DOMESTIC WATER SUPPLY IMPROVEMENTS IN TANZANIA

IMPACT ON RURAL WOMEN

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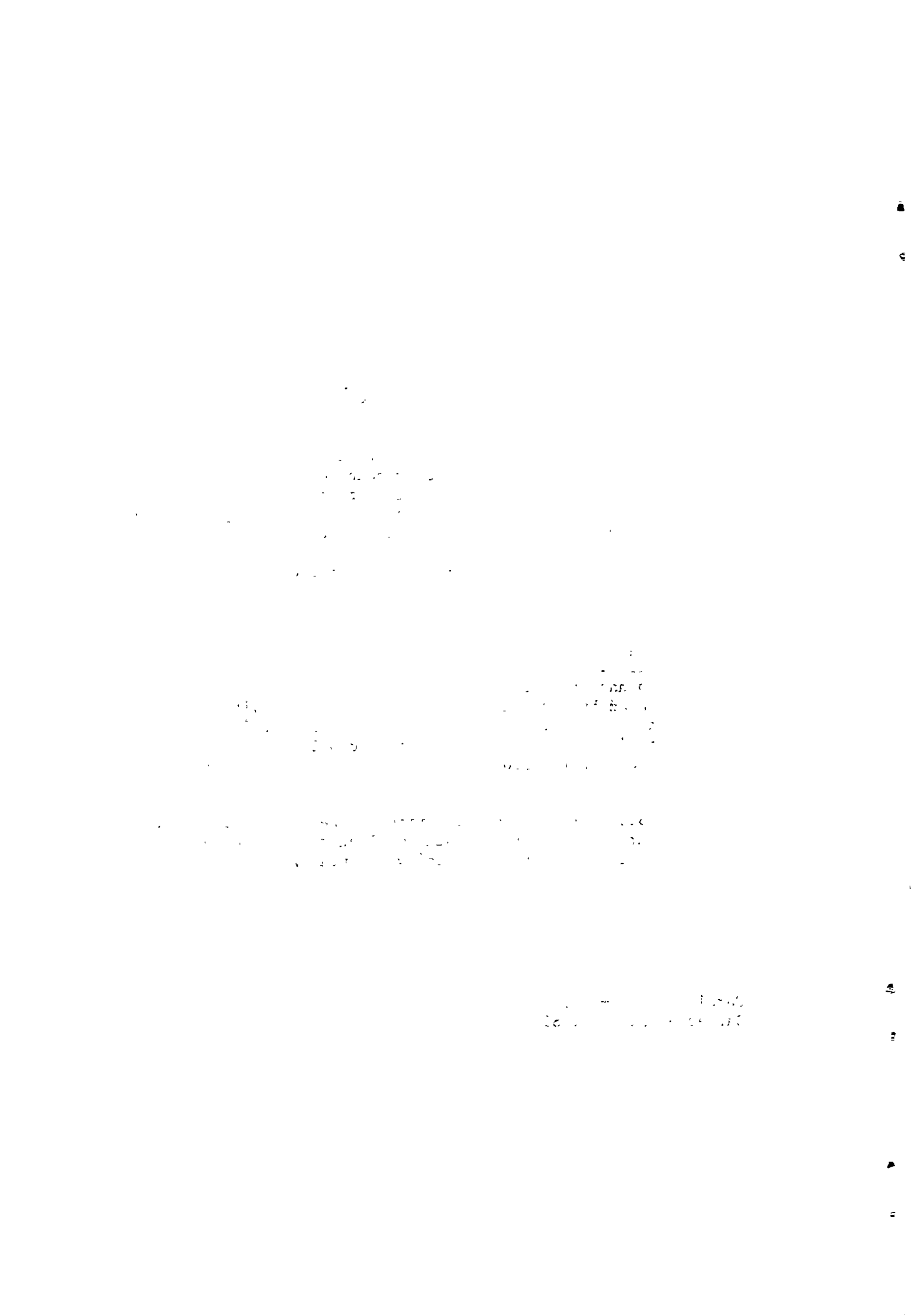

Preface

This report, produced in the last year of the UN Decade for Women, is written in a spirit of optimism. At this late stage in the decade the message about the role of women in development, and the need for their more equitable participation, seems to have finally reached the rural water supply sector. Even if the description of the impact of improved water supplies on women appears to be largely negative, there are signs of increasing attention being given to women's roles - actual and potential. On the part of the donor sponsoring this report - SIDA - there are indications of awareness of the need to involve women, and of a real willingness to try to do so. What remains is the "how". There is a lot to be done before women are participating fully and equitably in all aspects of improvements to rural water supplies. However I am hopeful that the neglect of women which has characterized the past two decades will now be compensated by a decade or more of intense activity and experimentation, so that women will finally be permitted to participate in their own development, and will reap some real benefits from inputs into the water supply sector in rural areas.

Christine Stoermer Steinberg contributed the cover illustration which captures so well the burdensome long trek for water, but at the same time conveys the dignity of rural women.

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"...village women... do not feel the changes and developments of the last twenty years have significantly improved their lot, and with the possible exception of health care services, government programmes have not successfully tackled areas which concern them most. While they admit the existence and utility of services and extension efforts which have reached the village they tend to denigrate the value of these because they have not changed what in the final analysis emerged as the most important concern of women - their heavy burden as second-class villagers. Adult education, agricultural inputs and advice, the provision of water, roads, schools etc are all inherently 'good' changes in their eyes but such changes have not brought them into the mainstream of village life have not altered their fundamental relationship with other villagers, their fathers and husbands. On the contrary they may be seen almost as palliatives, encouraging village women to be more at ease with the heavy physical burdens of their secondary role..."

(Wiley, 1981 - my emphasis)

1. INTRODUCTION

1.1. Objectives of the study

The objective of this report is to study the impact of the programme for improvements to domestic water supplies in Tanzania on rural women. This may seem an unnecessary or irrelevant subject for discussion since most of the commonly anticipated benefits of improved water supply have immediate implications for women, i.e. improved convenience, improved health, and increased productivity. It might be logically presumed that inputs in this sector could only have positive impact on women. However, as this report illustrates, this is often far from the case, partly because the water supplies function poorly or are not used as intended, and partly because there has been a complete lack of attention to women, the intended but ignored beneficiaries. The potential for increasing the involvement of women is studied and possible strategies illustrated.

1.2. Practical presentation of the material

Section 2 provides an overview of the general situation of rural women in Tanzania. This is considered an important backdrop for understanding the constraints to women's participation in development projects, including water supply improvements. In particular the division of labour, access to education and training, health status, social status and political participation are illustrated. The needs of women with particular relevance to water supply improvements are highlighted.

Women's role in water management - collection, storage, use and maintenance of sources - is presented in section 3. Women's role in terms of hygiene, sanitation and the general health and wellbeing of the families is illustrated. The potential benefits and implications of improved water supply for women and the status of such improvements as a strategy for changing women's situation are discussed.

A brief summary of Swedish involvement in the water sector is presented in section 4, with emphasis on the increasing attention being given to women's participation evidenced in policy statements and in the search for an appropriate strategy for involving women. The potential of HESAWA programme in three regions in Tanzania for promoting changes in women's involvement in water supply and sanitation improvements is outlined.

In order to be able to assess the impact of the improvements to water supplies on women in Tanzania, it is necessary to give an overview of the developments within the water sector, i.e. the goals, strategies and progress. The functioning of the schemes constructed is poor, and even utilization of the operational schemes leaves a lot to be desired. This has serious implications for impact on women. It is therefore crucial to give some attention to the main causes, noteably the lack of community participation in general, the neglect of operation and maintenance aspects and inappropriate technology choice. Information on these aspects is found in

section 5. It is also suggested that the failure to involve women must be considered a hinder to the success of the rural water supply programme.

The impact of improved water supplies on women is presented in section 6, firstly in terms of achievement (or non-achievement) of concrete benefits, and secondly in terms of impact on women's status and their participation in community affairs.

Section 7 provides an overview of recent efforts made to involve women in water supply programmes, noteably the efforts of the Nordic donors. The experience gained so far is summarized and areas which have been neglected are indicated. Possible measures for increasing women's participation are suggested.

The importance of the objective to reach and involve women in rural water supply programmes is discussed in section 8. The need for a concrete strategy to achieve this objective is also emphasized. Some guidelines for developing such a strategy are presented.

2. THE POSITION OF RURAL WOMEN IN TANZANIA

Women are still very much a subordinate group in Tanzanian society, overworked, under-nourished and often in poor health. They are denied access to education and training, improved technology, credit and most of the essential resources for development. Although they are the mainstay of production - both food and cash crops - they do not have access to land in their own right, and their labour and its produce are often outside their own control. They have total responsibility for the reproduction of the household, which is a tremendous burden, both physically because of the lack of labour-saving devices to assist in such tasks as cooking, water collection, grinding, etc, and also psychologically because of the impossibility of carrying out the multitude of tasks which are essential for the wellbeing of their families. Women are also involved in communal activities which means they carry a "triple burden" - in agricultural production, reproductive duties and communal activities. In recent years women have become more involved in income generating activities in order to ensure the survival of their families. This means that yet another burden is added to an already intolerable load. Thus women are an over-worked, subordinate group in dire need of assistance. They would appear to be the obvious target group in programmes designed for " the most neglected groups", "the poorest of the poor" in rural areas. To date, however, women have been neglected in almost all developmental programmes, including improvements to domestic water supplies.

2.1. Facets of women's situation with implications for their involvement in improved water supplies

In attempts to involve women more fully in development projects there are certain aspects of their situation which should be considered.These include the current unequal gender-based division of labour; women's relatively poor access to education and training; women's social status and overall participation in community affairs; their health status; and the activities and relevance of women's groups, including the national women's organization - UWT. Each of these aspects will be discussed briefly here and related to attempts to increase their participation in improved water supply projects.

a) The gender-based division of labour: giving women an unequal share of the burdens

Despite the fact that statistical reports omit to include women in their calculations of the "economically active", there can be no denying that women in Tanzania are the main productive force in rural communities. The bulk of their activities is related to peasant agricultural production and domestic household reproduction. They have almost total responsibility for subsistence agriculture and they play an important role in cash crop production. Apart from this work in agricultural production, women are also involved in what, ironically, has often been termed "non-productive" activities, i.e. water and firewood

collection, domestic housework, care of other family members including the children, aged and sick. Such activities, which consume a great deal of women's time and energy, should better be termed "reproductive" activities since they literally ensure the survival of rural households. When these responsibilities are combined with communal and income-generating activities it is clearly seen that women carry an inordinate share of the work burdens in rural communities.

The constraints on women's participation in development by their excessive work burden are well documented in Tanzania. With regard to water supplies in particular a study by Nkhoma (1982) noted that women's work load hindered their involvement in improvements to water supplies. The reverse side of the coin is that the lesser burden shouldered by the men enables them to participate in all development activities, and thus increases their share of access to resources such as information, training, travel, etc.

This inbalance in the utilization of human resources at the household level must be taken into consideration when attempts are made to involve women in water supply projects or any developmental efforts. Women's time and energy are scarce resources and if women are to be encouraged to give of them in water supply improvements, it is essential that their involvement is at a meaningful level, i.e. that they are involved in decision-making and planning and not simply as an unpaid labour force. Women certainly do not need another work burden. On the other hand their position and status in the community might benefit from increased involvement in community development. Given women's full-time committment to other activities, it is essential that the improvements are well-planned, that the implementation is efficient and that the aspects of operation and maintenance are given adequate attention, in order to ensure that women's efforts are not wasted and that real benefits are forthcoming.

b) Women's restricted access to education and training

In the process of development in Tanzania, many changes of political, social and economic nature are taking place. Education- information and training - is a vital factor in enabling the population to adjust to these changes. Women have unequal access to educational resources and, as a result, the inequality between men and women has increased. Emphasis on education and training without ensuring the equal participation of women will mean a widening gap in knowledge and skills, employment opportunities and possibilities for participating fully in community development, between men and women. The implications for a rural water supply programme are that women must be given access to training (for example as pump attendants, site caretakers, health promotors, etc) and that in the education and promotion programmes associated with water supply improvements, special efforts must be made to ensure that the information reaches women, and is adapted to their real situation and needs.

One of the biggest limitations of the training offered to women to date is that it has tended to over-emphasize areas such as child-care, hygiene, nutrition, and to neglect areas where women are in real need of assistance, for example in agriculture, and

in skills needed for successful economic ventures, such as management, book-keeping. There has been a tendency to over-emphasize women's traditional roles rather than to attempt to prepare them for a new position in society. Water supply programmes should not fall into the same trap by only involving women in education programmes on health and hygiene. Women should be given access to technical training alongside men. To enable them to participate fully in planning and decision-making they should be given some special training in leadership, planning, management and organization. Only in this manner will women be given the self-confidence necessary to take a more active part in community development programmes.

c) Women's social status and overall participation in community affairs

Women's subordinate position in society in Tanzania can be largely attributed to the fact that patriarchy still predominates. Despite legal changes women have few rights in marriage and are still basically the "property" of their husbands. Given this lack of authority and status at the household level, it should not be surprising that women are conspicuous by their absence in the political sphere, both at national and community levels. For example, of 200 members of parliament elected in 1980, less than 15 were women. (Mascarenhas and Mbilinyi, 1983) The situation with regard to participation at all other levels - from regional to village levels - is similar, if not worse.

The involvement of women in decision-making processes that make up the government of a village is an important indicator of their status in the community, and of the level of their active participation in community development processes. To date, in spite of villagisation, women play a very minor role in community affairs. Power over all resources is still vested with the males in the rural communities.

Participation in village assemblies:
Studies from different parts of the country have indicated that women's participation in village assemblies is very passive. [1] It was reported from one region that the women who did attend meetings played *" a very backstage role... participating very little if at all in the discussions and answering of questions."* (Peterson and Peterson, 1980) This inactive role is due in part to the social expectations relating to women's "proper place in society". Male opposition to women's attendance as such, and especially to any active participation, is a key factor. Women's active participation is also constrained by lack of time, insufficient knowledge of Kiswahili, and a complete lack of experience in such spheres.

Women holding formal positions at village level:
Despite the villagisation ideology of equality, very few women hold positions of authority at village level. A study carried out by PMO (1980) revealed that in 514 villages in 19 regions, only

1. See for example, Wiley (1981); Mbilinyi (1982); von Freyhold (1979); Peterson and Peterson (1980)

6.5% of all village managers were women, and there was not a single female chairman or secretary. Women were similarly not well represented on the village committees. A study in 45 villages in Mbeya region revealed the same pattern. (Mbilinyi, 1982) The fact that women hold such a small percent of positions of authority indicates the inequality of their position in rural areas. Even when they are found in village committees their impact is far from equal that of the men. Women are usually not found on the "finance and planning" committee which is the most crucial and powerful committee. (Mbilinyi, 1982). Women are rather found on the "education, culture and social welfare" committee, a much more innocuous sphere, considered suitable even for women.

The male bias in planning and administration at all levels right down to the household level does not facilitate the involvement of women. Women are underrepresented in all government departments at all levels, but particularly at levels of authority. At village level there are few women extension officers or field-staff who could motivate or encourage women to participate actively. An increase in numbers of female teachers, agricultural extension officers, community development, cooperative officers and health workers at village level could make a significant contribution to promoting women's involvement in development efforts. (Mbilinyi, 1982) The implications for a rural water programme are to ensure that women fieldstaff are trained and motivated to involve and support local women.

Thus a water supply improvement project is unlikely to find any women in the village government. Women who attend village meetings are not likely to participate actively. Contact with the women will therefore be very difficult, especially if all project staff are males. In addition efforts to involve women may meet with hostility from the local males. Perhaps the most crucial constraint to women's increased participation is the fear among males that the balance of power at the household and community level will be disturbed to the detriment of men. There has been, and will be, male opposition to women's involvement in development programmes in any way other than as a labour force. However this opposition must be risked and challenged since it is imperative that women do participate actively.

d) Women's health status

While great advances have been made with regard to health care in Tanzania- especially through the establishment of health centres and the recent emphasis on MCH and VHW services - the health facilities in the rural areas are still not adequate to the needs of women. In some cases the facilities are completely lacking (some 60% of villages are still without health services) or inadequate due to shortages of trained staff, equipment, drugs, etc. In other cases women are unable to utilize the services which are available because of their heavy workload and/or poor transport facilities. Thus the health problems experienced by rural women are great - both in terms of ensuring they themselves are in sufficiently good health to carry out all their tasks adequately, and in terms of their responsibilities as caretakers of the health and well-being of their families.

Many of women's health problems are related to their child-bearing and rearing roles, which in combination with the cycle of over-work, undernourishment, and insufficient health care facilities, has led to unacceptably high rates of morbidity and mortality among women and their children. Poor nutritional levels are a key factor in many households. Some of the causal factors are insufficient feeding of children (especially in peak agricultural seasons) and seasonal shortages of both basic foodstuffs and essential supplements such as fruit and vegetables. However concern over nutritional status should not only be directed towards children. Women themselves are an "at risk" group in terms of adequate nutrition. In addition health problems such as goitre, anaemia and vitamin deficiencies have impact on women's capacity to produce the food required by the family, as well as to carry out the multitude of reproductive duties in a satisfactory manner.

Among the diseases affecting rural households are (not listed in order of incidence) malaria, diarrhoea (especially in young children), respiratory conditions, nutritional deficiencies, anaemia, measles, tuberculosis, tetanus, bilharzia, intestional worms, skin and eye diseases. Many of these are connected with water supply, sanitation and personal hygiene.

Thus in terms of a programme for improved water supply it is important to note the importance of health education and sanitation. Obviously improvements to water supply alone will bring little health benefits since women's health problems are caused by a multitude of factors. The importance of preventative measures is clear, as well as the need to address efforts to men as well as women. Far too often health and nutrition programmes are aimed solely at women as mothers. This is based on the assumption that women have the sole responsibility for the health and wellbeing of the families. While this is true in many cases, efforts should be made to break this cycle of unequal responsibility. Another motivation for including men is that men, not women, have the resources necessary for bringing about the necessary changes.

e) Women's groups and their potential for development

Although the strength and functioning of traditional women's groups in Tanzania today is largely undocumented, there are indications that women's joint efforts tend to be informal and limited in terms of time span. However the fact that women have, traditionally, had such groups and that they continue to cooperate under certain circumstances is positive. In all probability women could be mobilized through these groups to cooperate for specific development activities, such as improvements to water supplies. There is also a great number of other groups, such as those run by NGOs and churchs, working with women throughout the country. These groups could also be good channels for communication with women. As pointed out earlier, women are increasingly involved in economic activities, often as groups. The national women's organization, UWT, reaches down to the village level, although not every village has a branch.

The implications for development projects at village level are firstly that it is important to know what groups exist in rural communities, what sorts of activities they have been

or are engaged in, and what the success rate has been. This is necessary in order to assess the potential of such groups to mobilize women and the likely reaction of women to efforts to involve them in such activities as improved water supplies. If women's groups have a history of failures, and the village government has been characterised by inefficiency, corruption and lack of female participation, it might be - understandably - difficult to mobilize women. In addition, it is important to keep in mind the power of traditional women leaders over other women. This power may be mobilized constructively in a programme, but if such women are ignored their power may be used successfully to maintain the status quo, even when (at least to the eyes of the observers) it is far from the interests of the women themselves. Use of locally-based women's groups could help bridge the gap between the local women and the planners/ administrators from outside, and thus ensure that adequate consideration is given to women's needs and priorities. Use of UWT should be attempted as this might give this, to date, rather ineffectual organization the necessary resources for grass-roots involvement in developmental programmes.

f) Women and change

Rural women are still largely regarded by outsiders - males and females, nationals and expatriates - as backward and innately conservative. Planners and administrators are quick to presume that women are passive and not interested in playing an active role in community affairs. This is related to the "invisibility" of women in community affairs, as well as their lack of education and knowledge of Kiswahili. However one of the main reasons women have not played an active role in development efforts has been simply because little serious attempt has been made to involve them. They have not been given a chance to present their opinions or suggestions since they are largely excluded from formal government communication channels. When projects are rejected by women (as they understandably are in some cases) this is simply taken as evidence of their conservatism, rather than as an indication that there could be something basically wrong with the planning or implementation of the projects themselves. In fact, if women's resistence to change is analysed more closely there are often very good reasons for women's negative attitudes to the proposed changes. This has been very well illustrated by experience from Singida region. At times women's resistance could be related to incompatibility with cultural or social patterns, at other times there were very good practical reasons for the non-acceptance of the changes proposed. (Jellicoe, 1978)

Even if women are more inclined to cling to traditional practices, this should not be surprising given women's situation as outlined earlier. They receive less impulses from outside the community; they have less formal education; they know less Kiswahili; they are less involved in political and religious spheres, and they travel outside the immediate community a lot less than men. Rather than a sign of innate conservatism, women's unwillingness to accept some changes should be seen as a symptom of the inequality they are subjected to. This could be addressed by increased

attempts to actively involve women in developmental projects.

There are many examples of women accepting innovations and working hard to ensure the success of development projects. Experience from Singida region revealed that women were more actively involved in supporting the literacy campaign than were the men. (Jellicoe, 1978) Experience from agricultural projects has shown women to be often more receptive than men to advice and instruction. However it was pointed out that women lacked the opportunity and authority to apply what they learned. (de Wilde, 1967) It has also been pointed out that when women receive information directly (and have the possibility of implementing it) they tend to act upon it more quickly than men, mainly because *"they have less time to waste."* (Wiley, 1981) The latter remark should be kept in mind by development planners. Women can be a vital resource in rural development if plans are well made and efficiently implemented. However women will object to their scarce resources of time and energy being wasted with projects characterised by poor planning and general inefficiency.

If consideration is given to their needs and problems - and most importantly to women's own perceptions of these - is should be possible to involve women more fully in social change. Women are still largely an untapped resource in rural societies today. They are over-worked but their potential is under-utilized. The challenge for rural development programmes is to release that potential for the development of the women themselves and the community as a whole.

2.2. What do women in Tanzania need?

Women need legislative, structural and attitudinal changes to bring about an improvement in their overall status in society. Before women can be integrated into development efforts in rural communities they must be relieved of some of the unequal burden of work and responsibility for family welfare. Women also need a fair return for all the inputs they make in rural development, through their roles in production, reproduction, communal activities, and their increasing income-generating activities. If they could be assured equal access to essential resources and control over their own labour and its produce, their situation would be immediately much improved. As the situation stands, women are denied access to land, capital, improved technology, education and training. As a result their productivity is low. Since they are subordinate to and "controlled" by men, their labour inputs are exploited without a just return. Finally women lack the time, energy, skills and motivation for active involvement in community affairs.

The needs of women with implication for a programme of improvements to water supply and sanitation are:

- increased control over resources

Water is a resource over which women have traditionally had control. There is a risk that improvements can result in reduced control by women. If men enter this sphere as "managers", women will be forced into a new dependency relationship with men.

- increased access to information and training
Special training programmes should be developed to assist them to carry out their old roles more effectively, and to adopt new roles.

- increased access to modern technology
Women should be given the opportunity to be involved in technical aspects, for example to undertake responsibilities as pump attendants. Men should not be given the monopoly over all technological innovations.

- to be relieved of some of the work burdens
In this case the burden of water collection, through improvements which guarantee improved access and reliability, and thus bring about improved convenience.

- attitudinal changes concerning women's position and role
Through ensuring that women are given the possibility to participate fully, on an equal basis with men, it is possible to bring about changes in attitude among both men and women. Emphasis on women's participation by the donors might also bring about a much needed increase in attention to women's issues at all levels within the relevant ministries.

All of the aspects mentioned above are interrelated so that what is needed is not a piecemeal approach treating some of the problems, but an integrated attempt to improve the position of women, and in this way ensure their full participation in rural development. However it must be ensured that increased participation of women does not simply mean increased exploitation, for example through increasing their workload, or in a deterioration of their situation and status relative to men. The goal must be to relieve them of some of their burden in order to improve living conditions for themselves and their families, and most importantly, to facilitate their liberation and development, as a group and as individuals.

3. WATER - HEALTH - SANITATION: THE REALITIES FOR RURAL WOMEN

3.1. Women's roles and responsibilities

a) Water collection, management and use

Water collection is part of the daily domestic burden of women in rural areas in Tanzania. Women are also often involved in collecting water for small animals or for income-generating activities such as beer-brewing or salt-making. It is impossible to study the development of domestic water supplies in any meaningful way without including the aspect of women's involvement. But to date there are very few studies with any emphasis on women.[1] This must be linked to the general tendency within the water sector to plan from above on a large scale, with little consideration (if any) to prevailing local conditions, needs or priorities. In this context it is not surprising that women have not been considered target groups for study.

Traditionally water for domestic uses is women's responsibility and burden. Children (especially girls) do assist but the final responsibility for ensuring that the household has adequate water for use in the home rests with the women. If men are at all involved with carrying water it is almost always for commercial purposes - to sell, for watering cash crops, etc. In addition, whereas women carry water on their heads- in buckets, gourds or clay pots - this is seldom the case with men. Men and older boys utilize improved technology such as wheelbarrows, bicycles or yokes. Water portage seems to have the low status that most domestic chores and "women's work" is assigned, and thus men will not carry water for domestic uses unless they are absolutely forced to.

Within the country there are considerable differences in availability of water. However it can generally be said that water collection is a time and energy consuming activity. The actual amount of time and energy spent daily depends on factors of location of settlement, terrain and season. While settlements are normally located so that water is available within a distance of less than 2 kms, in some parts of Tanzania women and children have to walk up to 5km or more. And at the peak of the dry season they may have to wait hours for sufficient water for collection.

Women normally carry up to 20 litres at a time on their heads, and may have to make this trip two to three times a day, depending on what activities are planned. Water collected is used for drinking, cooking, household cleaning, personal bathing (for themselves and small children, and sometimes even for their husbands). It appears that in some areas women do bathe at the source, although the main pattern is for women to bathe at home since most sources lack the necessary privacy. Washing of the clothes is done either at the source or at home, but if the source if far away it is likely to be done there.

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1. See Ausi (1983); Hannan-Andersson (1982, 1983, 1984); Nkhoma (1982)

The average daily consumption per capita (PCC) varies greatly in different parts of the country, and in some cases even within a community. However generally speaking it can be said to be far too low for the good of the health of the population. For example, studies in Pare (Kilimanjaro region) and Singida region recorded PCCs of 10.4 and 8.7 litres respectively. (Hannan-Andersson, 1982 and 1984a) Even allowing for the additional litres for any personal bathing and washing of clothes that may have been done at the source, the PCC was still a far cry from the recommended minimum of 20 litres per person per day.

Women have the main responsibility for the handling of water in the homes, since they are the ones responsible for all domestic tasks, including cleaning, washing dishes, cooking. Thus women are responsible for storing water for drinking and other uses. It is their duty to treat water for drinking (by boiling and/or filtering) if it is not suitable for drinking directly. The conditions under which water is handled in the homes varies as a result of differing social and cultural patterns. Economic conditions also play a role, for example in determining the type of household equipment available to the women. And individual preferences have some impact. What can be said very generally is that the handling of water in the homes leaves a lot to be desired. Drinking water is often neither stored separately nor covered. Procedures for taking water for drinking are in many cases inadequate, for example infectious diseases can easily be transmitted from one household member to another through the practice of drinking from the same calabash, or by using containers without handles to take water from the storage vessel. Water is seldom boiled before drinking, even when it is highly polluted, despite the fact that most women probably know that they are expected to boil it for the sake of the health of their families.

The management aspects of domestic water supply for women include assessing the amount of water required by the household and ensuring its collection at appropriate times. Another important aspect is the making of judgements and choices concerning the source of water for domestic use. There is considerable evidence that water collection is not simply a "thoughtless" routine. Women make rational choices based on definite criteria, in as far as possible given the constraints of time, energy and other duties. This is evident in the use of different sources for different purposes- basic water management carried out daily by women. Although it appears that convenience (related to location and reliability) has the highest priority for women, the aspect of quality is not unimportant. Women generally appear to choose the best quality source within a reasonable walking distance for drinking and cooking purposes. Although the criteria determining womens assessment of quality may not be "scientific", it has been proven (by checking with laboratory tests) that women make good judgements of water quality. The aspects usually taken into consideration by women include taste, temperature, odour and appearance (including colour), as well as very obvious effects on health, for example stomach pains and diarrhoea.

Women play an important role in the management of traditional sources. Though it is not well documented for Tanzania as a whole, it appears that women do participate in some actual construction work. They are the ones who decide when a new source is needed, either a new permanent source or a temporary dry season source. Women have the main responsibility for keeping the sites well maintained and ensuring that children and animals do not contaminate or destroy the sources. In spite of the prominent management role women play in traditional sources, they are seldom given similar roles in improved water supplies.

While it is true that women do almost all of the water portage in the households, it is equally true that it is the men who make most of the decisions and control most of the resources in the family. Thus even if decisions concerning water supply and use may be made by the women, they are often constrained by the independent action of the husbands. The women may have some control over some aspects of the water supply situation but they certainly do not have control over them all, and certainly not over the most fundamental- the location of the house in relation to the water sources. Women usually have little control over cash income in the family and thus are restricted from investing in home improvements, eg for rainwater catchment. Wheelbarrows and bicycles, which are usually utilized by the men for water collection, are not available to women. In a sense women do not even control the amount of water they have to draw and carry each day, as this is sometimes determined by the bathing habits of the men. If husbands desire to bathe at home every day, this may entail an extra trip for collecting at least 10 extra litres for this purpose.

Even if women in a community feel real dissatisfaction with the water supply situation, because of their lack of a direct voice in community affairs, they may be powerless to get anything done about it. They may be able to influence their husbands to support their demands, but otherwise women have few channels through which to make their needs and priorities known. In studies carried out in many parts of the country it has been revealed that water is a high priority for women (and indeed also for men). However it does not always have first priority. This was revealed in one village in Pare (Kilimanjaro region) where water supply improvements were 4th priority after poor distribution of goods, lack of health facilities, and poor transport. (Hannan-Andersson, 1982) In Mbeya region a study of priorities in 5 villages indicated that water supply was third priority after the need for a dispensary and a shop. (Mbilinyi, 1982)

Socio-economic studies in Iringa/Mbeya/Ruvuma regions made the conclusion that water supply was equally important for men as for women, and that for both sexes it was high priority. (URT/ DANIDA, 1983) It was maintained that both sexes tend to regard village and family problems in much the same way. However in Singida region it appeared that women's perceptions of their problems differed from the men's. Women agreed with men (or rather declined to disagree) that water supply was number one priority, but when questioned about their greatest work burdens water was not mentioned at all. Instead agriculture and grinding millet were given as the main problems. In addition 22% of the

women mentioned water collection as being the activity they enjoyed most. This may have been because of the possibility of meeting other women at the sources. (Hannan-Andersson, 1984a)

What it is extremely important to keep in mind is the fact that inadequate water supply is only one of the basic problems of rural households, which must be seen in the context of the totality of needs, just as the collection of water must be placed in the context of the overall work burden for women. Water supply cannot be treated in isolation. There is need for a real understanding of the interrelationship of different activities and of the factors that control the allocation of scarce resources of time, energy and capital in fulfilling basic needs. To improve water supply is one strategy to improve living conditions and stimulate general development. By itself it cannot achieve these goals. Unfortunately all too often the approach is to compartmentalize development, when what is needed is an integrated approach which tackles the problems on a number of fronts simultaneously, starting with those which have the highest priority for the communities concerned - having given due attention to the priorities of all groups, including the women. Village life is complex and the problems experienced are all interrelated. The piecemeal approach cannot succeed, especially since many of the problems in rural communities are related to the general poverty of the households.

b) Women and their role in maintaining health standards

The main responsibility for maintaining adequate health standards in the family rests with the women since, apart from their reproductive roles, women are also involved in the care of the aged and sick in their households. Due to the inadequacy of health facilities in rural areas, in many communities women provide the only primary health care available (except for the traditional health services). Much then depends on the ability of women to recognize and deal with health problems before they become acute. Thus the need for adequate information and motivation, especially on preventative measures, to be directed towards women. However the need for supportive measures in terms of also involving men in health education programmes has been mentioned earlier.

Because of their roles with regard to collection and utilization of water in the households, women come into daily contact with contaminated water. They must therefore be seen as both an "at-risk" group for water related diseases and as possible "agents of contamination". Women are probably highly prone to diseases which can be related to water. Since women are involved in the care of small children, cooking and serving of food and drink, there are plenty of opportunities for transferring such diseases to other household members. Women can also act as contaminators of water through improper water-use.
Clean water at the source is easily contaminated after collection, for example through the use of dirty vessels for collection and storage; inadequate procedures for drawing of drinking water from storage containers, etc. Proper instruction in water-use and information on potential sources of contamination of water after collection are essential.

By virtue of their roles in the socialization of young children, women have the responsibility for inculcating good patterns of personal and general environmental hygiene in family members. This includes such habits as using latrines, washing hands after defaecation, washing themselves and clothes sufficiently often, and keeping the surroundings clean. Toilet training of young children is also their duty. The general situation with regard to the use of latrines, personal hygiene and general environmental sanitation leaves a lot to be desired in most parts of rural Tanzania. Latrines are in poor condition and are often not used by all members of the households at all times. The inadequacy of personal hygiene must, however, be related to the chronic shortage of soap for washing clothes and bathing. Taking this fact into account, health education is urgently needed to stress the importance of bathing using water alone, and of washing clothes frequently either without soap, or using traditional "soaps". Standards of personal hygiene in many households involve serious health risks, especially with regard to preparation and serving of food and drink. Since women are the ones who prepare and serve beer (often in their own homes) the risks involved are not only for the individual households but for many outsiders as well. Household surroundings often constitute a health risk in the sense that refuse is allowed to lie rotting in the compounds attracting flies and other vectors. In the rainy season large pools of stagnant water are breeding places for mosquitoes. The role of women in these aspects must be taken into consideration if health benefits are to be achieved from water supply/sanitation improvement programmes. The need for integrated programmes which also give sufficient emphasis to personal and environmental hygiene is great.

3.2. Improvements to water supplies: what benefits for women?

Before an assessment can be made of the impact of improvements to water supplies on women, it is necessary to have a clear understanding of the intended benefits. It used to be presumed that benefits would occur automatically water supply improvements were installed in a community. Negative experience has given rise to a more realistic approach to what can be expected.

The benefits that are usually cited for improved water supplies all have implications for women:

- a reduction of time and energy expenditure, leading to increased opportunities for involvement in productive activities.
- an increase in the quantity and improvement in quality of the water consumed, leading to improved health and wellbeing
- stimulation of general socio-economic development.

Discussions of the objectives and expected benefits of improved water supplies usually omit to mention what should be an important goal - the involvement of women in water supply improvements with the potential benefit of improving their overall position in rural communities.

When the anticipated benefits are analyzed more closely it becomes apparent that there are two "levels" or "stages" of benefits, a short-term and a long-term. This is illustrated in the figure below.

Figure 1: Simplified model of expected benefits of improved water supply

Short-term benefits	Long-term benefits
Reduce burden of time and energy expenditure	Increased time/energy for productive activities leading to increased productivity and socio-economic development
Increased quantity and and improved quality of water available and consumed	Improved public health and well-being
Equitable involvement of women in all aspects of improved water supplies	Improved position of women in rural communities

The short-term benefits are all worthwhile benefits in themselves. Women's lives would be made easier if their work burden was reduced, if there was more water of better quality available, and if they were more involved in planning and sharing of benefits. However the far-reaching benefits must be the ultimate goal, i.e. the increase in productivity and socio-economic development, and the improved health and status of women. Although it is not illustrated in the figure, all these long-term benefits are closely interrelated. Greater productivity will not be achieved if health is not improved, and greater productivity in agriculture is also dependent on an improvement in women's situation since women are the major food producers. Health will probably not be dramatically improved without an improvement in general living conditions, which is in turn dependent on adequate production levels. Women's status will not be improved until women have adequate health levels to be able to cope with their normal activities, and have time and energy over to participate fully in other developmental activities.

The presentation of expected benefits, as in the figure above, is largely a hypothetical exercise. Benefits from improved water supplies are not achieved automatically. The situation is highly complex. There are many conditions which must be fulfilled for the achievement of impact, which will be elaborated below. It is obvious that the achievement of the long-term benefits is dependent on the water supply programme being an integrated programme. If an improved supply is simply installed and the community left to its own resources, the chances of achievement of benefits in the long-term perspective are very slight. A programme which includes a participatory health/sanitation component has a greater chance of making an impact on health conditions. And if

community participation and conscientization is sufficiently emphasized, the community may be led to come to grips with other problems and to have the time/energy and inclination to make the necessary efforts to increase productivity, and therein general welfare. If women are involved in all aspects, including decision-making, the chances of their participation in other activities will, hopefully, be slowly increased and their status improved.

In order to increase convenience and relieve the burden of water collection, the supply must guarantee ease of access and reliability in all seasons. If there is not sufficient density of supply points and/or location is not more convenient than traditional sources, then the supplies will not be utilized. This is because accessibility is the criteria with highest priority for women. Similarly the systems themselves have to ensure regularity of functioning and this implies an adequate maintenance infrastructure. If these aspects can be assured, i.e. the improved supply is more convenient than the traditional supplies and functions reliably, the benefits for women will be considerable since water collection is excessively time and energy consuming.

It is presumed that, given adequate functioning of the water supplies, a reduction of expenditure of time and energy on water collection will result in more time and energy available for other "productive" activities. Even if functioning is assured, for health benefits an increase in quantity of water consumed is necessary. Thus if women are expected to collect more water the time saved will not be considerable. Even presuming that a lot of time was saved, the possibilities for engaging in "productive" activities is governed by factors of seasonality, the existence of opportunities for such activities, and other personal and cultural factors which determine the inclination of individuals to engage in such work. (Saunders and Warford, 1976) Women may simply want to utilize any time saved for leisure and much needed rest. There must be a recognition of the overburdening of women and the real need for time to rest and recover strength and energy - especially given the fact that rural women are over-worked, underfed and frequently in poor health due to too frequent pregnancies and little chance to recuperate adequately.

The achievement of the benefit of increased production is difficult to assess. The term "productive" lends itself to all kinds of interpretations. What is usually implied is increased agricultural activities. It is certainly true that an increase in agricultural production is very necessary in Tanzania but the desirability of trying to extract more labour from women can be seriously questioned. Is it a "benefit" to reduce women's work burden in one area, only to increase it in another? Surely it would be a more just policy to try to increase the time and energy expenditure of males in agriculture, or failing this at least to ensure increased inputs of extension service, improved technology (especially mechanized weeders), credit, etc, for women. Another area in which it is presumed women would utilize saved time is income-generating activities. Again the need for increasing cash income for basic household necessities is a real one. However it can be questioned why it should be women who, over and above their full-time work in production and reproduction, should look for

means of raising cash income. It has been suggested that men are simply handing over more and more responsibility for providing for the needs of the family to women. If this is the case then it is not a positive development for women. Similarly the fact that in many households men control the income women earn would negate the positive impact of women using "spare" time for income generating activities. The end result may well simply be increased exploitation of women.

The health benefits of improved water supply are probably the most difficult to assess. The most that can be said with certainty about the linkage between improved water supply and health is that *"while improved drinking water is probably a necessary condition for the improvement of people's health. it is not a sufficient one..."* (Saunders and Warford, 1976) There are many factors at work in determining the impact of improved water supply on health, including the water quality and the reliability and convenience aspects which have implications for the actual useage of the improved supplies. As well there are many environmental, social and cultural factors which have to be taken into consideration. For water supply improvements to have any impact on community health conditions it is essential to reach all members of the community. All households must be given the possibility of abandoning all polluted traditional sources completely. Thus the economic constraints in Tanzania today have a role to play in determining the level of health impact. If the improved supplies are not adequate- if they do not give total coverage - or if they break down, part or all of the community is forced to revert to traditional polluted sources and health benefits are negated. Forcing people to revert to contaminated water for only 2% of the time, risks undoing the health benefits of drinking clean water throughout the rest of the year. (Cox and Shildon, 1982) There are researchers who would go even further and suggest that the impact may even be negative, in the sense that giving people access to "safe" water for some periods of the year may damage the immunity they have to certain diseases connected with polluted water.

A lot of the responsibility for ensuring that their families obtain health benefits from improved supplies is placed on the women. They are expected to utilize the improved supplies at all times, and to maintain them in the manner intended; they should increase the amount of water used, especially for personal hygiene purposes; and they should accept and utilize supplementary inputs such as health education and sanitation advice. When these conditions are not fulfilled and benefits are not forthcoming, there is a tendency to blame the communities and especially the women. However the fulfillment of these conditions is not dependent on the women alone. In fact the fault may often lie with inadequate planning and implementation of projects. Attainment of health benefits is dependent on adequate health education to all members of the community, and on sanitation improvement inputs. And it is necessary that all inputs are based on a sound knowledge of the realities of rural living, and emphasize the provision of adequate information and motivation for the changes advocated.

Presuming that planning and implementation are adequate and women accept and utilise the improved sources (and sanitation improvements) as intended, and bring about the necessary changes in water-use patterns, what benefits can be expected? There are a multitude of infectious water-related diseases, the incidence of which could be reduced through improved water supplies and sanitation facitilites- on the condition that health education is provided. These diseases, which cause a great deal of morbidity and mortality in rural Tanzania are illustrated below:

1. Faecal-oral - cholera, typhoid, diarrhoea, dysentry, hepatitis, ascariasis.
2. Water-washed - skin and eye infections
3. Water-based - guinea worm, schistosomiasis, clonorchiasis
4. Water-related insect vector - malaria, filariasis, yellow fever,tryanosomiasis

Since many of these diseases are serious problems, particularly malaria and diarrhoea among small children, reduction of their incidence would be of great benefit to women. However reduction of these diseases can only be achieved with changes in patterns of hygiene and water use. Experience from other countries, and from Tanzania itself, indicates that normally personal hygiene and water use patterns are unaffected . Often the only change is that whereas women walked long distances to a polluted well, now - if they are lucky - they collect cleaner water at a closer distance. Improved water quality affects only the water-borne transmission of the faecal-oral diseases. Since the faecal-oral diseases are mainly transmitted by non-water borne routes, the water supply improvement is likely to have only limited impact on health. (Feachem, 1978) For optimum health benefits the integration of health education and sanitation improvements is crucial. For a significant reduction of faecal-oral diseases there is a need for increased attention to personal and environmental hygiene.

3. 3. The status of water supply improvements as a strategy for improving women's situation

It has been suggested that improved water supply may have a positive effect on the development process in all the various sectors of village economy and society. However, the most that can be definately stated is that, although water by itself is unlikely to have a significant development effect, *"its absence will prevent, or at least greatly hinder development."* (World Bank, 1979). Integrated rural development efforts are required which simultaneously tackle other local problems, otherwise no dramatic impact on the lives of the people can be expected.

Because of the anticipated benefits discussed previously, it is also expected that women's lives will be improved and that the water supply improvements will have a catalytic impact on women's development. While this might appear quite feasible in theory, the reality is that inputs in water supply alone - even if successful- without supportive measures in other areas will remain development inputs of minor consequence to the everyday realities of women.

This is related to the fact that water supply is only one of the problems experienced by rural women, and it may not always be the most important problem from their perspective. As pointed out earlier, women's greatest problem in rural areas is their subordinate position and lack of access to power and resources. An effective strategy for improving women's situation must come to grips with this problem. However in spite of the increased rhetoric which seems to indicate that the neglect of women in developmental programmes has been recognized, and the gender-specific conditions which suppress women have been deplored, policy and programmes have not yet begun to seriously challenge the basic structure of gender relations.(Geiger, 1982) The problems involved in translating a consciousness of the root causes of women's subordination into positive developmental action on behalf of rural women are many and complicated.

Rural development projects, such as improved water supplies, have been criticized as supporting the status quo with regard to the division of labour, rather than encouraging women to challenge it. While accepting that the reduction of work burdens is a worthwhile goal in itself, Geiger (1982) maintains that such projects fail women in the long run by not tackling the essential problem. Thus instead of attempting to involve men in more of the work tasks traditionally assigned to women, such projects help women to accept the division of labour as it is, by making it a little easier for them.

While this is very true, it is of course, an oversimplification of the problem. There is little likelihood of a change in division of labour in this sphere in the near future since it is traditionally exclusively women's work, and as such very low-status work. Changes in the division of labour may be more possible at this point in time in other areas such as firewood collection or agriculture, areas where men are already involved to some degree. Introduction of water portage technology- such as wheelbarrows, ox-carts, etc may encourage men and boys to assist women more in water collection. In addition primary school programmes which emphasize the value of this and other women's work, may have a positive impact in the long run.

Nevertheless the dilemma raised above must be kept in mind, and efforts must be made in all water supply projects to bring about more fundamental changes for women than simply a reduction of their work burden. For optimum impact on women's situation the projects should ideally be integrated projects, which attempt to come to terms with all problems as experienced by the women themselves, rather than simply concentrating on water supply. At the very least there should certainly be integration of health education and sanitation improvements. Women's position and status in rural communities could benefit from equitable involvement alongside men in all aspects of improvements to water supplies, but especially in the areas where they have been typically excluded, i.e. planning and decision-making, information and training. Women would also benefit from appointment to positions of authority in connection with the water supply, i.e. on Village Water Committees (VWC), as pump or tap attendants, or as health workers at village level.

4. SWEDISH INVOLVEMENT IN RURAL WATER SUPPLIES IN TANZANIA

4.1. A long history of involvement

Support to the development of domestic water supplies in rural areas has been an important part of Swedish development cooperation programmes in Tanzania since 1965. In the 20 years of this involvement approximately SEK 500 million has been channelled into this sector. (SIDA, 1984) The agreed allocation for 1984/85 is SEK 35 million, which accounts for 8% of the total allocation to Tanzania.

SIDA was the first donor in the rural water supply sector and contributed 70-80% of the total development budget for this sector up until the mid 70s, whereafter 25-30%. (SIDA, 1984) The number of donors involved with rural water supplies has increased significantly so that by 1978/79 there were approximately 16 donors involved in water development projects throughout the country.

The character of Swedish involvement has changed significantly since it was initiated in 1965. Initially assistance was granted on a national basis and included water installations, equipment, buildings, maintenance workshops, vehicles, administrative reinforcement, and education on various levels. A change of direction came at the end of the 70s. SIDA became involved in the preparation of Water Master Plans (WMP) for the three regions around Lake Victoria - Kagera (formerly West Lake), Mara and Mwanza regions. In keeping with Tanzania's new policy to concentrate the external aid programmes in the water sector to specific regions, SIDA's assistance became concentrated in these three regions, and successively most other activities have been phased out.

4.2. Increased interest in involving women

The stated aims of Swedish assistance to the water sector are *"improving the health of the people...and creating better prospects for social development and economic growth."* (SIDA, 1984) The given target groups are the neglected groups in rural populations, especially in more underdeveloped areas - as defined in the strategy for rural development which guides Swedish involvement in rural areas. (SIDA,1981) It is heartening to find clearly spelt out that women and children constitute particularly important target groups, that must be reached *"on account of their special position where the handling and use of water is concerned."* (SIDA:Water strategy. Water supply programmes for rural areas. 1984)

However, the awareness of the need to involve women and of developing concrete strategies for ensuring their participation is a relatively recent development. Attention to women in this traditionally "women's sphere" has been conspicuous by its absence, both at the level of policy statements and at the level of practical implementation. A close study of the previous strategy for involvement in the water sector (SIDA, 1979) reveals that while women's roles in water collection and use, and the possible benefits of improved water supply for women

were mentioned, there was no emphasis on the need to involve them, let alone concrete suggestions as to how to do this. However it is important to note that community participation in general was not given adequate attention at that point in time, so there was a lack of involvement of all members of the community, and not only women.

Following the recognition of women as an important target group, the most recent water strategy also has a well-defined goal to involve women in all aspects, including decision-making, education and training inputs, health programmes, and in undertaking the responsibility for water supplies once installed.

> *"SIDA should strive as far as possible towards reaching those women's groups which can take responsibility for a water installation. Such an aim would promote the participation of women in the decision-making process at the local level and contribute towards increasing the number of women who participate in the educational activities linked to the water programmes." (SIDA; 1984)*

Because of the intimate connection of health/hygiene/sanitation aspects with water supply, the increasing emphasis of the health sector policy on women is also an important development. Recent policy statements (SIDA, 1982) emphasize the importance of women's role in primary health care, child health, nutrition, and water and hygiene. It is particularly positive that attention is given to the need to utilize women's experience and involve them in all levels of the health-care system.

The increasing attention to women at policy level is a positive development. However the translation into practical implementation is more difficult. The water strategy recognizes the constraints to women's participation but indicates one possible means of reaching and involving women, i.e. through existing women's groups. (SIDA, 1984). Similarly the possibility of reaching women and girls through programmes directed to the primary schools is mentioned. There is an urgent need for attention to developing these and other strategies further, and for implementation on a trial basis, before concrete progress can be made in ensuring women's participation. The coming period will be characterized by trial and error. It will be a difficult process because of the many constraints previously identified in this report. There is a need for a whole-hearted committment from the side of SIDA if the well-worded phrases in recent policy documents from headquarters are to mean real changes for women at grass-roots level.

Indeed progress in the water sector as a whole will be increasingly difficult, if not impossible, without the more active involvement of women in all aspects of the improvements. Therefore there may well be ulterior motives in promoting women's participation, i.e. to improve the success

rate of projects. The two motives for involving women can exist side by side, as long as the goal to improve women's situation is always kept in mind as more important in the long run than the goal of ensuring the success of the projects as such. In all probability women would recognize if they were simply being exploited and would reject such moves.

Ultimately what rural water supply projects must be aiming for is not simply the construction of well-functioning water supplies, but social change leading to improved living conditions for the community, and especially for the women. SIDA's committment to women's development is genuine, although it has not yet been clearly stated that one of the objectives of Swedish involvement in the water supply sector is to improve the situation of rural women. SIDA's committment needs to be clearly defined and concretely illustrated by a concerted effort to stimulate the full participation of women in all aspects of the HESAWA (Health through sanitation and water) programme.

4.3. HESAWA: an integrated programme with potential for women?

Apart from the increasing attention to women in Swedish involvement in rural water supply programmes, there are other important changes and developments which are now finding expression in the development of the HESAWA programme in Kagera/Mara/Mwanza regions. As the name itself suggests one of these important changes is that there is more emphasis on real integration of health and hygiene aspects into the water supply programme. Thus sanitation improvements and health education are no longer envisioned as "components" in the water supply programme, but real interaction is aimed for. The emphasis on health and hygiene education is illustrated by the fact that improved hygiene is stated clearly as one of the operative goals of the water supply programme. (SIDA,1984) Attention is given to the aspects of sanitation, waste disposal, and drainage - fundamental aspects which are usually totally neglected in water projects. Similarly the important aspect of "tap to mouth" routes of contamination is emphasized. However there is a significant apparant lack of emphasis on personal hygiene aspects.

Community participation is emphasized by HESAWA as the whole programme is planned on the basis that water supply/health/ hygiene is basically a local matter. As a consequence of this the following long-term goals have been set:

"- *to gradually transfer the responsibility and costs for water supply from the state to the consumers, based on their own priorities, and a reinforced popular participation in the process,*

- *to develop and adapt technical and administrative solutions to facilitate consumer participation and responsibility for costs,*

- *to improve knowledge about the connection between clean water and better health, as well as create the possibility to use this knowledge practically when using water." (SIDA, 1984)*

Considerable emphasis is given to the aspect of felt need and the priorities of the communities involved. Ideally the initiative for the projects should come from the communities themselves. The practical aspects in which the community is expected to be involved include:

- mobilizing interest
- participating in siting, planning and construction of supplies
- contributing financially to investment and operation costs
- being responsible for operation and maintenance
- guaranteeing fair distribution of water (SIDA, 1984)

The planning goal *"that every household in the installation area shall be reached by the improved water supply system"* (SIDA,1984) is a very important fundamental change, especially in the context of the situation in Tanzania today where very few villages receive full coverage of their needs. Such a policy has real potential for ensuring increased health benefits.

Another very important development is the increasing interest in the possibility of achieving benefits through improvements to traditional sources. Since the HESAWA programme has been planned with due attention to current problems in the water supply sector in Tanzania, a great deal of attention is given to operation and maintenance aspects, as well as to the rehabilitation of existing schemes, with the same conditions as for new schemes concerning participation, etc.

In 1983 a consultancy company in Sweden was enlisted to assist SIDA with the implementation of the HESAWA programme. The company, HIFAB International AB, has begun this task. However, since little more than a year has passed and progress in the initial stages is inevitably very slow, it is too early to assess the impact on women. What can be said is that HESAWA has potential for involving women, providing there are concerted efforts to keep the interests of women in the forefront. One way of assessing this, even at an early stage, is to study the documents relating to the programme. In the most recent sector reviews there appeared to have been little (if any) attention given to the aspect of women's involvement, at least judging from the documents which resulted from these joint discussions. (SIDA/PMO/MAJI, 1984a and 1984b) The most concrete evidence that the aspects of women's participation has been considered at all was the "well-worn" proposal that at least two women should be included on water committees at village level, and that one of the scheme attendants elected by the village government should be a woman. Even more disappointing was the total neglect of the issue of women's involvement in the study of strategies for initiating participation in HESAWA. The only evidence that women had been considered at all was the inclusion of the alternative "she" (e.g. he/she) where one would normally always find "he". (IRA/WMPCU, 1984)

More recent documents have shown increasing attention to women. In particular the internal document (SIDA, 1985) gave evidence of concern that women are not yet involved. SIDA must make it very clear to all parties involved- the consultants, the relevant ministries, that the issue of women's involvement is of highest priority, and insist that all that it is possible to do to ensure their equitable participation is in fact actually done.

5. RURAL WATER SUPPLY IN TANZANIA: A SUMMARY OF DEVELOPMENTS

5.1. The target and strategy

In 1971 a 20 year development programme for the rural water supply sector was prepared. The target was formulated as follows: *" a piped water supply will be provided so that by 1991 all Tanzanians will have ease of access to a public domestic water point."* The "ease of access" was defined as a distance of 400 metres. However, following the villagisation campaign in the early 70s, the government was compelled to accelerate the development programme. It was now imperative to provide adequate water supplies to the new settlements. Firstly the promise of improved water supplies was often used as an incentive for resettlement, and the construction of improved supplies thus became a political necessity. Secondly, the resettlement resulted in large population concentrations and the provision of adequate supply became a matter of some urgency because of latent health problems. Thus a second interim objective was proposed in 1975, which was formulated as the provision of *" a source of clean, potable and dependable water within a reasonable distance of every village by 1981, as a free, basic service."*

A series of elaborate and very expensive Water Master Plans (WMP) were prepared for almost all the 20 regions of the country by 9 different donors, as the basis for the 20 year development plan undertaken in 1971. While a great deal of data of value was collected and an overview of the situation obtained through the water master planning exercise, the lack of emphasis on socio-economic and cultural aspects is a great shortcoming. [1] Donor involvement in the rural water supply sector increased after 1972, with most assistance being given on a regional basis, firstly in preparation of the WMPs and then in implementation programmes. The involvement of the various donors in the regions assigned to them is indicated in Appendix 1.

5.2. The progress to date

1. Potential capacity vs actual service

Given the magnitude of the task and the limited resources available, it is not so surprising that the 1981 objective has not been attained. Even with an extension of time to fit the 1991 target set by the UN Decade the achievement of the goal does not seem possible. It is very difficult to assess just what has been achieved in the rural water supply sector in Tanzania to date. Government figures give the percent of the population with access to improved water supply as 39% (1983 Ministry of Water figures). The WHO/IBRD report (1977) gave the figures as around 1/3 of the rural population. However, there are all indications that these figures are too high, as it is

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1. A noteable exception was the WMP prepared for Iringa, Mbeya, Ruvuma regions by DANIDA (URT/DANIDA, 1982 and 1983)

necessary to distinguish between potential capacity of the schemes constructed and the actual service provided. Many schemes are not functioning to capacity, or often not at all. It has been estimated that the construction of new schemes falls far short of the number of schemes falling into disrepair and disuse annually.

There is no reliable statistical data available on the functioning of existing rural water supplies. The ILO report (1982) stated that *"only about one-half of those with potential access to improved water appears actually do benefit from the systems in existence."* This fact was recognized by MAJI [1] when it was stated at the annual conference of regional water engineers that 50% of all schemes in the country were not functioning to design capacity. (URT/MAJI, 1978) The studies carried out in connection with the WMPs in the various regions recorded generally low reliability and functioning of the improved supplies. Evaluations and sector studies carried out after the completion of the WMPs reveal that the overall performance of the improved supplies is still very poor in meeting the needs of the rural population.

Few surveys at the national level have been carried out. An inventory in 1975 (Engström and Wann) indicated that 98% of all projects were still in running condition mechanically but that at least 40% were affected by the fuel shortages. It was estimated that 20% of the rural population had piped supplies- of which 70% were diesel-powered. As much as 50% of supplies were overpopulated in relation to design capacity, which was related to mass population moves as a result of villagisation. A problem was identified in the fact that only 5-6 regions had any regular maintenance of pumps or engines. This lack combined with the severe problems experienced with fuel supplies after 1975, must account for the rapid deterioration of the situation with regard to operation of rural water supplies.

By 1980, when it was estimated that schemes had been built to supply more than 25% of the rural population, 80% of schemes relying on diesel were not functioning. (Andersson, 1980) The situation today is even worse as fuel shortages are chronic. Experience from many regions indicates that only pumped schemes in district centres receive somewhat regular supplies of diesel. All other diesel powered schemes are not functioning.

The impact of partial failure of schemes should also be mentioned. It has been pointed out that though the schemes as a whole may be functioning, several taps may be broken or the pressure at certain points may be so low as to cause excessive queueing and force many potential consumers to revert to unimproved sources. (URT/DANIDA, 1982)

The functioning of shallow wells with handpumps is also far from problem-free. Experience from Singida, Shinyanga and Mtwara/Lindi indicate serious problems

1. MAJI is Kiswahili for "water" and is used to refer to the Ministry of Water, Energy and Minerals.

with reliability. In 1981 it was reported that in Masasi District 350 of 400 wells had dried up after a very short time. (Andersson et al, 1981) While this is an extremely drastic example, and efforts have been made since to remedy the situation, it gives a good illustration of the problems experienced. In a more recent evaluation of the Finnish programme in Mtwara/Lindi it was admitted that many of the handpump wells have to be classified as "seasonal", *"being unreliable sources of water supply during the dry season, either becoming completely dry or having inadequate yields such that people have to wait to fill buckets or they can only obtain water in the morning."* (Finland, 1984) Figures made available in the same report indicated that in the dry season of a normal year about 50% of handpump wells have insufficient yields, and thus cannot guarantee adequate supplies of water for the community. In a recent study in Shinyanga region, the level of service of improved supplies was revealed to be as low as 10% because, in addition to the fact that no diesel-fueled schemes were working, 40% of shallow wells were out of order. (Andersson,1982)

Dodoma region is one area in Tanzania with serious water problems. In 1982 a study by UNDP/FAO revealed that 59% (248 of 421) villages had improved supplies, and that most of these were functioning unsatisfactorily. A more in-depth study in one district in the region provided evidence that the functioning of improved supplies was poor. Of 33 water supplies visited, 22 were out of order.(Mujawahuzi, 1977) According to design figures these improved supplies were supposed to be serving more than half the population of the district. This illustrates how important it is to distinguish between hypothetical availability and actual service.

On the basis of the reports and evaluations available, it is probably correct to assume that the percent of population actually served with water from improved supplies is much less than the official figures of around 39%. Blandwaardt and Tielens (1981) estimated that a more accurate figure for the percent of population served with MAJI operated piped supplies would be 15%. However this figure may be much lower because of the chronic fuel shortages.

2. Problems of non-utilization of operational supplies

While the figures quoted above are negative enough in themselves, the actual situation in terms of the percent of population actually benefitting from the improved supplies is probably even worse, since many operational schemes are not being fully utilized. Statistics on utilization are virtually non-existent.

> *"With the exception of a few area studies not enough information appears to be available to permit more than a speculation about numbers of people who actually use the systems that are fully operational. These studies show that the percentage of people benefitting from the facilities range from 25% to 75%."* (ILO, 1982)

Studies carried out in Singida region (Andersson and Hannan-Andersson, 1984) revealed that not all those considered potential beneficiaries of functioning schemes were actually utilizing the improved sources. Sometimes the schemes were rejected altogether, or they were utilized for some uses and in some seasons only. It appeared that the most crucial factor was the failure of the "improved" supplies to improve accessibility. An in-depth study in one village in Shinyanga region (a village with extremely high coverage of 12 handpumps) it was revealed that only 60% of the population used the improved sources.(Andersson, 1982). A study by Ausi (1979) in Shinyanga also revealed the same tendency. Kauzeni and Konter (1981) found that of 30 villages surveyed in Morogoro region, 26 still relied on traditional sources, despite the availability of improved supplies. In Iringa/Mbeya/Ruvuma regions, because of weakness in the planning process primarily in relation to suitable locations, there was very low useage of operational schemes in some areas. (URT/DANIDA, 1982)

The aspect of utilization is important as the non-utilization of operational schemes lowers the percent of population actually benefitting from improved supplies even further. In the absence of reliable statistics, an estimate of the percent of population actually benefitting from operational improved supplies must be as low as 5% in many regions- a far cry from the official figure of 39%. On the basis of this figure it is obvious that a re-evaluation of the whole situation in the rural water supply sector is urgently needed.

5.3. The main problems identified

The poor performance in the rural water supply sector has been linked to

a) the non-functioning of many schemes, for a variety of reasons including shortage of diesel, poor maintenance

b) the non-utilization of operational supplies, which can be related to lack of information and motivation and/or poor planning.

If these two factors are analysed further it is realized that the failure can be largely attributed to:

1. inappropriate technology choice
2. neglect of operation and maintenance
3. lack of community participation
4. failure to involve women

In the past there was a tendency to emphasize other causes, for example the lack of trained personnel, lack of foreign exchange for spare parts, vehicles, etc, and the general shortage of financial resources. However the importance of the four factors listed above has now been recognized by the government and external donors, and some measures are being taken to rectify the situation. Thus the ILO study (1982) commends *"recent governmental changes in orientation"* which included increased emphasis on rehabilitation of

existing schemes, operation/maintenance aspects, and a move towards more simple technology - in particular shallow wells with handpumps.

1. Inappropriate technology choice

In the early stages of developments within the rural water supply sector there was emphasis on construction of large-scale schemes with sophisticated technology. The trend towards diesel-powered pumped supplies was very evident. Problems of fuel shortages and problems relating to poor maintenance and operation have resulted in the non-functioning of almost all these schemes. Gravity schemes have fared better in terms of reliability. However financial resources and physical conditions prohibit the application of this technology type in many parts of the country. Gradually the capital intensive technology has given way to more appropriate technologies based on popular participation in the form of self-help labour.

Wells with handpumps is the low-cost alternative technology which has received much attention in Tanzania. Implementation has been on a relatively wide-scale in Shinyanga, Morogoro and Mtwara/Lindi regions, and to a lesser extent in Mwanza, Tanga and Singida regions. However, as indicated in the previous section the functioning of shallow wells is far from guaranteed. There are serious problems with reliability and maintenance has been neglected. Studies in Singida and Shinyanga indicate that the impact of shallow wells with handpumps has been very limited, and the most appropriate level of technology - one which will allow for maximum attainment of benefits- has not been reached with handpumps. (Andersson and Hannan-Andersson, 1984; Andersson, 1982)

A problem with all the technology types utilized is that financial constraints limit the implementation on a wide enough scale to allow the improved supplies to compete with traditional sources in terms of density and location. However recently there has been some emphasis on the possibility of improving all traditional sources with simple low-cost methods. Such a solution is not a new concept in Tanzania. As early as 1970, when the 20 year development plan was being worked out the need for low-cost technology was admitted, and the possibility of improving traditional sources was mentioned. (Rimmer, 1970) However, in reality the emphasis was always on pumped piped supplies. As far as it is known there has been no effort to improve traditional sources. Therefore the increasing emphasis (at least in theory) on this aspect in the HESAWA programme is very positive.

2. Neglect of operation and maintenance

Lack of emphasis on operation and maintenance is a major cause of the non-functioning of many supplies, including shallow wells with handpumps. Up until 1977 almost all efforts were concentrated on development of new schemes, with few arrangements made for the continued operation and maintenance

of the schemes constructed. The result was a disastrous level of inefficiency. However maintenance is now widely recognized as an all-important variable in the success and efficiency of water supplies, and efforts are being made to ensure adequate maintenance procedures are incorporated in all projects.

One problem in Tanzania has been the lack of resources - financial and otherwise, to set up an efficient organization for maintenance. Even with the low-cost technology type, handpumps, there has been a need for a centralised, complicated and expensive organization since maintenance has been relegated to the regional level. Thus the operation and maintenance has been plagued by problems relating to the system established - lack of a functioning communication system, lack of transport, lack of spare parts, lack of committed maintenance officers, and unnecessarily long delays in actually doing something about the problems.

Because of the general lack of community participation in improved supplies, the general feeling among the communities is that water supplies belong to the government and it is their responsibility to maintain them. With large piped schemes the personnel charged with maintenance and upkeep have been employed by MAJI, and have had no real responsibility to the local community. In many cases they have been "outsiders" in the community. In this kind of situation poor operation/ maintenance is not surprising. Unless more emphasis is put on involving the communities in a meaningful manner in the development of the water supplies, and giving them a sense of ownership and responsibility, maintenance will continue to be a serious problem.

3. Lack of community participation

Although more and more research points to the fact that it is the scant attention paid to the "human factors", and the failure to involve people in their own development, which results in the non-impact of development projects, water supply projects have been characterized by neglect of socio-cultural aspects. There has been an inbalance in the attention given to technical and economic factors. The failure of efforts in the water supply sector is certainly tied to the fact that there has not been enough concentration of efforts to involve the consumers. There has been much theorising on the necessity for increased participation, but few practical recommendations as to how to achieve it. As a result, far too often even today the most expected (or permitted) of those to benefit from the improved supply is unpaid labour for digging trenches or wells. Not only have the consumers been excluded from effective participation in planning and decision-making, but there has been a serious lack of information/promotion concerning the improved supplies, and especially concerning the health aspects of water supply.

In a study in 1975, Tschannerl and Muhawahuzi reported that in many cases initiative for improved water supplies came from the local people. It may be true that the demand or request for improved water supplies originated from the community, but evidence would suggest that the involvement

of the communities typically did not progress much further than that level. Apart from requesting assistance, the only involvement normally has been in providing labour for the construction phase. Even this was organized in a non-participatory manner, in the sense that there were no discussions on what the communities were willing and able to contribute. They were simply told what they were expected to do. (URT/DANIDA, 1982) There has been no involvement in planning or decision-making on, for example, the type of improvement possible, the location of supply points, or how to best maintain the supply. MAJI has had the main responsibility for planning and implementation. Since community participation was not considered necessary nor desirable, the procedures used do not facilitate the involvement of the villagers. The technical staff viewed their function primarily as the provision of technical expertise. This was considered something the communities lacked and consultation was therefore felt to be unnecessary. There was also a disparaging attitude towards the views of the villagers. (URT/DANIDA,1982)

As an illustration of the extent of the lack of participation, in one village in Singida region many of the villagers were not aware of what the planned improvements were, even when the surveys were underway. (Hannan-Andersson, 1983). A similar situation was reported from Iringa/Mbeya/ Ruvuma where, in many cases, surveys and initial construction were carried out without any prior discussions with the communities. (URT/DANIDA, 1982) Although data available from other areas of the country is sporadic and unsystematic, there are indications that the situation is similar, i.e. an almost complete lack of meaningful participation in water supply improvements.

Thus there has been an extraordinary lack of participation in the days of concensus on its necessity, and in a social environment with an ideology of self-reliance and self help. There has been a tendency to regard holding discussions with the village leaders as involving the communities. However there is increasing awareness of the need to involve all the consumers, and even the women! In some regions, noteably those supported by the Nordic donors, there have been attempts to develop procedures to ensure increased community involvement.

The main strategy employed to stimulate increased involvement of the communities in the improvement of their water supplies has been the establishment of Village Water Committees (VWCs) as a means of increasing involvement in planning and decision making, as well as ensuring two-way communication.To facilitate involvement in operation/ maintenance and to stimulate increased responsibility at village level, scheme (tap or pump) attendants are recommended. The appointment of site (tap or pump) caretakers is aimed to stimulate the taking of responsibility for the upkeep and general hygienic conditions around individual pumps or taps. To ensure adequate maintenance at village level, training programmes have been initiated for the elected/ appointed attendants and caretakers. Special promotion coordinators at regional level have been appointed (or

are planned) in all the Nordic programmes. In addition there have been attempts to establish new categories of fieldstaff to facilitate participation, in particular the involvement of women. The areas in which least has been done to date are sanitation and health education, although an interesting pilot project using Village Health Educators (VHEs) was carried out in Mbeya region. [1]

As a result of the limited experience with real community participation, some general conclusions can be drawn. Firstly, in spite of the many practical problems which have emerged with all the strategies attempted, it appears clear that increased community participation will have a positive effect on the success rate of projects. Especially increased involvement in planning, for example in the location of sites, leads to increased acceptance. One important conclusion concerns the necessity to carry out the improvements at a pace which allows for active involvement in planning and decision-making. At present the pace is too fast for real discussion and deliberation at village level, and some groups- especially the women, get left out in the process. There is also a need for real coordination and integration of the efforts of the three government bodies involved in water/ health/sanitation and community development, i.e. AFYA, MAJI and MAENDELEO. [2] The promotion of the ideology of participation in these three bodies is crucial for the success of participation efforts. This may involve some "re-training" for staff at different levels, and particularly fieldstaff. Finally it is very obvious that a definite strategy is required otherwise the anticipated benefits of participation will remain purely hypothetical.

4. Failure to involve women

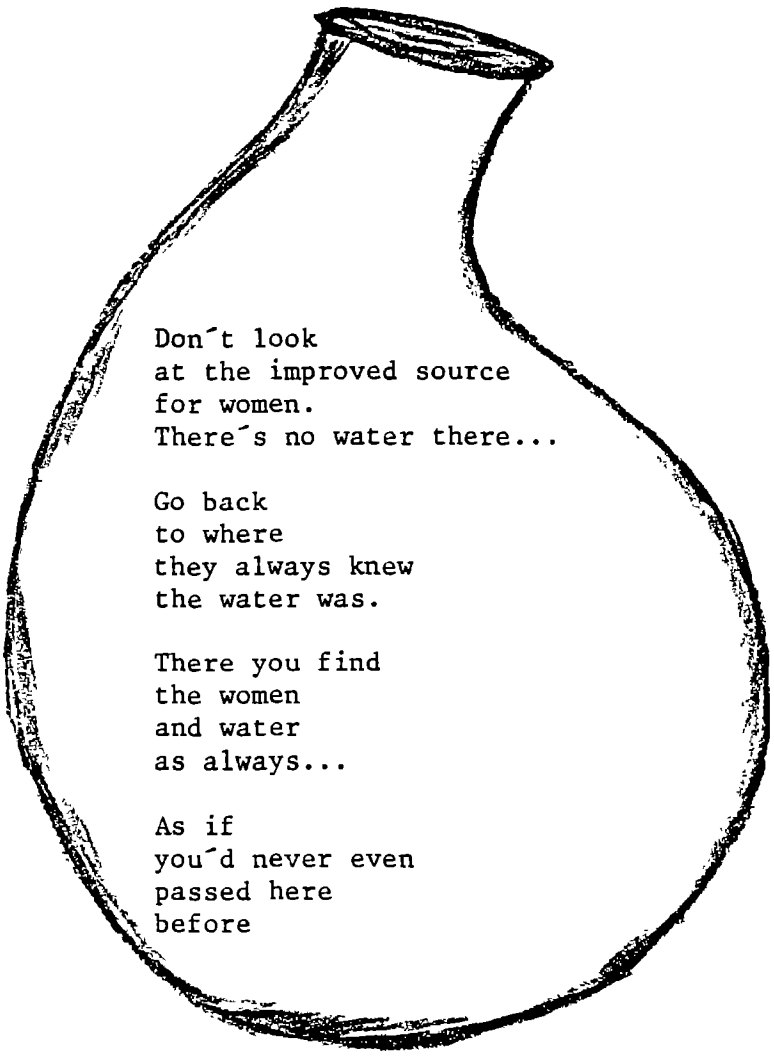
Another very important reason for the low level of success of water supply projects to date must be the failure to involve women. Although water collection for domestic use is wholly women's responsibility and burden, women have been almost completely ignored. As a result of the exclusion of women from planning and decision-making many mistakes have been made resulting in the failure of projects- either because the supplies have not functioned or because they have been rejected by the women.

For example there is evidence that failure of water supply projects can be attributed in many cases to lack of contact with women concerning the suitability and acceptability of the locations and sources of water. An example is found in the PMO/IRC (1983) study in Shinyanga and Morogoro regions, where one water supply was rejected completely because its source was a river where people usually bathed. If the women had been asked about the location they would never have accepted the river as a source. Similarly in Singida region, water supplies have been rejected

1. Nkhoma, Alice G. and Laubjerb, Kristian. 1982.
2. AFYA refers to the Ministry of Health and MAENDELEO to the Community Development Department in the Prime Minister's Office.

because the water in the wells is considered too salty. The women in these areas knew very well that this water would never be acceptable as drinking water, but their opinions were never asked. The involvement of women in planning and decision-making is important because although the design issues which will be improved through their participation are minor in their engineering or financial consequences, they are of major importance *"in their potential effect upon acceptance and correct use of the new facilities."* (Feachem, 1981)

The result of this lack of attention to women in terms of the benefits attained, and overall effect on women's situation will be discussed at greater length in the following section.



Don´t look
at the improved source
for women.
There´s no water there...

Go back
to where
they always knew
the water was.

There you find
the women
and water
as always...

As if
you´d never even
passed here
before

6. THE IMPACT OF IMPROVED WATER SUPPLIES ON WOMEN

6.1. The limited impact to date

The constraints to satisfactory progress in the rural water supply sector described in the previous section, have led to a situation which is not positive for women. The impact of water supply improvements carried out to date can, at best, be described as limited. In the majority of cases the impact would have to be assessed as non-existent, and in a few cases there are possibilities of negative effects. What is certainly true is that, as described in the village below, most women are back at the traditional sources, even after the villages have received improved water supplies.

> *"... once again the women and children are to be seen laughing and chatting at the well or by the stream, and carrying clay pots of water on their heads back to the family compound, scarcely noticing the abandoned standpost as they go." (Burton, 1979)*

6.1.1. The achievement of benefits?

One way to assess the impact of improved water supplies on women is to evaluate the achievement of the intended benefits as described in section 3. The attainment of these benefits is, however, very difficult to measure. Before any impact can be assessed the functioning and utilization of the improvements must be assured. (WHO,1983) As the previous section indicated both the functioning and utilization of improved supplies in Tanzania today leaves a lot to be desired. In a situation where as little as 5% of the rural population may be utilizing operational improved supplies, the overall impact of assistance to this sector can only be said to be very slight.

a) Improved convenience leading to increased productivity:

In terms of improved convenience, there is a very small percentage of rural women who are experiencing varying degrees of a reduction of time and effort in water collection. However, if the improved supply is not more convenient than traditional sources, in all probability these women are not using the improved source continuously throughout the year. There has been very little research done on these aspects. Some limited experience from Shinyanga[1]. and Singida[2]. regions indicates that the improved supplies are usually not closer to the households than the traditional sources.

> *"On average the improved water supplies are over 700 metres from houses which is often greater than the distance to the traditional sources in villages served by the project. Only a minority of households benefit from the shorter water collection journey." (URT/ADAB, 1984)*

Scarcity of resources in Singida region led to the situation (not untypical for other parts of Tanzania) where only 2-3 wells

1. Ausi, 1979; Andersson, 1982
2. URT/ADAB, 1984; Andersson and Hannan-Andersson, 1984; Hannan-Andersson, 1984

were provided per village. Evaluation of the situation indicated that this was completely inadequate. *"Overall, an insufficient number of improved supplies have been provided to improve access for the majority of households in most villages." (URT/ADAB, 1984)*

Queueing at the improved sources was also considered a problem by the women, and resulted in many of the women returning to the traditional sources rather than face long waits at the improved source. The practice of providing so few wells per village resulted in increased scope for favouring particular groups within the village and the decision on location became political. (URT/ADAB, 1984) In such a situation women's priorities and preferences receive little attention. Given the inadequate access and poor performance of the supplies installed, the majority of households still rely on traditional sources for domestic water. (Andersson and Hannan-Andersson, 1984) From the point of view of the women improved accessibility is the highest priority, and thus the failure of the water supply programmes to substantially improve convenience is a serious problem.

Increased involvement in "productive" activities, leading to increased productivity and general wellbeing is difficult to discuss in the context of the water supply programme in Tanzania today. It could only be a meaningful topic for discussion if there was an adequate improvement to both convenience and health conditions. There is very little data collected on this aspect in Tanzania (or indeed in any other country involved in similar rural water supply programmes). Some small-scale studies revealed that women who do use the improved supplies usually do so just because of convenience improvements, and thus there are some savings of time for them. In a study in Singida region, an attempt was made to discover what this saved time was used for. The activities mentioned were agriculture, firewood collection, grinding, housework and collecting wild vegetables. These are all tasks which women have too little time for at present. Only one woman mentioned having used the time to start a new activity. To branch into something new is difficult for women as they usually lack the resources which are necessary, e.g. land, capital, knowledge/skills, etc. It was pointed out that the time saved by the women was not used for resting or taking care of children - two areas which are (or should be) important priorities where women and children are concerned. When women were asked how they would like to spend free time as many as 71% mentioned rest, 8% visiting neighbours and 3% mentioned care of children. This probably gives a better indication of what free time would ideally (from the women's own point of view) be used for. (Hannan-Andersson, 1984). However the constraints of the unequal gender division of labour means that women are forced to use any free time to carry out the many tasks allotted to them which they normally do not get time to complete in a satisfactory manner.

In discussions on increasing women's involvement in "productive" activities there is often evidence of a serious misconception, i.e. that women's reproductive activities such as cooking, cleaning, care of children, collection of firewood, and even water, are non-productive. Such

activities are highly productive. In fact it is the work of women in these areas together with the inputs into agriculture which ensure the very survival of rural households in Tanzania today. Any freed time channelled into reproductive activities is well invested. It should also be remembered, as pointed out earlier, that encouraging women to invest saved time in agriculture and income-generating activities may be only leading to increased exploitation. Since women already carry an excessive share of the burdens in agriculture, and they may not have sufficient control over any income they generate, increased involvement in these areas cannot be correctly interpretated as "benefits" for women.

In terms of increasing production in agriculture, which is certainly necessary in Tanzania today, the potential of the impact of improved water supplies does not seem high. The time saved by use of improved supplies is usually only of significance in the dry season, since this is when most women actually do use the improved supplies - when there are no traditional sources sufficiently convenient. Agriculture is primarily a wet season activity and thus the saving of time in the dry season will not have great impact on productivity levels in agriculture.

b) Improved health through increased quantity/improved quality of water consumed

Because of the inadequate coverage of village needs (in terms of density and location of improved supplies) and the poor functioning of the supplies installed, health impact could only be expected in a small percentage of households. Unfortunately, because of the neglect of health education and sanitation aspects, and the failure to provide adequate information and motivation on the correct use of improved supplies, there appears to be very little impact on health. Studies from many different part of the country provide evidence that water-use patterns (including the quantity of water used) remain the same.[1] Thus the only possible health impact would be on the water-borne faecal-oral diseases. The non-water borne faecal oral, water-based, water-washed and water-related insect vector diseases remain unchanged.

The assessment of health benefits is made difficult by the fact that not all households use the improved sources exclusively. Some use traditional sources for some purposes and at some times of the year. It is also difficult to utilize the health statistics which are available at primary health care facilities, since there is no record made of type of water supply used by households, or if the households have their own latrine, etc. In Singida region a study, based on a very small sample, revealed that there was no significant difference in health problems experienced by those households who claimed to use the traditional sources when they were working and those who utilized the traditional sources. (Hannan-Andersson, 1984) Similar findings were made by another evaluation in the same area. (URT/ADAB, 1984)

1. URT/ADAB, 1984; Nkhoma and Laubjerg, 1982; Hannan-Andersson, 1982, 1983, 1984) Kirimbai and Van Wiki, 1983

In some cases it can even be presumed that new health problems in relation to water supply have been created. These are related to the belief that water from improved supplies is automatically "safe". There is therefore a risk that less care is taken with such water, due to a lack of understanding as to what can happen to "safe" water on the perilous journey "from tap to mouth" There is also a problem in the face that whereas women never washed clothes close to sources for drinking water (there were often separate sources for different uses), there is an increasing tendency to utilize improved sources for both activities.. Women appear to believe that the cement aprons on shallow wells are impermeable as they can be seen washing themselves and clothes on the aprons. This indicates the extreme importance of information and health education. It also illustrates the importance of basing planning on the existing practices and needs of women. If women have always washed clothes near the source, it is both pointless and unjust to expect them to carry water to their homes for this purpose. The women will simply reject such regulations as they create an additional burden for them. Construction of washing facilities at a suitable distance from the improved source would solve this problem.

c) Increased involvement of women leading to improved status:

In terms of increasing the involvement of women and improving their status the progress has been very poor. In spite of the fact that water collection, use and management is increasingly recognized as entirely "women's business", women have been consistently excluded from all dialogue about the priority of improved supplies, the possible improvements, the implementation, and arrangements for operation and maintenance. Unfailingly they have been involved in any self-help construction activities, but they have not always been reached with the necessary promotion or instructions about the proper use of the improved supplies, nor with adequate water-related health education.

Far from helping improve women's situation, water supply improvement programmes have probably had some negative impact on women's position and status. This is due to the fact that when "development" comes to a community through improvements to water supplies - regardless of whether the improved supplies ever work or not - the men in the community are exposed to new ideas and technology, and are involved in training programmes which give them new information and skills, and new contacts outside the community. If they are involved as paid attendants or caretakers there is also an increase in cash income. Thus with the advent of new technology and impulses from outside, men are willing to enter a traditional "women's sphere" and to monopolize any resources made available. Gender roles change in the sense that men now become the "managers" of the new supplies and women become mere "consumers". Thus women's new dependency relationship with men can only be termed a negative effect. Not only are women denied access to the new resources, but the existing inequality between men and women can actually increase as a result of improvements to water supplies. The question raised in this context is whether the few benefits (if the supply actually works regularly) in terms of reduced burden and some slight health improvement, are worth this price for women's overall development.

6.2. A hypothetical case: the benefits for women illustrated

A study of improved water supplies in three villages in Singida region (Hannan-Andersson, 1984) would suggest the following hypothetical village situation to illustrate typical impact on women.

In village X, with a population of 2000 people in 300 households, 2 wells with handpumps are installed. This means that, theoretically, each well is to serve 1000 people or 150 households. However, since the village is scattered, it is impossible to find locations which are suitable for all households. Therefore half of the households will never use the wells. Thus the number of potential beneficiaries is immediately reduced to 150 households. Given the lack of attention to informing and mobilizing the community which results in the misuse and/or inadequate maintenance, the handpumps break down after a short time. One pump is repaired again after a long delay, but the second is left unrepaired because of a lack of spare parts. Again the number of possible beneficiaries is reduced - to 75 households or 500 persons.

Since the convenience for half of these households is not very significant, and during the wet season there are plenty of traditional sources more conveniently placed, these households will only use the well for a few months of the year when there is no other water source closer. Thus the population which uses the well continuously over the year, and has therefore some chance of benefits, is now only around 38 households or 250 persons.

Because of other factors such as long queues at the well during peak collection periods, conflicts between some of the households, etc., around 5 of these households use the well irregularly, i.e. only when there is no waiting and/or no likelihood of conflicts. Another 5 households use the well for some household uses only, for example water for cooking and drinking. They continue to use the traditional sources for personal bathing, washing of clothes and dishes. Thus they have reduced possibility of health benefits.

There are now only approximately 27 households (or 180 persons) utilizing the well at all times for all uses. What are the benefits for these households and the women collecting and using the water?

As far as improved convenience is concerned, only about 10 households have better access to the improved source than to other traditional sources, so that it actually involves benefits in this respect. The other 17 households using the well have to pass some traditional sources. They do so because the distance is not too much greater, and they are attracted by what they believe to be better water quality.

In terms of health benefits the situation is even less positive. A few households are using water of better quality but because there has been no health education related to the water supply improvements, and no sanitation improvements, the impact is limited. The women and their families continue with the same patterns of water use and personal/ environmental hygiene, and thus the impact on the health situation can only be slight. There are health problems related to the improved supply because the women take their washing to the well (as they have always done) but the waste water flows back into the well, which leads to pollution risks.

Since only 10 households had any improved convenience, there are only possibilities for the women from these households to, in theory, utilize time saved to increase "productive" activities. However some of these women are pregnant or have infants which means they need any saved time for rest and child-care. Perhaps 5 women do try to go to the fields (which are now- since villagisation- up to one hours walk from the household) but because they are tired, over-worked and under-nourished, their inputs are far from highly productive.

Women's participation in the process of change involved in the development of the water supplies was minimal. Women received very little information on what was happening. Some attended a village assembly where the water supply was discussed, but no-one asked their opinion and they did not dare to contribute without being asked. Some of the women were also sent by their husbands to contribute the labour share of the household in digging the wells. Since it was a relatively "progressive" programme, two pump attendants were appointed by the village council. Both of these were males. Once installed these men did little to ensure the sanitary conditions around the wells were maintained, nor to provide the actual users of the source, the women and children, with correct information on use or necessary changes in water-use and hygiene patterns.

According to official statistics, Village X has received improved water supply and is marked off the list as "covered". Since it is highly unlikely that anyone will ever visit the village to check on the functioning of the water supply, it will be presumed that all improvements are functioning well and being utilized as intended. It will also be presumed that women are experiencing improved convenience and a lessening of work burden, and that the community in general is benefitting from improved health. Since the involvement of women and resulting improvement to their position and status in rural areas has never been a well-defined goal, this aspect would not be considered at all.

In reality life goes on in Village X as always. The majority of women are back at the traditional sources and their situation has hardly changed at all. The only benefits are relatively insignificant savings of time for 10 households. There are no health benefits and no impact on productivity and well-being.Impact on women's position and status in the community can only be described as NIL.

6.3. Reasons for the lack of impact

In summary it can be said with certainty that the impact of improved water supplies on women in Tanzania has been very slight, even after 20 years of donor involvement. There are few benefits for women and little catalytic effect on women's development. The possibility that women's situation relative to men has deteriorated in the process is extremely negative. Some of the main reasons for the failure to achieve positive impact on women's situation are given below.

- the generally low success rate of projects in terms of functioning and utilization, leading to non-achievement of benefits.
- the almost total neglect of health and sanitation aspects
- the planning of improvements in complete isolation from the real needs of the women
- the non-involvement of women in the improvements carried out, apart from as self-help labour in construction.[1]

All of these factors can be related to the fact that there has never been a well-defined goal to improve women's situation or status through improvements to water supply. Until this goal is clearly defined and women's involvement is given high priority, there will be no attempt to develop concrete strategies for stimulating their participation on equal terms with men.

The fact that women have been neglected almost totally is an indication of another problem - a sometimes complete lack of knowledge of the realities at village level. The lack of an adequate knowledge base on the position and status of women,

1. More recent efforts to rectify this situation will be treated in section 7.

including the gender-based division of labour, means that women and their problems are largely "invisible" to planners and administrators, and evidently also to donor groups. An adequate knowledge base on the concrete situation of women in rural communities is a key to the success of all development programmes, including improvements to water supplies.

The inappropriateness of technology choice has also had implications for the involvement of women. Because a high-level technology type was introduced into rural water supplies, men were considered the obvious targets (by the men in leadership positions in the village and by all the men in the project teams) for all training and positions of authority. With the recent trend towards less complicated technology types - including even improvements to traditional sources- there are increasing possibilities for women to participate. There are few new skills or resources involved, and probably few positions of authority emerging from such a strategy, and men will probably be less likely to want to monopolize the process. Women's links with traditional sources are well established, and they have a wealth of knowledge and experience which can be utilized by the project. Their effective participation in planning, implementation, and operation and maintenance can be facilitated. The men can hardly be opposed to women's active participation in improvements to traditional sources, since the improvements are to a resource already existing and utilized by women.

The shortage of female personnel at all levels within the ministries means that women's issues are never brought to the fore. At village level there are few women who can ensure that women are present at meetings and can support their more active participation. This is a situation which requires urgent rectification, through positive discrimination in training programmes at all levels. The female staff which currently exists should be identified and utilized to the full to promote women's participation.

7. RECENT EFFORTS TO INVOLVE WOMEN

Generally speaking it can be said that at the beginning of 1985 - halfway through the decade - very little attention has been given to women's involvement in spite of increasing calls for the same at international level. The involvement of women is very difficult, largely because of women's traditionally subordinate position in rural societies which effectively hinders their involvement in any developmental activities. On the other hand it would be incorrect to simply blame the lack of involvement of women on traditional attitudes in Tanzania. There has been a lack of a conscious objective on the part of donor agencies and national government ministries to reach and involve women. Since women are not considered special targets, there have been no concrete strategies developed to facilitate their involvement.

However, it is necessary to point out that there has been, in the last few years an increasing awareness of the necessity to involve women in order to maximize the attainment of benefits. Efforts are being made in Tanzania to develop ways and means of motivating and supporting women to participate more actively. Progress has been slow. There is a need for a great deal of experimentation to overcome the constraints to women's involvement. To date most efforts to include women more effectively have been largely concentrated to the regions with programmes supported by the Nordic donors.

7.1. Involvement of women in the Nordic supported programmes

The DANIDA supported programme: Iringa/Mbeya/Ruvuma regions

The main efforts for women to date have been made in these regions. This is related to the fact that the WMP emphasized socio-economic data, and as a consequence special attention was given to women and their roles. Pilot projects stimulated women's involvement in VWCs and as health promotors, and valuable experience was gained in this manner. Since the implementation began as recently as February 1984, there has been no evaluation made. Thus the information provided here is based largely on the socio-economic study in the WMP and the pilot projects, and mainly concerns the participation of women as members of VWCs and as attendants. Little is known about the overall participation of women.

Women in VWCs:
The involvement of women on the VWCs has not been easy. Initially when the members were elected by the village leaders, women were only elected after persistent pressure from the project group. Finally measures were taken to ensure that 50% of members were women, using what is termed as "positive discrimination". Even when women were elected to the VWCs there were obstacles to their effective participation. When MAJI staff had meetings with the VWCs they tended to ignore the women and address themselves to the men. Women seldom voiced an opinion. (URT/ DANIDA, 1983) It was also reported

that women's attendance in the VWC was poor. However closer investigation revealed that this was a result of male opposition to women's participation. The women members were simply not informed when the committee should meet. (Nkhoma, 1982)

In general the role of VWCs has been ineffectual. There has been some success with planning aspects, i.e. location of domestic points and design of laundry facilities. However the VWCs were generally less successful with dissemination of information to other villagers, organization of labour and maintaining hygenic conditions around the sites. (URT/DANIDA, 1982) The communication between the VWC and the rest of the villagers, especially the women, was poor. In a study in one village it was revealed that most women did not know that such a committee existed, let alone its functions. It was further reported that the women on the committee were particularly frustrated. Apart from the general lack of support to the VWC, the female members did not feel recognized as legitimate members. (Nkhoma, 1982)

In Mbeya region a form of positive discrimination using female extension workers was experimented with. During the first VWC meetings the female extension worker was present to support the female members and make sure they were given a chance to voice their opinions. She also tried to ensure that members reported back to the other villagers about the committee activities. After three months it was felt that the women committee members were more confident during the meetings.

> *"The very presence of the female extension worker seems to have a positive impact on the behaviour of the women members of the village committee as well as on the MAJI field staff." (URT/DANIDA; 1983)*

There appeared to be a predominance of "independent" women amongst those chosen as members of VWCs in Mbeya region. Many of the women were either divorced, widowed, single or married to migrant labourers. Which meant that these women had an advantage in that they did not have to contend with the suspicion and hostility of husbands. The participation of married women would appear likely to *" remain problematic as long as attitudes do not change and as long as the division of labour between the two sexes remains unchanged." (Nkhoma, 1982)*

The opposition to female participation in VWCs in these regions is documented in the socio-economic studies and in the pilot projects. Even when women are elected there are many effective means of limiting their role, from not informing them when meetings are to be held, ignoring them during meetings to the more drastic form of opposition used by husbands- threats of physical abuse. (Nkhoma, 1982, and URT/DANIDA, 1983)

Scheme attendants:
The rationale behind appointing women as scheme attendants is that women are more likely to be truely concerned with the functioning and upkeep of the schemes. In schemes where MAJI staff had the responsibility for organizing village inputs,

all the scheme attendants were men. Therefore pressure was brought to bear on the VWC to elect two attendants- one male and one female. Problems were experienced with the participation of married women, especially concerning their receiving permission from their husbands to attend maintenance training. (URT/DANIDA, 1983) There were problems with organizing adequate compensation for the attendants. It was suggested in the socio-economic study that if the village government would not compensate the attendants regularly that women should take the position on a voluntary basis, since they have a vested interest in a well functioning water supply. (URT/ DANIDA, 1983) However the ideal situation would be that the village guaranteed regular compensation for both male and female attendants, so that women are included in this category on an equal basis with men.

Training of women:
Attempts are being made in Iringa region to have all training at village level to facilitate the involvement of women. Some women showing potential in the programme have been sent to training institutes in the country for further training. While these women are theoretically "lost" to the project in the sense that they can be sent to work anywhere in the country, it is possible to have them seconded back to the programme. More practical would be the development of a training programme for suitable female candidates which caters for the specific needs of a water/sanitation/health programme.

The NORAD supported programme: Rukwa/Kigoma regions

The emphasis on women's involvement has not been as evident in the NORAD supported programme, in spite of the fact that there is considerable interest in women's issues in development assistance at headquarters level within NORAD. The increasing interest in women's involvement is evidenced by the publication of guidelines for involving women in water supply programmes. (NORAD, 1984). However this strategy has only recently been published and there are signs that the interest in women is increasing at the level of practical implementation.

The strategies employed to involve women are similar to those utilized in the Danish supported regions. Women are involved in self-help labour (alongside men) in construction activities, digging trenches, carrying pipes and refilling trenches. They are also included in VWCs though their involvement here is recommended rather than obligatory. Women are involved as scheme attendants . Unfortunately training is still largely away from the village, which limits the possibilities for women to be involved.

Positive experience has been gained in the programme in Rukwa through the training of women as plumbers. These women are part of the implementation team and their presence must have an impact on women in the village. The use of local women as "promotors" has proven very effective. These women know the local conditions and language, and they are accepted by the women in the villages. They have been able to present the programme in a meaningful way to the local communities, and have been very effective as agents of motivation and mobilisation.

Another positive development is the emphasis on community participation and health/sanitation aspects in a project to be run by a Norwegian NGO. While the project description does not give any special emphasis to women as such, it is to be hoped that the project will be developed in a manner which gives women a real opportunity to participate.[1]

FINNIDA supported programme: Mtwara/Lindi regions

Women's involvement in improvements to water supplies, and the impact of these improvements on women in the Finnish programme has recently been evaluated. (Toivola, 1983; and Kivelä, forthcoming.) These reports indicate that the involvement of women has been very limited. Toivola places special emphasis on the fact that there has been little attention to women from the very start of the programme. Women have hardly warranted a mention in any of the numerous reports produced on the programme, even in the most recent evaluation from 1984.[2] The first special mention of women is in an evaluation report from 1981 - after nearly 10 years of implementation. (Toivola, 1983) The claim is made that the serious lack of attention to women must be related to the predominance of males among the planners, researchers and implementators in this programme.

Toivola reported that the lack of women's participation is not surprising given the general lack of community involvement.Women were only consulted for information on where they collected water, and they were involved in self-help construction activities. There were no women members of coordination groups, or among counterparts, and no women were trained as pump attendants. (Toivola, 1983) On-the-job training with a mobile team made it completely impossible for women to participate.

However some positive developments have taken place since 1983. A female expatriate maintenance officer has been appointed and steps have been taken to facilitate the involvement of women in training programmes. A village-based maintenance organization has been established which makes possible the training and appointment of women as pump attendants. (Finland, 1984) It has been recommended that a strategy for improving community participation be worked out and a Promotion Coordinator engaged. (Finland, 1984) Hopefully this will lead to increased involvement of women in planning and decision-making. This could be facilitated by the planned revision of the WMP, when it is expected that additional socio-economic data will be collected. (Finland, 1984) While the establishment of VWCs has been recommended, according to the latest evaluation there are still no VWCs formed. (Finland, 1984) Thus the community as a whole lacks a forum for voicing their opinions.

1. See: Norwegian Church Aid, 1984
2. See: Finland, 1984

SIDA supported HESAWA programme: Kagera/Mara/Mwanza regions

As pointed out earlier, the HESAWA programme is still in a very early stage of implementation and not much progress has been made with actual construction of water supplies. Therefore evaluation is not realistic. However the trends towards involving (or excluding) women should be discernable even at this early stage. Emphasis on women in the WMP was not noticeable. However the implementation of improvements to water supplies in these regions has diverged considerably from the original plan proposed. And there are several positive trends from the point of view of women in the direction taken by the programme.

As indicated previously there is increasing attention being given to women's issues in project documents. However there is still a lack of emphasis on women's involvement in the programme discussions and sector reviews with the relevant ministries in Dar es Salaam. At the regional level efforts are being made to include women in the "Task Force". This group normally includes the Planning Officer, Water Engineer, Health Officer, and Community Development Officer at regional level. In Kagera and Mwanza regions the Community Development Office is represented by a woman, while in Mara region it was necessary to appoint the Officer for Women's Affairs to ensure that women's aspects are kept to the fore.

The emphasis on health education and sanitation right from the start of the programme is a positive aspect. Working through the Village Health Workers (VHWs) one of whom will be a woman, appears to be a good strategy, especially since efforts are being made to bring the training closer to the women - at least to the Division or Ward level. It has also been recommended that the proposed Health Education Specialist in the programme should be a woman.

When forming field promotion teams (with representatives from MAENDELEO, AFYA and MAJI) the Promotion Coordinator attempts to involve the female officer with responsibility for women's and children's affairs in the Community Development Department. This is a worthwhile strategy since it is these women who have close contact with the women's groups which are already in existence, and with UWT groups.

Because of the difficulties in one Promotion Coordinator being actively involved in all three regions, the position of Promotion Coordinators will be established in all three regions. A Tanzanian woman has been employed on a trial basis in Kagera region, and it is hoped that other women can be found for the remaining regions.

The HESAWA committees at village levels (similar to VWCs) have 6 elected members of whom 3 are always women. Women are also encouraged to become pump caretakers. To this end efforts are being made to bring the training to the village level. Previously the holding of the 5 week course at District level effectively excluded women.

7.2. Involvement of women in other programmes

A cursory study of other programmes in the rural water supply sector revealed that little attention has been paid to women. This of course has to be related to the general lack of involvement of the community as a whole. There is, however, evidence of increasing emphasis on women's roles in water supply development in all the donor supported programmes.

In the UNICEF supported programme in Wangingombe (Iringa region) there does not appear to have been any special emphasis on women in the improvements to water supply and sanitation. However UNICEF is now supporting a nutrition programme with emphasis on women and children in the same area, and links are being made with water supply, sanitation and general health improvements. [1].

The Dutch supported programmes in Shinyanga and Morogoro appear to have neglected the aspect of community participation, and women have not been involved at all. Participation has been described as "nominal", with the normal involvement being through attendance at a general village meeting where such aspects as most suitable site, need for clean drinking water and the importance of using the improved supply in a proper manner, etc, were discussed. (DHV Consulting Engineers, 1980)[2]. However there appears to be a change of direction underway. Positive experience has been gained through cooperation in a PMO/IRC joint pilot project on community participation. [3].

Initially the Australian supported programme in Singida region (The Tanzanian Village Water Development Project) did not give any special attention to women's roles and involvement. However in the early 80s it was evident that a more integrated approach to water supply improvements was needed, and the importance of involving women was emphasized. In 1982 a Rural Development Advisor was appointed to the programme, with the task of providing basic data of relevance, and developing a strategy for a more integrated approach, increased participation (also of women), and maximization of benefits. To facilitate these tasks a social survey team was formed, consisting of two surveyors and two female assistants. This group formed an advance team for project activities and their duties included obtaining basic data and negotiating with village members. Women's Surveys were also carried out in selected villages to obtain information on water-use patterns, health patterns, and attitudes concerning health, hygiene and sanitation. The objective of these surveys was to develop methods for involving women in the planning stages. Following the surveys meetings were held with the village government to discuss the water use and needs of the village. According to an evaluation of the programme, this procedure provided a

1. A similar programme "Accelerated Child Health and Survival through Basic Services" is planned for Kagera region. The focus is on women as mothers and attention will be given to water supply and sanitation
2. See also Ausi, 1978; and White and Kerkhoven, 1981
3. See White and Kirkhoven, 1982; PMO/IRC, 1983

mechanism for the representation of women's views in the location of improved water supplies. (URT/ADAB, 1984) However the fact that there were few VWCs established and that the few pump attendants who were trained (at the time of the withdrawal of the donors from the programme) were all men, was not positive for women's involvement.

7.3. General conclusions on strategies to involve women

The experience gained on the strategies utilized for involving women to date is summarized below. Areas which have been neglected are indicated and possible measures for improving the situation are suggested.

7.3.1. Strategies utilized to date

1. Women as members of VWCs

In areas where women have been elected to VWCs (with the village government being either persuaded or forced to include them) there have been problems in getting the women to take up the positions and participate actively. Opposition of males, especially as husbands, has hindered women's involvement. Even if women have been permitted to participate, social expectations have limited the extent of participation. It is obvious that training inputs and support from female extension staff are necessary if women's presence on VWCs is to be more than mere "tokenism". Another point of relevance is the fact that very little is known about the tasks the VWCs actually perform in the different regions. Without such knowledge it is impossible to assess the impact of women's participation on these committees.

Although it is highly likely that in the foreseeable future women's role on VWCs will be very low key, it is nevertheless important that they are represented, as it does mean an increase of status for women, as well as a means for women to keep informed on what men are deciding and doing about domestic water supplies, an area which has traditionally been women's domain. For this reason it is considered correct strategy to apply positive discrimination and make the election of 50% women on such committees obligatory, despite the risk of male opposition.

Another factor of extreme importance in involving women in VWCs is the necessity to avoid recruiting only women from the higher levels of village hierarchy. In all probability the women who would be most suitable to the males in the community are the wives of the elite among the men- either the traditional elite or those holding political positions. This may lead to jealousy and hostility among the less-well-off women, since such elite women cannot be expected to adequately represent the interests of the poor women in the community. On the other hand, the poorer, less articulate women may have no possibility to assert themselves in a group. Women with higher social status, although also subordinate to men, have had access to other resources, more stimulus from outside, and are often quite experienced in directing the labour of men and other women. (Nelson, 1981). What is important is that it is not naively

assumed that there is a natural solidarity among all women in rural communities. There is inequality and conflict even among the women.

2. Women as pump/tap attendants and/or site caretakers

Women have been hindered from taking positions as pump/tap attendants, either because of their husbands' opposition or because the holding of training programmes at District or Regional level has prohibited their involvement. The trend towards holding training programmes in the village is very positive for women. It makes it easier for women to get permission to attend, and eliminates the problems of child-care and arranging for someone to take care of the women's duties while they are away. The timing of such courses even when held at the village level is crucial as there would be no possibility for women to participate in peak agricultural periods.

The suitability of women for the position of site caretaker, (especially when it is unpaid !) appeared to be well accepted in the rural communities.

3. Use of female fieldstaff

There has been some experimentation with the use of local women extension officers to motivate and mobilize the communities. The need for increased female staff at all levels is urgent, but especially at village level since all-male project staff will inevitably have difficulties in effectively involving women in water projects. The appointment of female fieldstaff could, as experience from Mbeya region suggests, ensure that village women feel more at ease in public discussions. Hopefully women staff members would identify with village women and thus make a greater effort to involve them. This may, however, not always be the case as the negative attitudes which have prevailed towards peasants in general and women in particular, may also be held by better-educated "town" women. (Nelson, 1981) Training of fieldstaff - both males and females, in community development ideology and methodology and particularly in the aims of reaching all women, is crucial. For the female fieldstaff it might also entail training in asserting themselves in all-male groups.

Such female field staff should be involved in an advance team which would prepare the communities for the improvement of their water supplies. Their work would thus include basic data collection and consultation with the villagers (and particularly the women) at the planning stage. They would also have an important role to play in health education aspects and follow-up activities.

4. Promotion officers/coordinators

To facilitate the participation of the communities promotion coordinators or community participation officers (to date nearly all expatriates) have been appointed in the Nordic supported regions. Use of local women, who are conversant with the situation facing women in the different areas (and where possible the local language) would be ideal in terms of promotion and mobilization of women. However it may be only in the distant future that such qualified women are

available. A long-term strategy could be to select women with potential in the programme to work as counterparts with the promotion officers. In the course of their work they could be trained in the ideology and goals of the programme and successively be given more responsibility for promotion activities.

7.3.2. Areas which have been neglected

1. Stimulating the involvement of all women

There has been a noticeable lack of efforts in stimulating the involvement of all village women. It is important to be aware that the election of women on VWCs and as attendants or caretakers is not the end of women's participation. The strategy must not be confused with the goal. The overall objective is to reach all women with information and promotion, and to involve them as fully as possible in all aspects of the improvements. All of the measures described previously are (or should be) geared to promoting the increased involvement of all village women. Other measures should also be sought to promote this involvement.

For example efforts should be made to encourage the attendance of women at village assemblies. Means of supporting women in this respect could be:

- ensuring that the meetings are at suitable times for women
- ensuring that women are informed of the meetings
- arranging for interpretors to translate important points into the local language if women do not know Kiswahili well
- arranging breaks in the meetings to allow for information to be given to the women and to test their response
- appointing spokespersons for the women (female or male) if it is found that the women themselves cannot voice an opinion in such meetings
- attendance of female extension officers to support women
- arranging child-care if necessary

Another method of involving all women would be the calling of all-women meetings where the project is presented to the women and their opinions and suggestions sought. The women's point of view elicited in this manner could be presented to the general village assemblies if it is impossible to get women to speak at village assemblies. Another method used successfully [1]. would be to make certain of the general assemblies "Women's Days". At these meetings only women are allowed to speak and present their views. Experience has shown that such meetings are successful from the point of view of the women, but they are very difficult for the men who find it almost impossible to keep quiet and listen to the women. [1].

As a means of counteracting some of the problems which will be experienced in involving women in village meetings and in VWCs, a Women's Promotion Group could be established from the very start of the project. This group should consist of 5-10 members (one from each "area" in the village) chosen

1. Used in attempts to get information on women's situation for the development of the RIDEP plan in Mbeya region. (Mbilinyi, 1982)

democratically by the women, These women should be observors at all discussions, including those with the village leaders and the VWC, and would have the responsibility to report back to the women in the areas they come from. They should be involved in all aspects of the planned improvements, and would endeavour to ensure that "their women's" voices were heard, i.e. that the suggestions of the women are actually raised and given adequate attention.

Use of all existing women's groups - traditional groups, church groups, and the national women's organization UWT, should be experimented with. The possibilities of using traditional dance and drama groups should also be investigated. In such activities women from all categories can be included, and poorer women- if encouraged sufficiently- could perhaps be able to assert themselves, since talents in these fields have no relation to status and educational standards. Presentation of information and motivation using this media might have widespread appeal among all village members, including children. Drama groups from the schools could also be encouraged to perform for adults.

All existing groups and institutions should be utilized to ensure maximum involvement of and impact on all women in the community. Such groups could include religious bodies, adult education groups, all health facilities such as MCH clinics, dispensaries. Primary schools could be utilized by designing programmes for primary level which are indirectly targeted towards the mothers of the children. Use of rural newspapers, local religious periodicals, and perhaps the radio could be considered.

Promotion and mobilization from village to village might be a good method of initiating requests for assistance in new villages. Following the completion of improvements to water supply and sanitation groups from the village - such as the Women's Promotion Group and dance and drama groups - could be encouraged to go to neighbouring villages to promote interest in the programme by describing the experiences in their own village. Promotion among women peasants is probably very effective when done by other women peasants who have similar experiences and can best describe real benefits the programme may have had for them.

2. Health education and sanitation

There has been a serious lack of attention to health and sanitation aspects. This has implications for women in terms of failure to achieve health benefits. If more attention were given to health aspects of water supply, for example the "tap to mouth" route of contamination of water, care of water supply sites, personal hygiene, and general environmental hygiene, women would appear to be the most obvious targets for information and motivation efforts. In this manner their involvement in the water supply programmes could be increased. However as pointed out earlier in this report, the ideal situation would be where the health and sanitation inputs are targeted to men and women as equal members of the community. The female VHWs could also be effectively involved in the programme.

8. NEED FOR A WELL DEFINED GOAL AND A CONCRETE STRATEGY

8.1. The goal defined

It should not be so surprising that women have been uninvolved in water supply improvements, or that benefits to women have remained hypothetical rather than real, since there has never been a well-defined goal to reach and involve them, nor a specific focus on women as an essential target group. The increasing attention to women in water supply and sanitation programmes is largely due to a growing awareness of the fact that women's involvement is crucial to the success of projects, especially since there is now general recognition that domestic water supplies is a "women's sphere". It is clear that the efforts made to involve women are, in many cases, based on the practical goal to improve the success rate of water supply projects and maximize benefits. The achievement of this goal would, of course, be of value to women. Nevertheless it would be more positive for women if the attention being given to women was based on a clear objective to create equality between men and women. This latter objective is essential if water supply improvements are to fulfill the goal of improving the living conditions of one of the poorest groups in rural societies, i.e. the women. Since women's under-privileged position in rural communities is largely a result of the gender-based power structure, any efforts for women in rural areas must focus on establishing a more equitable distribution of power and resources. Otherwise projects such as improved water supplies are simply treating the symptoms and not coming to the root of women's problems.

Thus as well as aiming to achieve the concrete benefits for women of reduced burden and improved health, water supply projects should also have the objective to improve women's position and status in rural societies, through involving them on equal terms with men. This must be a well defined goal on the part of SIDA and other donor agencies. It must be clearly stated in all programme documents and made an issue for discussion in all negotiations with the relevant ministries, at all levels. The annual sector review should also give adequate attention to this aspect.

Obviously the full and equal participation of women, alongside men, in a community development programme, will not be easily achieved. Women's subordinate position and lack of involvement in development processes is not yet a priority issue in Tanzania. It is likely to be considered a somewhat peripheral aspect in the water programme. Initially any pressure from donors will probably be dismissed as a "western" preoccupation. Women have been effectively excluded from development activities to date, so progress will inevitably be slow, despite the best of intentions. Efforts for women will have to contend with all-male policy making bodies, male administration, male village leadership, males with higher qualifications than women, more men in the labour force, and many more men already involved in

developmental activities. *"Thus good intentions face an immediate set of disadvantages not usually calculated for."* (Wiley, 1981)

What is important is that SIDA is determined to make women's involvement a high-priority issue in the HESAWA programme being implemented in Kagera, Mara and Mwanza regions. Women's involvement must be pushed in the programme right from the initial stages, since it is very difficult to try to involve women once the programme is underway. By that time approaches and routines are established which may be very difficult to change. Experience has shown that if the participation of women is recognized as necessary when a programme has been underway for some time, the strategy usually adopted is to add a "women's component" to the main programme. This is rarely successful. Women should be an integral part of the programme, on equal terms with men, and not treated as a marginal group in need of special treatment.

8.2. A concrete strategy developed

The efforts made for women in the rural water supply sector are a relatively recent phenomena. As yet there is little evidence of support from within the concerned ministries. There are indications of a lot of opposition from males at the local level. It is therefore very important that a concrete strategy is developed to ensure that some real changes are made. Some of the measures which could be used in developing such a strategy are discussed below.

- learn from the experience to date
- experimentation
- encourage and support appointment and training of female staff
- establish an adequate knowledge base on women
- develop an appropriate overall strategy
- practise "positive discrimination"
- promote a positive image of women's role in the programme

Learn from the experience to date

As discussed in section 7 there is increasing interest in women's involvement, and efforts are being made in some programmes in Tanzania today. It would be positive if more exchange and cooperation between donor agencies involved with rural water programmes could be established. Exchange on efforts made, problems met, etc could be fruitful for all donor groups. One method of stimulating exchange would be to visit the areas where most is being done to involve women. Another possibility would be arranging a small workshop for those practically involved with this work in Tanzania today, eg. the programme officers from the relevant donors, promotion coordinators, and those involved in research on these issues. If representatives from MAJI, AFYA and MAENDELEO were invited, it would be a means of indicating the committment SIDA and other donors have to increasing the participation of women.

Experimentation

Since women are not normally fully involved in development efforts there are no well-established guidelines and routines for ensuring their involvement. The coming period will probably be characterized by trial and error. It is important that there is an openness to try all possible methods. The workshop suggested previously could assist by providing an up-to-date inventory of what has been tried in different areas, and what the successes and failures have been. It would probably be beneficial to carry out pilot projects in the three regions where HESAWA is being implemented, which will concentrate on developing methods to increase women's participation. Such projects could be carried out by persons outside the consultancy firm, and could be a complement to the efforts of the promotion coordinator. These pilot projects could emphasise the areas where least experience has been gained-in methods for involving all village women; use of existing women's groups; use of female field staff.

Encourage and support the appointment and training of female staff

An increase of female personnel is necessary at all levels within the ministries if there is to be increased support to women's participation, and the necessary policy changes. Women are needed at higher levels of authority, but also very importantly at the village level as extension staff. Those women already involved should be identified and given support. SIDA could, through special training programmes, scholarships, etc, support the appointment and training of women personnel at all levels. Because of women's general lack of access to education, and lack of self-confidence related to their overall subordinate position, women project staff will probably need a lot of encouragement and practical support. Some women may even need in-service training to up-date skills, and perhaps even leadership training.

At village level training is also the key to real involvement of women. It is not enough to appoint women to VWCs and to positions such as pump attendants, without giving them the resources necessary to make a success of the tasks assigned them. Training will prepare women for the new roles, as well as better equip them for the roles they have traditionally had regarding domestic water supplies. Leadership training is also essential for these women. To date such training given to village women has been in a vacuum. Here now is the ideal situation - to train women who are actually being given a role in community affairs. UNICEF, UWT, PMO and CCT (Christian Council of Tanzania) are already involved in such training programmes. The resources available, especially at such institutions as Buhare and Rungemba, should be investigated and utilized as far as possible. New courses with special relevance to water, health and sanitation should be developed.

Establish an adequate knowledge base on women

Even if there is a lot to learn from the experiences to date, it is important to keep in mind the socio-cultural differences between regions in Tanzania which have implications for the development of a suitable strategy. It would appear that one of the biggest failings of all water supply projects (and many other types of developmental projects) is the lack of sufficient knowledge on the concrete realities of the communities in the areas where the programmes are being implemented. When it comes to the role and status of women, the information base is almost non-existent. Programmes usually have a lot of relevant information on physical conditions and general socio-economic situation, but there is a need for a lot more "grassroots" information on how people live from day to day in the rural villages - what they actually do, and what attitudes, values and expectations they have. Without such an information base it will be very difficult to bring about behavioural change.

It should be clear that detailed information on the habits, attitudes and values of women concerning water, sanitation, hygiene, nutrition, child-care, etc, is essential baseline data, and yet such very basic information is usually lacking. Since water/health/sanitation problems are only one aspect of the total situation in a rural community, it is essential to have adequate information on all problems, and the villager's own perceptions of them, in order to design an effective programme. Women's perceptions are of special significance because of the key roles they play in domestic water supplies.

Obviously information on the living conditions in rural communities today, and the perceptions of the people themselves, can only be obtained through carrying out surveys, etc. However there is a wealth of material available in previous research, and especially in socio-anthropological studies. An important first step is an inventory of socio-cultural material available on the three regions, especially of material with relevance for health, sanitation and water supply. Ironically this is something which should have been done in the initial stages of the WMP, but which has been neglected through all phases of the programme up to today. The pilot projects for involving women suggested previously, should also include an inventory of all material of relevance on women's situation in the ethnic groups involved in the programme.

Develop an appropriate overall strategy

One of the most important aspects for ensuring the involvement of women must be that the overall strategy in the programme is an appropriate one. Changes which are impractical or incompatible with existing patterns of living will be immediately rejected. Above all, the proposed "improvements" must offer real advantages to the women, i.e. advantages as perceived by the women themselves. As pointed out earlier, improved convenience has highest priority for women. In fact it is the most crucial objective for the success of the water supply improvements. The failure of improved supplies

to compete with traditional sources in terms of convenience, i.e. adequate density and location of supply points, has led to the non-utilization, and thus the failure, of improved sources. The strategy to improve traditional sources would appear worth developing and experimenting with. Chances of acceptance and success of the improved supplies would be increased for the following reasons:

- more compatible with traditional patterns
- more compatible with economic realities
- more possibilities for community involvement, especially for women
- more possibilities for improving sources for non-domestic purposes
- improved rate of implementation, because of decreased dependence on outside inputs
- ease of maintenance

If utilization can be assured there are improved possibilities for attainment of the objectives of improved water supplies. In addition there are other positive aspects for women with such a strategy. The fact that technological innovations will be low-key and low-cost means increased possibilities for women to participate. Men would be less likely to monopolize the projects since there are few new skills or resources involved. And men are less likely to be opposed to women's participation since the improvements are to resources already existing and utilized by the women.

Practise "positive discrimination"

Forcing the issue of women's involvement through "positive discrimination" will certainly be necessary in the initial stages of the programme, until women have developed the necessary self confidence to assert themselves in community life without extra support, and men have come to accept women's participation in community life as their right. 50% of HESAWA committee members should always be women. One of the caretakers should also be a woman. Efforts should be made to ensure the female VHW receives the support she needs. When appointing new staff to the programme, where possible, women should be appointed. Contact should be established with women in prominent positions in the regions, and attempts made to secure their interest and involvement in the programme. In workshops and training programmes, etc, where qualified women are not selected by their heads of departments, efforts should be made to ensure their attendance- if necessary through special personal invitations.

Promote a positive image of women's role in the programme

Positive promotion of women's role can be done through the appointment of women to positions of authority - at village level in the VWCs and as caretakers - and at all other levels where some influence can be exerted. Experience has shown that the presence of women in positions with some status has a positive effect on women at village level. Another means of promoting a positive image of women's potential is to depict them in the poster series used to promote HESAWA in roles other than as consumers. Most poster series show women collecting water or demonstrating

their appreciation as the improved supply is officially "opened" by some prominent male. It is quite possible to depict women instead as health workers, as members of VWCs, and even as surveyors. But to date all skilled, status positions would appear - judging by the pictorial representation - to be exclusively male. A similar practical aspect is the fact that efforts to dissemination HESAWA have included t´shirts printed with the HESAWA emblem. Such t´shirts obviously never get distributed to the women. Women could be reached with information if HESAWA khangas were printed, with a positive depiction of the responsible roles women can play. Increased involvement of women is dependent on the awareness both men and women have of the role women are expected to play. Small practical measures, such as those described above, can be used to promote a positive image of women in the programme.

Bibliography

Andersson, Ingvar 1980
THE DEVELOPMENT OF WATER SUPPLIES IN TANZANIA. A STUDY OF THREE REGIONS, KILIMANJARO, SHINYANGA AND MWANZA REGIONS, Lund, Sweden. 22 p. (Mimeo)

Andersson, Ingvar 1982
WELLS AND HANPUMPS IN SHINYANGA REGION, TANZANIA, Dar es Salaam: BRALUP, 65 p. (Research Report No 77)

Andersson, Ingvar and Hannan-Andersson, Carolyn 1984
DEVELOPMENT OF DOMESTIC WATER SUPPLIES IN SINGIDA REGIONS, TANZANIA. PAST EXPERIENCES AND FUTURE OPTIONS, Dar es Salaam: IRA. 56 p. (Research Report No 62)

Andersson, Ingvar et al 1981
PROCEEDINGS OF THE WORKSHOP ON THE INSTITUTIONALIZATION OF THE SHALLOW WELLS PROGRAMME UNDER TANZANIAN ADMINISTRATION, Dar es Salaam: BRALUP. 12 p. (Research Paper No 71)

Ausi, Hilda 1979
RURAL WATER SUPPLIES AND REGIONAL DEVELOPMENT: A CASE STUDY OF SHINYANGA WELLS PROGRAMME IN BARIADI DISTRICT, SHINYANGA REGION, TANZANIA, The Hague: Institute of Social Studies. 171 p. (MA Thesis)

Ausi- Gondwe, Hilda 1983
WOMEN'S PARTICIPATION IN RURAL WATER SUPPLY DEVELOPMENT PROJECTS IN TANZANIA.
In: Falkenmark, M and Lundqvist, J. eds. 1983 op.cit. pp. 137-150.

Blankwaardt, B. and Tielens, N. 1981
INTRODUCTION TO THE WATER SUPPLY DEVELOPMENT IN TANZANIA, Dar es Salaam: Organization of Netherlands Volunteers. 25 p. + annexes.

Burton, Ian 1979
POLICY DIRECTIONS FOR RURAL WATER SUPPLY IN DEVELOPMENT COUNTRIES. (AID Programme Evaluation Discussion Paper 4)

Cox, Stephen and Shildon, Annis 1982
COMMUNITY PARTICIPATION IN RURAL WATER SUPPLY.
Grassroots development 6(1) 1982:4

DHV Consulting Engineers 1980
NATIONAL SHALLOW WELLS PROGRAMME, Holland.

Engström, J.E. and Wann, J.E. 1975
INVENTORY OF RURAL WATER SUPPLY PROJECTS IN TANZANIA. AUGUST TO DECEMBER 1975, Dar es Salaam: SIDA. 13 p.

Falkenmark, M. and Lundqvist, J. eds. 1984
WATER FOR ALL. COORDINATION, EDUCATION, PARTICIPATION, Linköping, Sweden, Department of Water in Environment and Society. 279 p. (Tema V Report 9)

Feachem, Richard G. 1978
DOMESTIC WATER SUPPLIES, HEALTH AND POVERTY. A BRIEF REVIEW.
Water Supply and Management Vol 2 1978:357-362.

Feachem, Richard G. 1981
COMMUNITY PARTICIPATION IN APPROPRIATE WATER SUPPLY AND SANITATION TECHNOLOGY: THE MYTHOLOGY OF THE DECADE.
Development Research Digest No 5, Summer 1981:37-44.

Finland, Ministry of Foreign Affairs 1984
TANZANIA: MTWARA-LINDI RURAL WATER SUPPLY PROJECT. REPORT OF THE EVALUATION MISSION MARCH 1984, Helsinki: Finnish International Development Agency. 63 p. + annexes

von Freyhold, Michaela 1979
UJAMAA VILLAGES IN TANZANIA. ANALYSIS OF A SOCIAL EXPERIMENT. London, Heinemann.

Geiger, Susan 1982
UMOJA WA WANAWAKE WA TANZANIA AND THE NEEDS OF THE RURAL POOR.
African Studies Review XXXV(2) June-Sept 1982:45-65

Hannan-Andersson, Carolyn 1982
WOMEN, WATER AND DEVELOPMENT IN A PARE SETTLEMENT, TANZANIA, Dar es Salaam: BRALUP. 119 p. (Research Report No 52)

Hannan-Andersson, Carolyn 1983
THE IDEAL VS THE REALITY: HEALTH BENEFITS OF IMPROVED WATER SUPPLY. HOW TO BRIDGE THE GAP?
In: Falkenmark, M and Lundqvist, J eds. 1984, op.cit. pp. 181-202.

Hannan-Andersson, Carolyn 1984
DEVELOPMENT OF DOMESTIC WATER SUPPLIES IN SINGIDA REGION. THE REALITIES FOR VILLAGE WOMEN, Dar es Salaam: IRA. 86 p. (Research Report No 63)

ILO 1982
BASIC NEEDS IN DANGER. A BASIC NEEDS ORIENTED DEVELOPMENT STRATEGY FOR TANZANIA, Addis Ababa. 416 p. (Report to the Government of Tanzania by a JASPA - Jobs and Skills Programme for Africa - Basic Needs Mission)

IRA/WMPCU 1984
RURAL WATER SUPPLY, SANITATION AND HEALTH EDUCATION PROGRAMME FOR THE LAKE REGIONS. PRINCIPLES AND PROCEDURES FOR COMMUNITY PARTICIPATION, HEALTH EDUCATION AND SANITATION, Dar es Salaam. 24 p. + annexes.

Jellicoe, Marguerite 1978
THE LONG PATH. A CASE STUDY OF SOCIAL CHANGE IN WAHI, SINGIDA DISTRICT, TANZANIA, Nairobi: East African Publishing House. 364 p.

Kauzeni, A. S. and Konter, J.H. 1981
INSTITUTIONALIZATION OF A SHALLOW WELLS PROGRAMME UNDER TANZANIAN ADMINISTRATION.
In: Andersson, Ingvar et al, 1981, op. cit.

Kirimbai, Mary and van Wijk, Christine 1983
PROJECT FOR THE DEVELOPMENT OF A COMMUNITY PARTICIPATION COMPONENT IN THE TANZANIAN RURAL WATER SUPPLY PROGRAMME. IMPACT OF WATER SUPPLY ON HYGIENE IMPROVEMENTS IN RURAL TANZANIA. A STUDY IN 8 VILLAGES IN MOROGORO AND SHINYANGA REGIONS, Rijswijk, Holland. IRC and PMO, Tanzania. 50 p.

Saunders, Robert J. and Warford, J.J.
VILLAGE WATER SUPPLY: ECONOMICS AND POLICY IN THE DEVELOPING WORLD, Baltimore: John Hopkins University Press, for the World Bank, 1976. 279 p. (A World Bank Research Publication)

SIDA 1979
STRATEGI FÖR LANDSBYGDENS VATTENFÖRSÖRJNING OKTOBER 1979, Stockholm: Industribyrån. 75 p.

SIDA 1981
SIDAS STRATEGI FÖR LANDSBYGDSUTVECKLING, Stockholm: Lantbruksbyrån. 34 p.

SIDA 1982
SIDA´S HEALTH SECTOR POLICY, Stockholm: Health Division. 14 p.

SIDA 1983
INDUSTRIBYRÅN SEKTORSRAPPORT 1983 LANDSBYGDENS VATTENFÖRSÖRJNING, Stockholm. 9 p.

SIDA 1984
WATER STRATEGY. WATER SUPPLY PROGRAMMES FOR RURAL AREAS. DOMESTIC WATER SUPPLY, HEALTH EDUCATION, ENVIRONMENTAL HYGIENE, Stockholm. 29 p.

SIDA 1985
FORTSATT STÖD TILL TANZANIAS LANDSBYGDSVATTENPROGRAM 1985/86 - 1987/88, Dar es Salaam. 15 p.

SIDA/PMO/MAJI 1984a
REPORT FROM THE JOINT SEWDISH TANZANIAN RURAL WATER SUPPLY SECTOR IN TANZANIA FEBRUARY 1984, Dar es Salaam 44 p. + annexes.

SIDA/PMO/MAJI 1984b
AGREED MINUTES, Dar es Salaam.

Toivola, Anja 1983
WOMEN IN DEVELOPMENT: THE CASE OF FINNISH AID TO TANZANIA, Helsinki: Helsinki School of Economics, Department of Sociology. 112 p. + annexes

Tschannerl, Gerhard and Mujawahuzi, Mark R. 1975
IMPACT OF RURAL WATER SUPPLY. EIGHT SELF-HELP SCHEMES IN AMERU, MASASI AND LUSHOTO DISTRICTS, Dar es Salaam: BRALUP. 56 p. (Research Paper No 37)

UNDP/FAO 1982
MULTIPURPOSE WATER DEVELOPMENT IN TANZANIA. PROJECT FINDINGS AND RECOMMENDATIONS, Rome. 20 p.

URT/ADAB 1984
EVALUATION OF THE TANZANIA VILLAGE WATER DEVELOPMENT PROJECT. FINAL REPORT, Canberra.

URT/DANIDA 1982
WATER MASTER PLANS FOR IRINGA, RUVUMA AND MBEYA REGIONS. SOCIO-ECONOMIC STUDIES VOLUME 12, Copenhagen: BRALUP(Dar es Salaam) and CDR (Centre for Development Research).

Kivela, Merja 1985 (forthcoming)
WOMEN AND WATER TECHNOLOGY: THE CASE OF FINNISH WATER PROJECT IN TANZANIA. Helsinki: Institute of Development Studies, University of Helsinki.

Mascarenhas, Ophelia and Mbilinyi, Marjorie. 1982
WOMEN IN TANZANIA. AN ANALYTICAL BIBLIOGRAPHY, Uppsala: Scandinavian Institute of African Studies. 256 p.

Mbilinyi, Marjorie 1982
WOMEN IN RURAL DEVELOPMENT OF MBEYA REGIONS, Mbeya: Regional Commissioner's Office. 104 p. + annexes. (Prepared for the URT/FAO Mbeya RIDEP Project)

Mujawahuzi, Mark R. 1977
A SURVEY OF RURAL WATER SUPPLY IN DODOMA DISTRICT, Dar es Salaam: BRALUP. 71 p. (Research Paper No 57)

NORAD 1984
NORADS HANDLINGSPLAN FOR KVINNERETTET BISTAND (NORAD's Plan of Action for Women-oriented Development Assistance), Oslo. 52 p.

Nelson, Nici, ed. 1981
AFRICAN WOMEN IN THE DEVELOPMENT PROCESS, London: Frank Cass. 136 p.

Nkhoma, Alice G. 1982
WOMEN AND PARTICIPATION: OBSTACLES TO THE INVOLVEMENT OF WOMEN IN THE WATER PROJECT IN UTENGULE, MPOLO AND MAPOGORO, MBEYA REGION, Dar es Salaam (Prepared for DANIDA). 52 p.

Nkhoma, Alice G. and Laubjerb, Kristian. 1982
HEALTH EDUCATION AND WATER DEVELOPMENT. THE EXPERIMENTAL HEALTH EDUCATION PROJECT IN UTENGULE VILLAGE MBEYA, Dar es Salaam, (Prepared for DANIDA) 63 p.

Norwegian Church Aid 1984
COMMUNITY PARTICIPATION/HEALTH EDUCATION PROJECT (CPHEP) RUKWA, TANZANIA. PROJECT DESCRIPTION/PLAN OF OPERATION, Oslo. 14 p. + app.

PMO/IRC 1984
WATER, SANITATION AND VILLAGE HEALTH: A COMMUNITY ORGANIZATION AND PARTICIPATION APPROACH IN TANZANIA. 17 p.
(Paper prepared for the interregional seminar on Women and the International Drinking Water Supply and Sanitation Decade (IDWSSD) held in Cairo from 12-16 March 1984)

Peterson, David and Peterson, Thadd 1980
THE VILLAGE PROFILE EXERCISE. BACKGROUND INFORMATION, IMPRESSIONS AND PERCEPTIONS, Arusha: APVDP

Rimér, Olle and Associates 1970
TANZANIA RURAL WATER SUPPLY DEVELOPMENT. VOLUME 1 TEXT AND VOLUME 2 APPENDICES, Dar es Salaam (Prepared for the Ministry of Agriculture, Food and Cooperatives, Water Development and Irrigation Division). 93 p. + appendices.

URT/DANIDA 1983
WATER MASTER PLANS FOR IRINGA, RUVUMA AND MBEYA REGIONS. SOCIO-ECONOMIC STUDIES VOLUME 13, Copenhagen: BRALUP (Dar es Salaam) and CDR (Centre for Development Research).

URT/MAJI 1978
MINUTES OF THE ANNUAL CONFERENCE OF REGIONAL WATER ENGINEERS AND OFFICERS OF THE MINISTRY OF WATER, ENERGY AND MINERALS. HELD AT TABORA, 3-5 APRIL 1978, Dar es Salaam.

URT/PMO 1980
REPORT ON VILLAGE SURVEY, 2 vols, Dodoma: Ujamaa and Cooperatives Development Department.

WHO 1983
MINIMUM EVALUATION PROCEDURE (MEP) FOR WATER SUPPLY AND SANITATION PROJECTS, Geneva. 51 p.

WHO/IBRD 1977
RURAL WATER SUPPLY SECTOR STUDY, Dar es Salaam. 60 p.

White, Alister 1981
PROJECT FOR THE DEVELOPMENT OF A COMMUNITY PARTICIPATION COMPONENT IN THE TANZANIAN RURAL WATER SUPPLY PROGRAMME. INTERIM REPORT, Rijswijk, Holland. 117 p.

White, Alister and Kerkhoven, Paul 1981
PROJECT FOR THE DEVELOPMENT OF A COMMUNITY PARTICIPATION COMPONENT IN THE TANZANIAN RURAL WATER SUPPLY PROGRAMME. REPORT OF A FIRST MISSION TO THE UNITED REPUBLIC OF TANZANIA, 11 FEBRUARY - 11 MARCH 1981, Rijswijk, Holland. 57 p. + annexes.

de Wilde, John 1967
EXPERIENCES WITH AGRICULTURAL DEVELOPMENT IN TROPICAL AFRICA, VOLUME 1: THE SYNTHESIS, Baltimore: John Hopkins Press for the World Bank.

Wiley, Liz 1981
WOMEN AND DEVELOPMENT: A CASE STUDY OF 10 TANZANIAN VILLAGES. A REPORT PREPARED FOR ARUSHA PLANNING AND VILLAGE DEVELOPMENT PROJECT, ARUSHA, TANZANIA, Arusha: Regional Commissioner's Office. 147 p.

World Bank 1979
RECOGNIZING THE "INVISIBLE" WOMEN IN DEVELOPMENT: THE WORLD BANK'S EXPERIENCE, Washington.

TANZANIA ADMINISTRATIVE AREAS 1982

Appendix

Donor involvement in water supply improvements in Tanzania.*

Region	Donor	WMP completed	Current involvement
1. Shinyanga	Holland	1974	Shallow wells with handpumps programmes completed 1978 - handed over to Tanzanian administration.
2. Tanga	Germany	1976	Shallow wells component in RIDEP
3. Mtwara 4. Lindi	Finland	1977	Large-scale programme underway
5. Kilimanjaro	Japan	1977	No domestic water supply. Improvements in general development programme - some irrigation
6. Kagera 7. Mara 8. Mwanza	Sweden	1978	Large-scale programme underway
9. Coast	Canada	1979	- - - - - -
10. Tabora	IBRD	1979	- - - - - -
11. Iringa 12. Mbeya 13. Ruvuma	Denmark	1982	Large-scale programme underway
14. Kigoma 15. Rukwa	Norway	1982	Large-scale programme underway

* The following regions on the mainland are not included:
Dodoma (WMP prepared by Tanzania)
Morogoro (No WMP although Holland is involved in this region in a shallow wells programme)
Singida (No WMP prepared although until recently Australia was involved in a programme in this region)
Arusha (No WMP prepared)

List of abbreviations

ADAB	Australian Development Assistance Bureau
AFYA	Ministry of Health
AID	US Agency for International Development
APVDP	Arusha Planning and Village Development Programme
BRALUP	Bureau of Resource Assessment and Land Use Planning
CCM	Chama cha Mapunduzi
CDD	Community Development Department of PMO
DANIDA	Danish International Development Agency
FINNIDA	Finnish International Development Agency
HESAWA	Health through Sanitation and Water
IBRD	International Bank for Rural Development
ILO	International Labour Organization
IRA	Institute of Resource Assessment
IRC	International Reference Centre (Holland)
MAENDELEO	Community Development Department of PMO
MAJI	Ministry of Water, Energy and Minerals
MCH	Maternal Child Health
NGO	Non-governmental Organization
NORAD	Norwegian Agency for International Development
PCC	Per capita consumption
PMO	Prime Minister's Office
RIDEP	Regional Integrated Development Programme
SIDA	Swedish International Development Authority
TBA	Traditional Birth Attendant
UWT	Umoja wa Wanawake wa Tanzania
URT	United Republic of Tanzania
VHW	Village Health Worker
VWC	Village Water Committee
WMP	Water Master Plan
WMPCU	Water Master Planning Coordination Unit

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