment and lack of facilities particularly difficult.

Finally, because of this lack of services AMREF was asked to and did establish a community-based health care programme which emphasises preventive and promotive health. This study was done to support and assist the objectives of this programme.

#### 0.2 Aims and Objectives

The purpose of this study was to make available information that would :

- (a) Facilitate the efforts to promote latrine ownership and use.
- (b) Enable health planners and health promoters to help the communities to more sanitary disposal of excreta.
- (c) Show what in the communities' values and attitudes can be utilized to facilitate better and more widespread latrine use.
- (d) Show what community initiatives exist and how they could be enhanced to promote latrine ownership and use.

To be able to obtain this information it was necessary to :

- (i) examine the extent of latrine ownership and patterns of use in this area;
- (ii) study the factors influencing decisions to own and use latrines;
- (iii) study the values and attitudes associated with latrine ownership and use.

- (iv) study problems encountered by communities in constructing and using latrines;
- (v) find out the nature and causes of problems encountered by health promoters.

### Methods

The methods used included visits to various homes both in the locations where there is a CBHC Programme and where there isn't one yet. During such visits the household latrine would be examined as regards its specific features, construction materials and location. The state of repair and maintenance were also observed. Discussions with family members, particularly the heads of the households were held in the course of the latrine 'inspection' and tours of homesteads. These discussions were informal revolving around general issues and their specific latrine use attitudes, patterns and problems.

Discussions were held with Community Health Workers in the areas where the community-based health care programme is running. These discussions centred on the latrine use patterns, attitudes and problems in the particular villages where they work. Sometimes visits to homes were made in the company of CHWs.

Household heads of homes without latrines were also met and attitudes and problems regarding latrine use were discussed with them.

Meetings were held with local Locational Community Development Assistants to find out what sanitation efforts are being made at community level through the formally registered self-help groups.

Discussions were also held with the staff at Kibwezi Health Centre on the estimated incidence of excreta-related problems and their prevalence in relation to other problems.

## Section 1

## SANITATION , EXCRETA DISPOSAL AND HEALTH

The connection between lack of adequate excreta disposal facilities and ill health is no longer in doubt. It is reflected in the prominence that sanitation is given both on its own and in connection with drinking water supply by international health agencies and national governments in developing countries.

Despite this recognition of the importance of sanitation to the improvement of health particularly in the rural areas of developing countries, not much has been done about it. WHO estimates of the percentage of population in these countries served with excreta disposal facilities show very low sanitation service levels.<sup>3</sup>

<u>Year</u>	<u>% population of developing countries served</u>
1970	11
1975	15
1980	13

This situation was not only grave, but was not expected to improve dramatically, as the modest goals proposed for the second United Nations Development Decade (1970-80) showed.<sup>4</sup>

### 1.1 Sanitation as Excreta Disposal

The major sanitation problem in developing countries is the safe disposal of human excreta. The low proportion of population served with piped water (13%) means that the problem of waste water disposal is not important, and with only 6.5% of the population in developing countries connected to sewers, sewage treatment should not rank as a priority problem in national sanitation programmes.<sup>5</sup> For this reason, the term 'sanitation' is used in this report to refer to 'human excreta disposal', and the two expressions will be used interchangeably.

Kibwezi, where this study was done, is a recently settled area where various factors have combined with the transience of settlements to result in many homes without safe means of excreta disposal. The morbidity pattern for the area shows a predominance of diarrhoeal and

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3. Ibid

4. Djukanovic V., Mach E P; Alternative Approaches to Meeting Health Needs in Developing Countries, A Joint UNICEF/WHO Study, WHO, Geneva, 1975.

5. W. Rybczynski, C. Polprasert & M. McGarry; Low Cost Technology Options for Sanitation A State of the Art Review and Annotated Bibliography (IDRC-102 e).



other excreta-related diseases.<sup>6</sup> It is for this reason that any efforts to improve rural health in this area must lay sufficient emphasis on safe disposal of human excreta.

## 1.2 Excreta Disposal and Health

Of all the infections related to water supply and excreta disposal, the diarrhoea causing infections are thought to be the most important. In Kibwezi (population approximately 100,000) it is estimated that there are about 500 episodes of diarrhoea per 1,000 population per year. The incidence is likely to be higher among the under-fives.<sup>8</sup> The control of diarrhoea is therefore rightly considered to be an important objective of the Decade.

The health objectives of the Decade emphasize the important role that adequate clean water and sanitation play in the health of communities. At its inauguration, the fact that improved water supplies alone are not likely to improve the health of the people using them was recognized. Sanitation and health education were thus considered important and necessary components of water supply programmes.<sup>7</sup>

The prevalent traditional belief in health circles that improved water supplies, especially the quality of water, would on its own have a decisive influence on people's health has been found to be largely fallacious.

The predominant role of hygienic excreta disposal in health is underlined by studies which have shown possibilities of direct fecal-oral transmission of diarrhoeal diseases, which no amount of improvement in water quality is likely to prevent.<sup>9</sup> Improper handling and disposal of human excreta may result in the contamination of food and thereby lead to diarrhoeal and enteric diseases.

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6. Nordberg E.; On the true disease pattern in Kibwezi Division, (Discussion Paper No.1). AMREF, 1981.
  7. Drinking Water and Sanitation, 1981-1990, A Way to Health, WHO Geneva, 1981.
  8. Nordberg E.; The Relative Roles of Nutrition, Hygiene, Medicine & Socio-economic Equality in Improving Health. (Discussion Paper No.2) 1982. AMREF.
  9. Feachem R.; 'Environmental and Behavioural Approaches to Diarrhoeal Disease Control in Acute Enteric Infections in Children'. New Prospects for Treatment and Prevention. Edited by T. Holme, et al, 1981.

### 1.3 Latrines as a Method of Excreta Disposal

Pit latrines demand consideration as a major means of excreta disposal in rural areas for two main reasons :

1. The method is simple and inexpensive. It consists basically of a pit, covering, and a superstructure which both protects the latrine and provides privacy for the user. Construction and maintenance costs are the lowest at \$ 19 to 65 per household per year. In contrast, septic tanks and sewerage are the most expensive technologies cost \$370 to \$400 per household per year. Thus the ratio of the lowest to the highest cost technology is 1:20.<sup>10</sup>
2. Not only has the latrine got a long history of use in various parts of the world, but it is also culturally one of the most acceptable. On Kenya's coast, the ownership and use of pit latrines has been a tradition spanning several centuries.<sup>11</sup> In many countries of Africa, latrines were introduced with varying degrees of success, with the coming of missionaries and colonial administration.

But despite the low cost, apparent simplicity and long history of pit latrine technology in various parts of the world, there are certain factors which have tended to influence people's attitude and affected their adoption. These factors may be classified broadly as socio-cultural, environmental and economic. Latrine ownership and use patterns vary from place to place depending on prevailing circumstances and the interaction of these factors, singly or in various combinations. However, certain common factors may be noticed which appear to exert influence on these patterns. An examination of latrine ownership and use characteristics and factors which have affected them will help to show :

- (a) What factors have been beneficial to latrine promotion efforts and how they could be used to increase latrine ownership and use.
- (b) What factors have hindered these efforts and how they could be overcome so that latrine ownership and proper use may become a community's way of life.

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10. Kalbermatten J.M. et.al : Technical & Economic Options (Appropriate Technology for Water Supply & Sanitation). World Bank, 1980.
  11. England R. et.al. : The Pit Latrines of Lamu, HRDU Nairobi, 1980.

## Section 2 FACTORS AFFECTING LATRINE OWNERSHIP AND USE

### 2.1 Factors Promoting Latrine Ownership and use

The factors that have played a significant role in promoting ownership and use of latrines may be classified under social, educational, environmental, legislative and historical factors.

- (a) Social Factors have perhaps played the most important role in promoting latrine ownership and use. Geographical mobility of peoples enables them to get to know of practices they were not aware of before. When such practices happen to have some attraction or prove to be convenient, they may be adopted. Many people who have travelled away from their rural homes often come back and construct their own latrines. Even if they do not do this, they are usually the first ones to adopt them when they are introduced into their communities.

Residence in urban areas may have a similar effect or may force the resident into the habit for lack of an alternative way of excreta disposal.

Association of latrine ownership and use with modernization or affluence may result in many people owning latrines regardless of whether or not they actually use them. 'Latrines as a status symbol' has resulted in their considerable popularity in many rural areas.

- (b) Educational Factors. The view of using the bush for defaecation as 'backward' and indiscriminate defaecation by adults and children as unclean has also been a strong factor in favour of latrine ownership and use. This appears to be the popular understanding of general cleanliness as taught in popular 'health education'. A general acceptance that absence of latrines and consequent use of the bush for defaecation causes disease has also been a factor. It does not appear to matter that the people do not know how or what diseases are caused by lack of proper excreta disposal facilities.
- (c) Environmental Factors have played a direct role in making people wish to own and use latrines. The need for privacy during defaecation is almost universal. (The Ik of North-eastern Uganda and some groups in Southern Sudan are claimed to be among the exceptional people who do not seem to pay any attention to privacy.

when defaecating.)<sup>12</sup> Receding bushes resulting from increased population pressure deprive people of the privacy that they were hithertofore afforded. A need for latrines solely for the privacy they offer is thereby created.

In other areas bushes may still be abundant but pose a problem because of the wild animals and dangerous snakes they harbour. The safety of the members of the family thus becomes a positive factor in increasing latrine ownership and use.

- (d) Legislative Measures have contributed to increased ownership of latrines. It is a normal requirement that public and business premises are not allowed to operate until public health authorities are satisfied with the excreta disposal arrangements. Indeed, in many rural shopping centres, owners of plots are required to build latrines before they can erect the facilities they intend to build.

In those rural areas where diseases such as cholera have broken out a combination of public health and administrative authorities enforce and oversee mass latrine construction campaigns. This has resulted in many latrines being built.

- (e) There are historical factors which have resulted in a tradition of latrine ownership and use. Enforced stay in jail or confinement in detention camps where latrine use is not only necessary for the individual but is also enforced by the authorities has led to the adoption of the habit of using latrines. Ownership of latrines in concentration camps during the emergency in colonial Kenya led to their acceptance and adoption by the inmates. This is a major contributory factor to the high percentage of latrine ownership and use in the rural areas of Central and parts of Eastern Provinces of Kenya.

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12. (1) Turnbull, Colin; . . . The Mountain People. (2) Personal Communication with Manasseh Olayo, former AMREF Community Development Officer in Southern Sudan.

## 2.2 Factors Hampering Latrine Ownership and Use

- (a) Among the most significant factors impeding latrine ownership efforts is what is regarded as the high cost of construction. The work of constructing a latrine often requires able bodied men who are in some cases away from their rural homes. The women and old people at home are usually not able to do the work themselves. The rural areas where latrine ownership needs promotion are usually the poor ones. The funds to hire labour to dig pits and construct the superstructure are thus difficult to obtain. This problem is compounded when health educators promote specifications whose construction costs are excessive to poor rural people.
- In some rural areas the task of earning a livelihood takes all the villagers' time and energies. Latrine construction is thus a very low priority as there are always more pressing tasks needing immediate attention.
- (b) There are certain environmental factors which may hamper efforts to promote latrine ownership. In some areas it is difficult to find appropriate wood for poles to construct the floors and superstructures of latrines. In other areas, the hard rock at or close to the surface makes it difficult to dig pits. Loose sandy or clay soils often result in collapsing latrines and thus discourage people from making further efforts. Availability of safe bushes near homes also provides alternative means of excreta disposal and obviates the need for latrines.
- (c) Socio-cultural Factors play an important, though diminishing, role in defeating efforts to promote latrine ownership. In some societies parent/child avoidance makes it difficult for a family to share a latrine. In others it is the parents who have a strong avoidance relationship with 'children-in-law' of the opposite sex. The latter taboo survives in most societies in varying degrees, though the important consideration is the relationship between a father-in-law and a daughter-in-law who reside in the same or adjoining homesteads in societies with a patrilocal system of marriage. In the more modernized rural communities where the nuclear family is emerging as the basic social unit, the avoidance is between parents and their children of the opposite sex.

- (d) While legislation has resulted in some increase in latrine ownership, there is evidence to suggest that it has not resulted in significant improvement in latrine use. Enforced construction of latrines leads to facilities built to avoid harassment and prosecution. For the same reason they are kept clean and unused so that they are in a presentable state in case of unexpected visits by authorities.

## Section 3

LATRINE OWNERSHIP AND USE IN KIBWEZI

It was estimated that by 1980, only 13% of the rural population in developing countries had adequate sanitation. Further, the modest objectives that were set for the United Nations Development Decade (1970-80) to provide 25% of the urban population with sewer services and 10% of the rural population with sanitary excreta disposal facilities - serve to show not only the low levels of existing services, but also that dramatic improvements cannot be expected.<sup>13</sup> This grim picture shows both the daunting nature of the task facing the IDWSSD and the timeliness of this intervention by the international community.

In Kenya, the rate of latrine ownership appears to be much higher than in most other developing countries. According to the Ministry of Health, 49% of the population are supplied with excreta disposal facilities. Of these, it is estimated that 40% use pit latrines.<sup>14</sup>

These impressive figures mask vast differences in latrine ownership among the various sections in the country. In Kiambu District, it is estimated that more than 90% of the homes have pit latrines while in Turkana District the figure is put at less than 1%.<sup>15</sup> In Kibwezi Division latrine ownership has risen in 2 years from less than 10% to more than 50% in areas where AMREF has established community-based health care programmes. In Mangelete the number of latrines increased from 459 to 630 (37% increase) while in Muthingini the increase was from 206 latrines to 439 (more than 100% increase).<sup>16</sup> While figures are not available for areas where the programme has not been established, investigations in Kambu and Mukaange Sub-locations indicated that latrine ownership remains at the level of the other sub-locations before the programme was started.

Despite varying latrine use patterns, there is generally a high rate of use because the majority of owners built the latrines so as to use them. Two factors, however, characterize those groups of people who either do not use their latrines at all, or who use them inconsistently. First, those people who have built latrines almost solely as status

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13. Djukanovic V, Mach E.P; Alternative approaches to meeting health needs in developing countries, A Joint UNICEF/WHO Study, WHO Geneva 1975.
  14. Ministry of Health Estimates for 1978.
  15. (a) Estimates by Ministry of Health. (b) Personal communication with L Owuor-Omondi and David Omambia.(AMREF).
  16. CHW records (Kibwezi). (AMREF - unpublished).

symbols do not make regular use of them. These latrines are used by adults and guests while children are either not encouraged or are expressly forbidden to use them. In Kibwezi such attitudes were frequently indirectly expressed. Secondly, in those areas where latrine construction has been enforced by government administration, there are not only a number of unfinished latrines, but also completed ones which are not used. Such instances are common in Western, Nyanza and Coast Provinces.

### 3.1 AMREF, Health and Sanitation in Kibwezi

The AMREF community-based health care programme stresses the preventive and promotive aspects of health. Discussions with Community Health Workers (CHWs) at the beginning of their training confirmed the findings of an earlier baseline survey which showed excreta-related problems to be the most common.<sup>17</sup> The predominance of diarrhoeal diseases in this area therefore required that urgent steps be taken to promote hygienic methods of excreta disposal. Diarrhoeas, particularly among children and infants, were found to account for the majority of conditions that required hospital treatment. They also accounted for a high proportion of deaths among the malnourished in this age group.

Because of the early recognition that sanitation problems consisted primarily of unhygienic disposal of human excreta, the training of CHWs emphasized the importance of ownership and proper use of latrines. Consequently, campaigns by CHWs to promote latrine ownership and education on the proper use and maintenance were started. Such education consisted mostly of home visits and discussions with villagers in their homes. Public barazas and other community meetings served as fora where the CHWs could give lectures on common community health problems and how they could be prevented. Tools were also made available at the Kibwezi Health Centre which could be loaned to members of the community who wanted to dig latrines but did not have proper equipment. The Public Health Technician (PHT) based at the Health Centre, in co-operation with the CHWs, gives advice where needed, especially where collapsing pit walls present problems or where impenetrable rocks close to the surface do not permit digging of a pit to a reasonable depth. The campaigns by CHWs have developed from personal crusades by individuals to joint efforts by teams of CHWs who move from one village to another visiting homes and addressing barazas.

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17. L. Owuor-Omondi; Baseline Survey of Kibwezi, AMREF, 1978.



### 3.2. Latrines in Kibwezi - Case Studies

A variety of factors have influenced the ownership of latrines in Kibwezi. Habits acquired by residence in towns, pressure to adopt what is considered a status symbol, health education, security from wild animals and snakes, and the need for privacy in the absence of bushes have all, to different degrees, influenced decisions to own and use latrines.

Influence by health educators, particularly AMREFs CHWs, has additionally led to an awareness of the need for 'more sanitary' latrines, although this awareness has not been translated into concrete slabs or more durable superstructures. Latrines in this area are mostly shallow pits which are built with only the short term needs in mind. In most cases, the houses themselves are temporary and sites of homesteads are shifted periodically thus making concrete slabs and permanent superstructures both impossible and undesirable.

#### 3.2.1 Latrine 'A' in Kai

The owner of the latrine has been a CHW since 1980. When he started work as a CHW, only 7 homes had latrines. Now more than 50% of the homes have their own latrines. His latrine promotion efforts consists of addressing people in Chief's and Assistant Chief's barazas which he follows up with home visits. During the home visits he advises on measurements, actual building and use of latrines. He has tried at certain times to invoke the Chief's powers to make more people build latrines but found it to have no effect. He believes most of those who have no latrines in their homes are scoffers or lazy. He has always owned and used a latrine mainly as a result of influence from friends. The present latrine was built a year ago after the previous one collapsed. His is a family of 8 people, all using the same latrine.

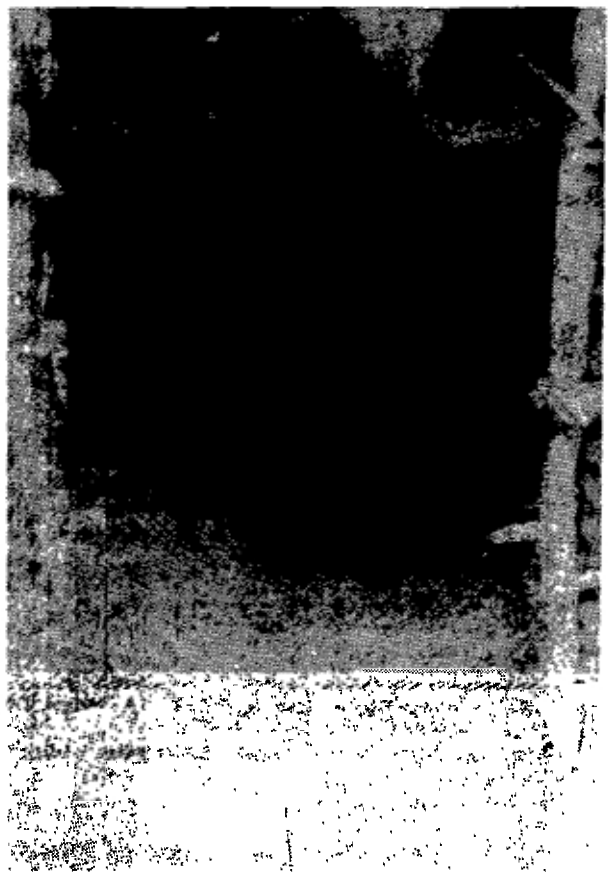
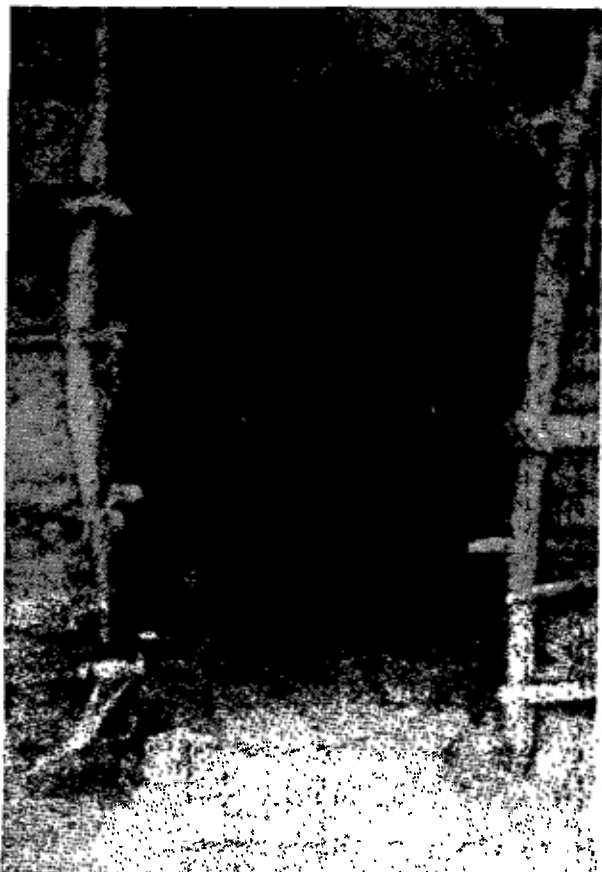
#### Latrine Structure

The latrine itself has a very simple structure. The owner claims not to have been able to construct a better one at the time because he had too many commitments. The pit is 6 feet deep. The floor is made of a row of sticks (from a hard variety of wood available locally) covered with earth. Poles and mud make up the walls of the superstructure. There used to be a grass thatched roof on it but the previous rains had ruined it and he was forced to remove it. He planned to make another

Latrine 'A' in Kai



This latrine has a sack hanging across the entrance. Three months after this picture was taken, heavy rains caused the latrine to collapse. Below on the left is the inside of the latrine with the cover on, and on the right with the cover removed.



one in its place but had not got round to doing it. An old sack, strung across the entrance about 2½ feet above the ground, serves as the cover for the door. The hole has a diameter of about one foot and a tin cover which fits very well. The cover is a flat round piece of metal plate with a stick fixed upright at the centre. The stick serves as the handle. The earth floor is smooth but around the hole it appears to be wearing out and becoming uneven. The inside of the structure is about 3 feet wide by 4 feet long. It is located about 15 yards from the house on the western side. The entrance to the latrine faces away from the house.

#### Use and Maintenance

All the 8 members of the family use the same latrine. There are no problems at all in sharing it. The youngest child (about 3 years old) has not yet learnt to use the latrine regularly. The father canes the child whenever he finds that the child has not used the latrine when defaecating. When the child was younger, it would defaecate anywhere in the compound and the mother or other older children would scoop the faeces and deposit it in the latrine. The latrine is used only by this family on a regular basis. Neighbours who do not have latrines of their own use the bush. The owner of the latrine considers that it is so private that it cannot and should not be shared.

While the man constructed the latrine himself, the task of cleaning and day-to-day maintenance belongs to his wife. She sweeps the floor and immediate surroundings. In case children might have defaecated on the floor she cleans that too. From time to time she applies a new coat of mud to the floor to maintain the required smoothness. Any available materials are used for anal cleansing (old newspapers, used exercise books, etc.). Hands are washed only before meals, but not after visits to the latrine.

#### Problems

According to the CHW, people do not have any problems sharing latrines. There are constant complaints, however, about the high cost of construction. He considers that his own latrine is only 'temporary'. When he is able, he would like to have a latrine with a pit at least 12 feet deep. He would have a concrete slab on top and build a more permanent superstructure with corrugated iron sheet roof.

### 3.2.2 Latrine 'B' in Kaunguni

The lady owner of the latrine, about 40 years old, lives with her three children while a fourth one lives with her husband who is a businessman in Uganda. She has some education and appears to be widely travelled. She is very hard working and self-reliant. She has a small semi-permanent house in which she lives but is building another bigger one nearby. She thinks faeces scattered around the home were unsightly. She also thinks it unhygienic for dogs and chickens to be eating scattered faeces. The home is at an exposed place with no bushes to offer privacy during defaecation.

#### Latrine Structure

The family has always owned and used a latrine. The previous one filled up about 3 years ago and <sup>she</sup> had the present one put up about 5 feet from the site of the old one. It is about 20 yards away and to the west of the house. The pit is about 8 feet deep. The floor is made of sticks laid down and covered with earth. The surface is fairly even but not smooth. The hole, which has a diameter of about one foot, has no cover. The walls are made up of erected posts and smeared with mud. The entrance, which faces away from the house has an old sack hung across it at a height of about 3 feet above the ground. The roof is made of corrugated iron sheets.

#### Use and Maintenance

The latrine is used only by the family. None among her neighbours ever uses it and she sees no possibility of using anybody's latrine on a regular basis. The youngest children are not old enough to go to the latrine on their own. When they have defaecated around the home, she scoops the stool and puts it in the latrine. Neither the mother nor the children wash their hands after visits to the latrine. Old newspaper or any other available scrap papers are used for anal cleansing.

#### Problems

She initially found it difficult to dig the pit herself, but when she found that the men who could be hired to dig were excessively expensive, she decided to dig the pit herself. She was eventually assisted by some male neighbours to complete it. She was also assisted in putting up the superstructure. She, however, had to pay for the nails and three corrugated iron sheets that were used. She would have liked the latrine to be deeper - at least 12 feet deep - but they came upon hard rock at

the depth of 8 feet and could not dig any deeper. The cost of hired labour is very high and this lady only got assistance when she started to do the work herself partly to spite the men who take advantage of destitute women.

### 3.2.3. Latrine 'C' in Kamunyuni

The owner of the latrine lives in his compound with his family, which includes two married sons. The people in the compound are about 20. He has resided here for the last 15 years and has had latrines for most of this time. The present one, however, is the most 'permanent' one. It was built this way due to the urging of the Community Health Worker. All the latrines have been built on the west side of the home between 15 and 30 yards away from the houses. The houses are surrounded by a barbed wire fence with the latrine on the outside. This site was preferred because it is near enough to the houses both to be used at night and to be safe from wild animals. The family seems to enjoy a slightly more than average standard of living with two of the four houses in the compound having corrugated iron sheet roofs.

#### Structure

The pit is about 11 feet deep. The floor is made of branches covered with earth. The surface is even and fairly smooth except around the hole which appears to have started to wear off leaving the hole rather wide (about 1½ feet diameter). The roof is low and one has to bend to be able to get in and stoop all the time one is inside. The walls are sticks and mud and the roof thatched. The entrance faces away from the houses. Bushes come up to about 5 yards of the entrance. There is nothing to cover the entrance while it is in use. Between the top of the short round wall and the roof are large spaces which permit much light and air in the structure.

#### Use and Maintenance

With the big size of the family, there are many small children who cannot use the latrine properly. At about the age of three, children start to undergo toilet training. This consists of ordering them to request to be taken to the latrine when they feel the urge, and caning them when they do not follow these instructions. The women and girls scoop the faeces deposited by the children in the compound and throw them in the latrine; their job is also to sweep and keep it clean. Ashes are spread lightly on the floor of the latrine in order to keep out the flies and reduce the smell.

### Problems

The facility is used by all the members of this family. The problem is sharing it partly because the number of people using it is large. The owner also feels that different sexes sharing the same latrine is a problem. Ideally, he would have liked to build a twin latrine - one section to be used by the male members of the family and the other by the females. The people who were hired to dig the pit charged Shs 15 per foot. When the hard rocks were reached-a depth of 11 feet - they increased the charge to Shs 25 per foot. The owner decided that he could not afford this and stopped further digging. He, however, paid a further Shs 18 to cover the pit. He thinks that the present latrine will be full in the next six months. He plans to build another one similar to the present one because that is all he can afford.

#### 3.2.4 Latrine 'D' in Kaunguni

The owner of this latrine is a 60 year old man living with his 40 year old junior wife. He has a small shop at the shopping centre. There are four children in the family. This is only his second latrine since he settled here about 15 years ago. The first one was a temporary structure with grass thatched walls and no roof that he built two years before. The pit was about 4 feet deep. He had not seen the need for a latrine until CHWs urged him to build one. The whole family used to use the bush for defaecation.

### Structure

The latrine was built one year ago. The CHWs made the measurements for him and advised him on how to construct it. He hired a man to dig the pit (about 6 feet deep) at Shs 8 per foot. His 22 year old son built the superstructure. He dug it to 6 feet because at that level they came upon some hard rock.

The floor of the latrine is made of a hard variety of wood laid over the pit and covered with earth. The surface is smooth and even. The hole, about one foot diameter in size, has a cover similar to the one in latrine 'A'. The walls are made of poles and mud. The roof is grass thatched. The entrance which faces away from the houses has a door of roughly hewn timber with strips of tyre material for hinges. It is located about 15 yards from the nearest house on the western side among some maize plants.

### Use and Maintenance

The wife sweeps the latrine every day and resurfaces the floor when it has started to wear off. There is not much work because there are no young children (the youngest are going to primary school). Ashes are sprayed on the floor to expel flies and eliminate bad odour. The latrine is smeared right up to the roof and the door fits tightly. It was cool inside, odourless and completely free of flies. There is normally no washing of hands after a visit to the latrine - water is extremely difficult to get there as the nearest source is about 7 kilometres away.

### Problems

The major problem here is the high cost of digging the pit. They regard the sharing of the latrine as quite normal. The owner is quite satisfied with it though he believes the CHWs do not think it is good enough. When this one is full he would like to build another one similar to it, but deeper if he can afford it.

### 3.2.5 Latrine 'E' in Kikwasuni

The owner of this latrine is a lady whose husband is working in Mombasa. The family is comparatively well-off, with a semi-permanent (iron sheet roof, plastered walls and cemented floor) house. The latrine is about 20 yards away on the western side of the house.

### Structure

The pit is about 8 feet deep. The floor is made of sticks laid down and covered with earth. The hole is about one foot in diameter. There is no cover for the hole. The inside of the structure is about 4 feet wide by 6 feet long. The walls are made of earth bricks held together by mud which is used to fill in the spaces (in place of mortar). At the four corners of the structure are poles to which the iron sheet roof is fastened. The entrance, which faces away from the house, has no door.

### Use and Maintenance

There are six members of this family who use the latrine regularly. There are other members of the extended family (brothers- and sisters-in-law, nephews and nieces) who, although they have their own, use this one from time to time. The lady is the only person who cleans it and

Latrine 'C' in Kaunguni



This latrine is just outside the barbed wire fence which encloses the houses inhabited by the family. Standing near the entrance to the latrine is the CHW for the village. Below on the left is the Latrine 'D' in Kaunguni, and on the right the inside of the latrine with the cover over the hole.





makes sure that it is always in good state. At the time of the visit, however, there were mounds of faeces on the floor, obviously left there by the children, which had not been removed.

### Problems

There are not many problems in the use of the latrine. The labour costs in digging the pit are, however, high. This pit was dug at the cost of Shs 8 per foot. The rest of the building was done by the brother-in-law. The iron sheets which form the roof were left-over from the construction of the house.

### 3.2.6 Homes without Latrines

The majority of the people who do not have latrines are defensive when talked to about their attitudes to latrine ownership and use. The most common reason they gave for not owning a latrine is the high cost of constructing one. These are mostly people who, for various reasons, are unable to do the required work themselves. There seemed to be unanimity, however, in the idea that a latrine is an important facility in every home.

One of the people who did not have a latrine was a 60 year old man who has been a resident in Kai sub-location for the last 36 years. He works in Mombasa where he lives with his grown-up son, who also works there. His wife and younger children stay at home. At this time he was staying with his family as he was on leave. He has never had a latrine in his home although he always uses them where he lives in Mombasa. The high cost of constructing a latrine is his only reason for not having one. He could have built one himself but he is never at home long enough to do it. He knows that ownership and use of latrines minimizes the incidence of diseases. Besides, he thinks it is awkward and embarrassing to have to go into the bush when the need to defaecate arises. He plans to build one as soon as he gets enough money to hire someone to do the work.

Another person who did not have a latrine was a 26 year old man who works as a night watchman at Makindu. He has lived in the area all his life and on the present site for the last 9 years. He lives with his parents, his wife and two young children. He was educated up to standard seven. He has never built a latrine at home, though at the time of the visit he had dug a pit about 6 feet deep, but had not covered it or built

Latrine in Kikwasuni



This is the side view of the latrine. At the centre is the lady owner, on the left the CHW for Kamunyuni Village and on the right the CHW for Kikwasuni.

the superstructure. He knew all the time that a latrine was important but had just not got round to building one. He finally decided to build one because he got 'enlightened' but denied that there was any influence from any quarter. He also thinks it is embarrassing to send his guests to the bush, and especially now that the distances to safe bushes are increasing because of receding bushes.

Ironically, another person without a latrine is the local career latrine builder. He claims to charge Shs 8 for every foot that he digs. Digging and constructing an average temporary latrine costs his clients up to Shs 200, depending on the depth of the pit which in any case does not exceed 15 feet. He has not yet seen the need for a latrine for himself and has no plans to build one in the near future. It might be that because of the nature of his profession which does not carry much prestige with it, he has chosen to be non-conformist because he really does not like his job. Whatever his real reason might be, he certainly appears to be the exception by saying that latrines are not important.

### 3.3 The Community and Sanitation in Primary Schools

With the 'free' education now offered in primary schools, the population of pupils has swollen to the extent that facilities of practically every kind are in short supply. In the rural areas, access to government supplies and supervision is more difficult than in the urban areas. In marginal and low income rural areas the problem is acute. The responsibility for the provision of sanitation facilities in rural primary schools, however, seems to have been shifted to the communities in which the schools are. In the relatively wealthy rural areas, the parents of the pupils raise funds either in a public 'harambee' funds drive or asking each parent to pay a fixed amount of money. The money is then used by the school to construct and maintain latrines. In the low income rural areas, the parents of the pupils are asked to come to the schools and construct the facilities themselves. In the Kibwezi area, the latter method is invariably used with varying results depending on the level and effectiveness of community organization, relations between community and school authorities and the nature of external agency influence of people's attitudes towards communal work.

Just as in the communities in the area, hygienic disposal of excreta is not considered a priority. School authorities thus tend to pay little attention to excreta disposal facilities. Although every school has got latrines, as a matter of course, the maintenance and use vary significantly, depending to a great extent on the attitude of the school heads. An interested school head persuades or compels parents to build new latrines as they are needed, or gets them to keep the old one in a reasonable state of repair. He also takes steps to discourage use of bushes for defaecation. He also teaches cleanliness and proper use of school latrines.

### 3.3.1 Weak Community Organization

At Ikungu and Kisingo Primary Schools, the interest and initiative of the heads seems to have been supported by the food that was available for distribution. Rice and cooking oil supplied on the Food-for-Work Scheme was given to those parents and community members who would come to school and do the designated work. At Ikungu, even without effective community or parents organization, the school head still managed to get people to construct latrines for the school. At the time of the visit two pits had been dug and efforts were being made to support the walls from collapsing. Two other latrines which had not collapsed were clean and well maintained.

At Kisingo Primary School there were three latrines, two for the pupils and one for the teachers. The pits of the latrines were deep but had been used for one year. It is unlikely that all the pupils were using the facilities regularly because, with a school population of about 300, the latrines should have been nearly full at least. The Food-for-Work Scheme was operating here also. At the time of the visit the Assistant Chief was directing work (making bricks for new classrooms) and supervising the distribution of food. There was no effective community or parents organization and only those people who wanted free food came to work.

At Kai Primary School, about 4 kilometres away, the Food-for-Work programme was not operating at the time of the visit. The Assistant Chief, through the various self-help groups, had got the work started towards building new classrooms for the school. Earth bricks had been

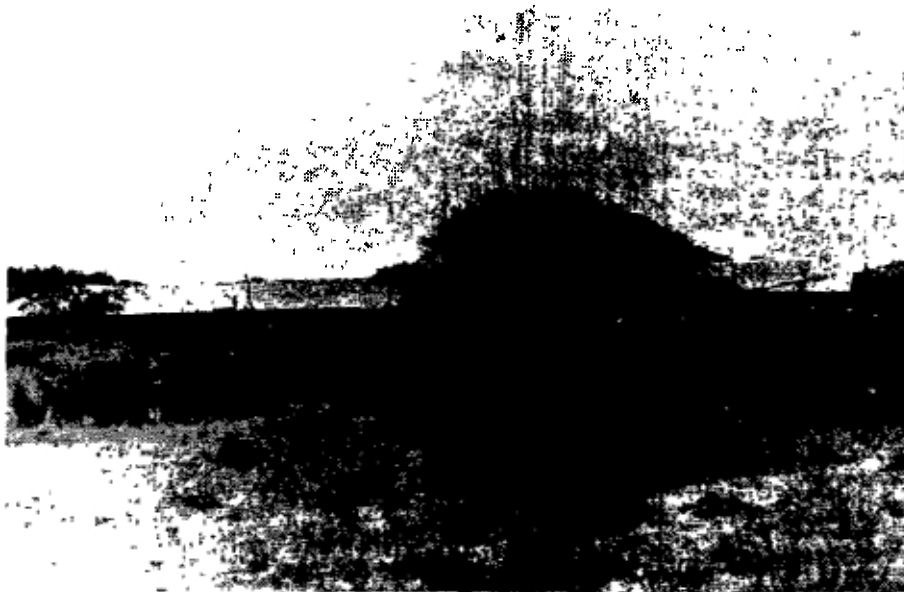
made and construction had started. Despite the claim of the CHW of the area to have called the attention of the school head to the need for new latrines, there does not seem to have been any action taken for a long time. The two hundred pupils in the school use the 'latrines', which are two structure standing side by side, consisting of erected sticks with bundles of grass strung haphazardly up to about 3 feet off the ground. There is absolutely no privacy. The high euphorbia hedge protects them from the school rooms about 50 yards away, but the two latrines cannot be used simultaneously as the boys and girls would be almost in full view of each other. Moreover, any user would be exposed to people passing on the road about 40 yards away and to anyone in the field up <sup>to</sup> 50 yards in every direction except from the classrooms. Teachers declared that they did not know the state of the latrines and how they were used. During the more than 30 minutes that we did surreptitious observation from the road, not a single pupil from the two hundred was seen going there. The thick bush about 20 yards across the fence behind the school might be the solution to the pupils' excreta disposal problems. Moreover, every foot of the floors of both 'latrines' was littered with faeces, some of them several days old.

### 3.3.2 Strong Community Organization

In contrast to the communities in Kisingo and Kai, the community around Nthunguni Primary School is quite active. Nthunguni Water Project, led by a wealthy and resourceful businessman at Mtito Andei, has not only made significant progress in obtaining water from Kathekani Railway Station but it has also built better classrooms for the primary school, (the primary school was itself built by the community under his guidance before it was taken over by the government), started building a secondary school, built a small house which they hope will be used to deliver mobile health services. In all the activities of this community, the Assistant Chief, the school head and the Community Health Workers all seem to play a subordinate and supportive role to the project committee and chairman. Even the Chief appeared to be deferential to the project committee and chairman.

As a result of the influence of the project chairman, four latrines have been built for the pupils and one for the teachers. They are built in one corner of the field about 50 yards from the classroom. The floors are made of earth covering the hard poles which are laid over the tops of pits. The floors are even and well maintained. The walls are mud

The school latrines at Kisingo Primary School



The latrine to the far left is used by teachers. The other two are one each for the girls and the boys. Notice in the back-ground the classrooms and the people present to make bricks on the Food-for-Work programme. Below is a closer side view of the latrines with the teachers' latrine in the distance.



The Teachers' Latrine at Kai Primary School



The teachers' latrine is made of erected poles and grass-thatched walls. There is a grass-thatched wall across the entrance. The roof is made of corrugated iron sheets. Below is the inside view of the latrine.



The Pupils' latrines at Kai Primary School



The one nearer to the camera is the boys' latrine and the other one the girls'. The two men are the deputy head teacher on the left and the Community Health Worker on the right. Below is a closer view of the boys' latrine. Notice the exposure and faeces littered all over the floor.





bricks cemented together with mud. The roofs are made of corrugated iron sheets. The entrances face away from the classrooms. The CHWs seem to have been very well received by the school where their instructions appear to be taken seriously. It was, however, obvious that they had not managed to penetrate the project committee and have their activities given enough prominence at community level.

At Komboyoo, the community has also organized very effective self-help groups. Even with the considerable external assistance that has been given to the Komboyoo water project, the people seem to have retained their initiative and self-reliance. Through such efforts they have not ~~only~~ built the tanks which supply water closer to the settlements but have connected pipes to take water to the local shopping centre and primary school. In all these activities the Assistant Chief appears to act as a figurehead leader while community leaders elected to run specific projects play a more active role. School heads, local small scale businessmen and other influential community members all appear to be actively involved in community efforts. Community Health Workers, some of whom also happen to be among these leaders, play an important role in general community development but also in the promotion of health as an essential component of community development.

There appears to be a close and productive working relationship ~~between~~ the head of Komboyoo Primary School and the Assistant Chief of the area. Similarly the relationship <sup>between</sup> these two and the CHWs in the immediate community seems to be equally warm. The CHW of the area happens to be the chairman of the school committee of this primary school. While remarkable progress has been made in latrine construction in the villages he has also managed to focus the community's and school committee's attention to the need for adequate latrines for pupils in the school. He is a man to be seen in the school frequently and uses every opportunity to consult with the teachers not only on the personal hygiene of the pupils, but also on the cleanliness of the classrooms, latrines and the school compound in general. As a result of this internal cooperation and self-reliance, there has been a significant improvement in the school's latrines. The four latrines at the corner of the playground about 30 yards from the classrooms are in a good state of repair. Despite the fact that the floors are made of the usual poles covered with earth, the surfaces seem to be even and clean. The

walls of mud bricks show the effects of weather but are still firm. The roofs are made of corrugated iron sheets. The entrances which face away from the classrooms have no doors, but the hedge separating the school compound and the road is enough to provide the needed privacy.

### 3.4 Discussion

The features characterizing latrines in Kibwezi are simplicity and impermanence. They are almost invariably made of locally available materials with little or nothing bought specifically for their construction. In cases where there is no member of the family who can build the latrine, people are hired to dig the pits and construct the superstructures. Though the costs incurred this way are low (between Shs 200 and Shs 400 depending on the depth of the pit), they are sometimes more than some families can afford.

The pits of latrines vary in depth between 4 feet and 10 feet. The depth is determined sometimes either by what the family considers to be the immediate need, or by what they can afford, or both. Hard rocks are the most important factor in this respect as the cost of digging soars drastically when they are reached. Collapsing pit walls also discourage people from digging deep pits as they know that the life of a latrine, deep or shallow, may be only up to the next heavy rains.

The floors of latrines are made of logs laid on top of the pit and covered with earth. Usually ebony is preferred for its durability. The surface is often even and level. In some homes, it is smeared until it is quite smooth. Ashes are usually sprinkled on the surface to expel flies and around the hole to soak up the dampness and eliminate odours.

In some rare cases, the logs over the pit are not covered with earth. This is when it is a temporary emergency structure to be used until a better one is built. Such emergencies arise when, in the relatively more densely populated areas, a pit latrine suddenly collapses.

The walls of latrines are normally made of poles and smeared with mud. Sometimes old corrugated iron sheets or metal sheets made from tins or oil drum lids are used. Walls may also be thatched with grass although, again, this is usually when the facility is regarded as very temporary. (Exception is the teachers' latrine at Kai Primary School.).

The roofs of latrines are almost always thatched with grass. In some cases corrugated iron sheets or other metal sheets are used. Rarely, they are left uncovered on top. However, this is either when the structure is 'temporary' or when the roof has been blown away during a storm. In the latter case, unless it is replaced it always leads to the latrine's collapse as soon as rains start.

Almost half of all latrines seen had hole covers. These consist of a board or piece of metal sheet with a handle fixed upright on one surface. The holes, whose size varied in diameter between 9 inches and 18 inches, were mostly not covered at the time of the visit.

The latrines whose entrances always face away from the houses, often have no doors, especially if there are bushes or tall crops around or in front of them. It is common to find gunny sacks hung across the entrances. Wooden doors are very rare. Latrines are situated at distances varying between 10 metres and 30 metres away from the houses, but always on the west (leeward) side of the houses.

One of the greatest positive influences in latrine ownership is modernization. Ownership and use of latrines is invariably associated with enlightenment and respectability. This attitude is reflected in the favourable way in which use of the bush for defaecation is being increasingly regarded. Remarks like 'it is embarrassing', 'it is not enlightened', 'it is not proper' and 'it is not respectable' indicate the high social status that is associated with latrine ownership. Latrine use has similarly been influenced by modernization, though to a lesser degree than ownership, considering that there are a number of latrines that are used irregularly.

Urbanization has played a significant role both in the ownership and use of latrines. Many people seem to have either lived in Mombasa or Nairobi for some time, or worked with the railways and thus got to visit many towns. In this process, a significant majority of them acquired and retained the habit of using latrines.

Health education is another factor which appears to have had a positive influence of people's decision to own and use latrines. While many people who owned latrines declared their ignorance regarding the relationship between unhygienic disposal of excreta and disease, some thought there was such a connection though they did not know which diseases were caused this way. In those areas with a community-based health care programme there was a higher level of awareness of both the connection between improper disposal of excreta and diseases, and especially that diarrhoeal diseases were caused this way.

In Kibwezi, the protection of families from wild animals and snakes is another factor which has promoted latrine ownership. This being an area that was a game reserve until less than two decades ago, dangerous wild animals, especially buffalo and snakes are still a menace in some sections. Latrines are a safe way of disposing of excreta without venturing into the bush, especially at night.

In those areas into which AMREF has not expanded the community health programme, the Chiefs and Assistant Chiefs have had to resort to the use of the Chief's Act to make people construct latrines. In market centres this has been effective because business premises are not allowed to operate unless they have a satisfactory latrine. In the rural homes, however, the result has been few unfinished ones which are hardly used. In Mukaange sub-location such powers appear to have been used with disappointing results.

There are those areas, such as market centres, close to water sources or where soils are more fertile, where settlement has been more concentrated, leading to a reduction of bushes. The disappearance of, or increasing distances to, the bushes which provided the needed privacy for defaecation has led to the adoption of latrines. The need for privacy in rural areas, however, is not always regarded merely as being out of view during the act of defaecation. A furtive approach to an anonymous site for defaecation constitutes an essential element of privacy that is valued by many traditional people. This view is reflected among some elderly people in Kibwezi by their expressed reluctance to be seen approaching or leaving the latrine, or to be known to be inside the latrine, and presumably defaecating, at a given time.

Besides the avoidance between the sexes, there does not seem to be any particular taboo working against the sharing of latrines within families. This avoidance is weak except between parents and grown-up children of the opposite sex. In any case, it was mentioned only as an inconvenience rather than a hindrance.

Perhaps the biggest constraint to latrine ownership are the high construction costs. Most of the families that had latrines in Kibwezi had dug the pits and constructed the superstructure themselves. In many

cases, it was not necessary to purchase any materials, and if there are men in the family, the cost of construction amounts only to their labour. But there are a number of families whose men are working away from home, or old couples who could not do the work themselves. In such cases, the families have to have enough money to hire labour to do the work. This may cost up to Shs 200 or more to dig a pit of not more than 8 feet deep, lay the floor and construct a simple structure of wood, grass and mud.

Costs of construction are further increased by collapsing pits in the lower sections of the Division. In Kai, Kisingo and Kathekani, it is common for latrines to collapse every year during the rains. As a result of this some people have given up constructing latrines while others have resorted to building temporary facilities consisting of shallow pits with bare wood poles as cover and a thatched or branch shelter around it to give privacy.

On the higher sections of the Division towards the Chyulu Hills, the rocks make it impossible in some areas to dig a pit at all.

The low level of sanitation in primary schools is a result partly of negligence on the part of the Ministry of Education authorities. No effort is made to inspect the facilities and running of the schools in more remote areas. Lack of interest and initiative on the part of headmasters and staff in schools also results in the deterioration of latrines and other facilities in the schools. In Kibwezi, it appears that the level of community organisation and strength of leadership is important in determining the level of sanitation that pupils enjoy.

## Section 4

## TECHNOLOGY, SANITATION AND THE COMMUNITY

4.1 Adequacy of latrines for excreta disposal

Health, particularly the preventive and promotive aspects, is rarely regarded as a priority anywhere in rural communities. The ownership and use of latrines as a measure to prevent disease and improve health is, therefore, a low priority. Pre-occupation with what the communities regard as pressing needs, such as food, water, income and general economic improvement, roads, education and hospitals, ensure that in order to succeed latrine promotion efforts must be closely correlated to these needs.

Existing latrines in rural areas are there primarily because certain non-health reasons have promoted their construction. Because of this, it is probable that the hygienic standards of these latrines would be less than satisfactory. In Kibwezi, many people have been persuaded to construct latrines by advocates using non-health reasons. Those who had latrines have been made to improve them by appealing to their aesthetic values and social prestige. Improvements have been confined mainly to fitting a good roof in order to keep the inside of the latrine dry, regular smearing and sweeping of the floor, keeping the edges of the hole dry and free of faeces, keeping a cover on the hole when the latrine is not in use and encouraging all people to use the facility at all times for all excreta disposal needs.

While this falls short of installation of the concrete slab or similar high quality surface, results from the present efforts by extension workers seem to justify this approach of promoting modest and realistic improvements. Both CHWs and some community members agree that there has been a significant fall in the incidence of diarrhoeal diseases. Suggestions regarding the necessity of using a concrete slab have resulted in resentment among some community members, despair among others and indifference among the majority.

4.2 The Latrine Technology

Effectiveness in the promotion of pit latrines as an appropriate technology depends upon their simplicity, low cost and their being culturally inoffensive to communities.

Minimal costs to the owner and to the national economies have encouraged pit latrines as an attractive project choice for developing countries which are not only poor, but whose populations are also predominantly rural. The fact that many people can construct latrines without requiring highly skilled assistance is a crucial factor. That latrine ownership and use have a long history in various countries has also led to the assumption that the technology involved is acceptable almost universally.

These advantages have, however, not ensured complete acceptance and adoption of latrines as a method of excreta disposal. When latrine promotion efforts have foundered the tendency has been to blame the latrines - the smell or the flies, or that they are aesthetically unappealing. Various improvements are then introduced in the expectation that the elimination of these negative aspects will lead to an improvement in attitudes towards latrines. However, the community is sometimes blamed for maintaining beliefs and attitudes which impede acceptance of latrines. If the community's attitudes and beliefs are thought to be at fault then social scientists are deployed to seek the social and cultural explanations for the failure. An examination of these two factors will lead to a better understanding of the roles that they play in influencing latrine promotion efforts.

#### 4.3 Improved Pit Latrines

There are two main considerations that are used as justification for the development of improved pit latrines. The assumption has been that people are reluctant to own or use latrines either because they are of poor quality and, therefore, unattractive, or because they are a health risk.

In the first instance, it is believed that existing types of latrines which smell, have flies or are aesthetically offensive discourage people from constructing or using them. The assumption then is that if latrines are developed that are odourless, have no flies and are aesthetically inoffensive more people will be induced to construct and use them. In the second instance, it is argued that poor quality latrines may be a source of infection. For the full benefits of latrine ownership and use to be realized, they must be of such quality that they are not a health risk. Improved pit latrines are therefore

expected to remove this potential danger of infection. While this will improve the safety of using latrines, it is not certain that it will improve the level of ownership and use. When improperly used and maintained it is true that latrines can have unpleasant odours and may be a breeding place for flies.

But this is popularly regarded more as an inconvenience than as a factor which would hinder their construction or use. Whilst a latrine is little used for this reason, it is a problem arising after the fact of ownership and not a factor contributing to the decision not to own one. Improved pit latrines can then be a benefit to latrine owners who are dissatisfied with their facilities. Although this is unlikely to increase latrine ownership, it will probably encourage more people to use the latrines regularly. The problem in rural sanitation is, however, primarily one of a lack of facilities rather than reluctance to use them. It would then appear that improving the standard of latrines will not have a significant impact on sanitation in most rural areas.

Secondly, the excreta related diseases in rural areas arise more out of lack of excreta disposal facilities than from unhygienic latrines. Nor are there known instances where rural communities have resisted construction and use of latrines because they consider them a possible source of infection. Promotion of improved pit latrines among people who have not yet seen their value often will not be effective. It would be tantamount to expecting people who do not think they need latrines to decide to construct and use them simply because they are odourless, have no flies or otherwise look pleasant. Even if the practice of defaecation developed, as in western countries, to be free of the inhibitions associated with it in developing countries, a squatting position is hardly conducive to prolonged indulgence (while smoking or reading the paper), which would make an odourless and fly-free atmosphere such an important factor. Similarly, it would be unrealistic to expect people who are unable or unwilling to construct latrines - because they are too costly - to adopt improved latrines which are even more costly.

Although from the point of view of health workers the installation of facilities that are not a health risk is an important consideration, it is a secondary one in view of the real issues in rural sanitation.



We believe that the primary task in sanitation promotion in rural areas is to get people to want to own and use latrines, and then to enable them to have latrines that are affordable, and which can be developed and improved within the means and economic abilities of particular communities. Health Education to improve and make latrines more hygienic will then have a ~~more~~ significant impact.

#### 4.4. Community Attitudes

The choice in most rural areas is not between different types of facilities, but rather between the latrine and the bush. Construction of latrines, even when done voluntarily, does not always mean their consistent use. The focus of sanitation improvement efforts should, therefore, be to eliminate the acceptance of bushes as an alternative to latrine use in excreta disposal.

The majority of the people in Kibwezi who have got latrines are satisfied with the fact that they have them at all. Regardless of their quality, they satisfy the families' needs, both physical and social. Suggestions that the latrines presently used are inadequate often elicited responses indicating surprise and embarrassment, and sometimes annoyance and resentment.

There are, however, those who do not believe that their latrines are adequate. The improvements they contemplate, however, are often with respect to :

- (a) increasing the depth so that they can be used for longer periods;
- (b) building an extra latrine either for the children, or to have separate latrines for males and females;
- (c) installing a concrete slab because it is recommended by experts.

But in all these the only impediment is the cost of making these improvements. Some people have been able to have latrines with pits exceeding 10 feet in depth, but these are few. Often, those contemplating a concrete slab with or without a more durable super-structure also planned to have a deeper pit for their latrine. But, again, a person was not found who had built or planned to buy materials

just for making a concrete slab or a permanent structure for a latrine. One had to have, or expect to have in the near future, such materials left over from another building to contemplate this kind of improvement. The cost per unit, of constructing slabs can be considerably reduced if they can be made in big quantities. This, however, will involve intensive campaigns not only to ensure that people want to own latrines, but also that they will be prepared to meet the costs of owning one. This may be difficult, but in Kibwezi it can be done through the AMREF Environmental Sanitation Unit and the Community Health Workers.

## Section 5

## LATRINE PROMOTION

5.1 Technical/Economic Factors

The first task in promoting adequate sanitation in rural areas is to make available to people a facility that is, first and foremost, affordable. It is important that as much as possible, only the locally available materials are used. In Kibwezi, the thriving brick-making technology could be developed and used to make a floor that is hard and smooth enough to offer the benefits of the concrete slab. The same technology could also be developed to make walls which are both durable and inexpensive. The ebony wood which is indigenous in this area is used to lay the base for latrine floors because it is hard and resistant to rapid decay. It could also be incorporated into a technology that is community-based. However, this can only be accepted as a short term solution as, with increasing population and the climatic conditions prevailing in this area, excessive use of wood for this purpose can lead to destruction of forests and ecological problems.

Most sections of Kibwezi are faced either with the problem of collapsing pits, or of rocky soils that are difficult to penetrate. Development of an inexpensive way of supporting pit walls against collapse would reduce the frustration and expense of digging new pits after those recently dug have collapsed. The teachers at Ikundu Primary School in Kisingo Sub-location used poles to build structures inside two pits, but these appeared to be so delicate that if sufficient rain fell to soak the ground, the pits would still collapse. Suitable advice would have helped them to build firmer structures which would result in more stable latrines. Rocky soils are a major problem in the higher sections towards the Chyulu Hills. Pits often are not deeper than three feet. A Community Health Worker near Nthongoni who tried to build a mounted latrine found it difficult to construct a firm and usable facility using only local materials and 'common sense'.

5.2 Health Education/Socio-Cultural Factors

The ownership and use of 'latrines as a status symbol' is a motivation that can be developed to increase adoption. 'Health Education' whose focus is broadened to incorporate this element will be more effective

and will result in better health for the communities. Encouraging leading community members to own latrines often leads others to follow their example. Community Health Workers, school teachers, leaders of self-help groups and church leaders are among those whose examples are often emulated.

The almost universal need for privacy during defaecation is another factor which can be used to encourage latrine ownership. Encouraging people to clear bushes around homes, ostensibly to eliminate mosquitoes and snakes, can deprive them of the vegetation cover which had hitherto offered privacy. This has been tried in some areas in Kenya with reasonable success.<sup>18</sup>

Fortunately, taboos are playing<sup>a</sup>/diminishing role as a factor hindering latrine ownership and use. The fear of using latrines because of the belief that faeces in latrine are more easily accessible to witches is disappearing. This does not arise from people's increased understanding of the germ theory of disease causation but from the general 'westernization' or 'enlightenment' which has caused communities to discard beliefs and practices, both beneficial and harmful, which they regard as 'backward'. The previously held belief regarding the impropriety of parents and children mixing faeces or men and women sharing facilities with their children, or with parents-in-law of the opposite sex, is in many communities no longer strong. These beliefs do not seem to play any role currently in Kibwezi. In Turkana where there is still a taboo against fathers mixing faeces with their daughters' excreta disposal is not yet a serious health problem as the hot dry climate is quickly believed to render the faeces harmless after they are deposited.<sup>19</sup> The positive socio-cultural factors, if adequately emphasized, will appear to outweigh the negative ones, and with the added pressure to conform, will prevail.

### 5.3 Community Factors

Public barazas and other community meetings have been used as fora where people are exhorted to build latrines. When the exhortation is done by government administration officers, then the 'order' is taken seriously, by those with premises in market centres or whose homes are

18. Personal communication with some Public Health officers at the Sanitation Planning Workshop in Mombasa. June, 1982.

19. Omambia D. and Omondi L. - Personal Communication.

accessible for inspection. Health extension workers have, however, also used public barazas with more positive results. These, coupled with home visits and examples by Community Health Workers, have been effective in promoting latrine ownership. By providing time for health workers to address people on sanitation, Chiefs underscore the importance of the subject, thus giving it essential prominence. Such opportunities also give the health workers the kind of prestige which makes the community more receptive during their subsequent home visits.

Self-help and other community groups are another means by which latrines could be promoted. Such groups, whether formally organized and registered with the local community development office, or informal and task-oriented, normally have a mechanism for taking collective decisions and using moral pressure to enforce them. In some sections of Kibwezi, such groups have decided on and enforced in this way the clearing of bushes and tall grass around homes, and making paths connecting homes to rural access roads. If these groups were encouraged to include latrine construction in the projects they promote, this could result in a significant majority of homes having latrines.

Another way of promoting latrine ownership is by involving women and women's groups. In Kibwezi area women have groups which raise money by contracting to do jobs for which they are paid. At regular intervals selection is done, by secret ballot, of one or two women who would benefit from the fund. In this system, known as 'nzangule', the women decide in advance what benefits the winners of the ballot are going to get. In the past winners have had crockery or furniture bought for them. Balloting is done until all the members have got their turn before a new round is started. Encouraging the inclusion of latrine construction in this practice could help those among them who are too poor to build latrines to have their own. Moreover, it will make latrine ownership not only prestigious, but also regarded as a social necessity.

#### 5.4 Relevance

Sanitation education to people suffering from excreta related diseases is likely by itself to be ineffective. However, accompanied by practical assistance to alleviate the immediate problems it could have more significant impact. CHWs in Kibwezi have found that they are more successful in their latrine promotion efforts when they are administering oral rehydration fluids to children suffering from diarrhoea.

Successfully relating sanitation to the more pressing concerns of the community also makes people receptive to suggestions to modify their excreta disposal practices. Water is a major problem in Kibwezi. Campaigns by the CHWs to show the community that water is not likely to improve their health without adequate sanitation, have led to the general acceptance of the view that water supply efforts and improvement of sanitation are interrelated.

Conducting latrine promotion campaigns without interference with other more important functions can also be a strong positive factor. During the long rains, all attention in Kibwezi is directed towards the preparation of shambas and planting. The pre-occupation with these functions results from the frequent famines which occur in this area. At this time an attempt to get people to work on latrines is certain to fail.

## 6. CONCLUSION

Latrine promotion efforts must aim at low cost facilities if they are to succeed. It is important, in order to determine what the community can afford, to consider the cash incomes of the people in question and the nature and order of their priorities. It is not enough to determine the affordability of latrines by merely comparing their costs with those of the other more expensive methods of excreta disposal.

One way in which costs could be reduced is by studying the resources and skills available in localities and exploring ways in which these could be used to build high quality latrines. The presence of local hard woods in Kibwezi, for instance, could be exploited to evolve durable superstructures and better floors. The local brick technology should also find a place in the evolution of more hygienic latrines.

The technology needed to improve rural sanitation does not yet require the construction of 'improved pit latrines'. In Kibwezi, ashes sprayed on the floor and thrown into the pit expel flies and eliminate odours. Moreover, the situation of latrines on the leeward side of the homesteads ensures that whatever odours might be present are blown away from the houses. Noticeably, flies and unpleasant odours did not arise as a problem or issue during this study. In Kibwezi, the technological problems that need to be addressed are :

- (a) a low cost method of preventing the collapse of pits in areas of loose soil;
- (b) a low cost method of building mound latrines and penetrating hard rocks that are close to the surface;
- (c) low cost construction of 'slabs' or hygienic floors;
- (d) the construction of inexpensive but durable superstructures.

In order to meet the objectives of the IDWSSD a new strategy is, therefore, needed which essentially will involve a change of attitude and approach on the part of public health workers and 'appropriate technology' promoters. This strategy must include :

- (i) a recognition that in most rural areas costs, rather than flies and odours, are the major impediments to latrine construction. While VIPs probably have a place as public latrines where flies and odours are a nuisance, and responsibility for maintenance and cleanliness is not taken seriously, they are largely irrelevant as a solution

to rural sanitation problems in low income areas;

- (ii) the abandonment of rigid standards of acceptability, and the promotion of less-than-ideal but affordable latrines. This must involve the acceptance of existing local materials and technology and adapting these to evolve a low cost and effective facility.
- (iii) the appreciation of the role a community, its values, attitudes, organisation and resources can play in ensuring sufficient, if not complete, latrine ownership and use in villages.

There are influences that have had a positive correlation with latrine ownership and use, whose encouragement and promotion have a positive impact on latrine promotion efforts. These are :

- (a) Migration, Urbanization and contact with people using latrines. These seem to have influenced people either by making it possible for them to get into the habit of using latrines, or making them more receptive to new ideas and practices. The association of latrine ownership and use with 'modernization' or 'enlightenment' stems in part from this influence.
- (b) Economic circumstances and educational status. These lead to an acceptance of a social status which is incompatible with the use of the bush for defaecation. When this awareness also entails contacts with and visits from people of status, it then becomes 'embarrassing' and 'awkward' to be using the bush for excreta disposal.
- (c) Social integration. Susceptibility to social pressures due to the need for acceptance leads to conforming to behaviour that is considered appropriate. School teachers and local village and self-help group leaders feel that they do not really 'qualify' unless they adopt what is considered appropriate behaviour for their groups. Such behaviour includes construction of latrines and making paths or 'roads' leading to their homes.

Economic improvement and formal education are particularly strong factors favouring latrine promotion. This seems to arise because the awareness of an improved economic status or standard of education is invariably accompanied both by the ability to construct and the motivation to use latrines. This points to a



new direction in which a thrust could be made with promising results. This will involve :

- (i) increased efforts to make primary education available to all rural children;
- (ii) improvement and emphasis on hygiene education in primary schools. The curriculum must then include a practical component involving construction of simple and low cost school and community latrines, their proper use and maintenance;
- (iii) improvement of the living standards of rural people by diversifying their agricultural activities and improving marketing facilities for livestock, agricultural products and products from small scale rural craft industries.

For Kenya, with its relatively high rate of latrine ownership, it may be possible to meet the IDWSSD objective of making it possible for the great majority of her people to have adequate excreta disposal facilities. But this objective can only be realized if the suggested changes in strategy are made . They are difficult changes to make because they essentially involve looking for failures, not in the communities, but in the values and attitudes of health promoters.

