

WOMEN, WATER SUPPLY AND SANITATION  
- a national training seminar -

Nairobi, Kenya

9 - 13 November 1987

sponsored by

the United Nations International  
Research and Training Institute  
for the  
Advancement of Women

INSTRAW



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## I. INTRODUCTION

The national training seminar on "Women, Water Supply and Sanitation" was convened at the United Nations Offices in Nairobi, Kenya, from 9 to 13 November 1987.

The meeting was convened by INSTRAW (United Nations International Research and Training Institute for the Advancement of Women) with the assistance of the Office of the International Labour Organization Skill Development for Self Reliance Project.

Thirty-five participants represented their respective ministries, agencies and organizations (see Annex I).

Also participating in an Observer capacity were representatives of 18 agencies and organizations (see Annex II).

The representative of INSTRAW made a statement welcoming the participants. She thanked UNEP for providing conference facilities and services as well as publicity; the Coordinators, Ms. Celia Male of ILO and Mrs. Ester Keli; and she thanked the Government of Italy for its generous support. Finally, she stated that she looked forward to an interesting and meaningful exchange in the week ahead.

### A. Opening of the seminar

The seminar was officially opened by the Minister for Water Development, Hon. Kyale Mwendwa. He said that it was a privileged and honour to be there to open the seminar. He noted the importance of water and cited the United Nations Conferences addressed to this issue.

The importance of provision of potable water to humans he noted was clearly understood, and many activities had taken place particularly after the proclamation of the International Drinking Water Supply and Sanitation Decade in 1980. What, however, appeared not to have become clear was the crucial role of women in water supply and sanitation. Nevertheless, he felt it could safely be said that it was in the interest of mankind that the crucial role of women in water supply and sanitation activities be clearly understood and acknowledged.

He noted with interest that the extent and importance of women's involvement with water had up until then remained elusive to policy-makers, programme directors, project managers and even the general public.

However, this important involvement was now being recognized. The Minister went on to note a case in Kwale where women had formed

committees which managed the wells; women had been trained as technicians to repair the well and pumps: and they ensured that men had nothing to do with these wells except when required and requested.

In 1974, the need for potable water in Kenya had become so manifestly felt that a Ministry of Water Development was created. The first Ministry's National Master Water Plan study which was completed in 1979, indicated that the water demand for domestic and industrial use would increase from 234 million cubic metres per year in 1978 to 1,546 million cubic metres per year by the year 2008. It was therefore clear that this increase in water demand mainly due to the estimated increase of population, could require considerable financial resources, and human efforts.

However, despite this recognition, Kenya set its own goal, of providing water to its population by the year 2000. Consequently substantial financial and human resources were applied towards achieving this goal. It was the Government's determination, the Minister stated, within the available means, to see that the distance travelled in search of water was reduced to the minimum. Where water was available, the government proposes to reduce the distance to about a quarter of a mile from the source to the homes, and finally to provide water to each and every home.

In Kenya, he noted, attention had been focused on the provision of water by the rural water supply programmes, for it was in the rural areas where the majority of Kenyans lived. Many hundreds of self-help water supplies scattered all over the Republic had been supported.

Overall development and management of water resources required trained manpower. In this regard, and recognizing the crucial role of women in the development of water, the Ministry for Water Development had been training women in all disciplines of water management. By the end of 1986, 92 women trainees had gone through the Kenya Water Institute, and 17 women trainees were admitted in 1987.

It was expected that this number would increase considerably in the near future. The Ministry would further continue to encourage community participation in simple water technologies in order to provide water through hand-dug wells, roof and rock catchments, small dams and pans, weirs and slow-sand filtration methods.

Finally, the Minister stated that for Kenya to achieve what it had so far achieved was mainly attributable to the stability in the country, which was a product of the wise, effective and dedicated leadership of His Excellency The President, Honorable Daniel Arap Moi.



B. Election of officers

The following officers of the seminar were elected:

Chairperson: Ms. Esther Wandeka  
Vice-Chairperson: Mr. P. G. Munoru  
Rapporteurs: Ms. J. N. Kebathi  
Mr. W. O. Syeunda

C. Adoption of the agenda

The agenda of the seminar was adopted without change (see Annex III).

D. Closing of the seminar

At the closing session, the representative of INSTRAW thanked the participants for having worked so hard during the week to produce so many meaningful recommendations; she thanked the officers for leading the group so effectively and the Government of Kenya for its active interest in the subject of women, water supply and sanitation. Finally, she said that on behalf of INSTRAW, she looked forward to the implementation of the recommendations of the seminar.

The Coordinator of the seminar, Ms. Esther Keli, expressed gratitude to the Ministries and particularly the Permanent Secretaries for their selection of such dedicated participants to the seminar. She thanked the resource persons for their presentations, and INSTRAW for initiating the activity.

She said it was an honour that Kenya had been the first country to hold a national seminar on women, water supply and sanitation, whose example would be used all over the world.

Finally, she called for the nomination of a committee and coordinator to maintain contact and further the implementation of the recommendations of the seminar.

Under the Chairperson, Ms. Esther Wandeka's direction, the following committee was then nominated:

- 1) Mr. K. A. Ajode, Ministry of Health
- 2) Ms. J. N. Kebathi, Ministry of Culture and Social Services
- 3) Ms. E. Keli, UNICEF

- 4) Ms. L. Kipkorir, Kenya Institute of Education
- 5) Mr. S. Makondiege, Ministry of Water Development
- 6) Ms. E. Wandeka, KANU/Maendeleo Ya Wanawake

The Chairperson then went on to say that the seminar had not been an easy exercise, and commended everyone for his input.

She felt, though, that it had been a very educational seminar. She had discovered how very much there was to learn, but that with positive support, the goals of enhancing the role of women in water supply and sanitation could be met.

In closing, she thanked the resource persons, her Vice-Chairperson, Rapporteurs and the Conference Coordinator and Secretary.

## II. SUBSTANTIVE ISSUES

### A. Module I: Introduction to the IDWSSD and INSTRAW

Module I, introduction to the International Drinking Water Supply and Sanitation Decade (IDWSSD) and International Research and Training Institute for the Advancement of Women (INSTRAW) was presented by the representative of INSTRAW, Ms. Stephani Scheer de Vela. Currently a consultant for INSTRAW, Ms. de Vela served as a member of the INSTRAW staff for a number of years and was actively involved in the development of the Institute's programme, Women and the IDWSSD, including serving as a member of the Inter-Agency Task Force on Women and the IDWSSD.

In her presentation of Module I, she noted that recognition of the seriousness and vital importance of improving water supply and sanitation worldwide had been underlined by the international community at the United Nations Water Conference held in Mar del Plata, Argentina back in 1977, which had resulted in the subsequent launching of the IDWSSD in 1980.

A Steering Committee for Co-operative Action was established, comprised of eleven relevant United Nations specialized agencies and organizations. The objectives of the Steering Committee were to put into operation mechanisms designed to help match projects with external sources of funds, exchange technical information between countries, shape global plans for human resources development, advise on project formulation and investment planning, and assemble comparable data for progress reporting and public information on the Decade as a whole.

In 1985, a review was made of the progress in the Decade in the form of a report to the General Assembly through the Economic and Social Council.

At the mid-point of the Decade, it was found that some 1,200 million people still lacked safe drinking water and some 1,900 million people still needed adequate sanitation. These numbers of unserved people represented more than twice the number of people provided with clean water during the first half of the Decade, and more than 20 times the number reached with adequate sanitation.

The consequences of this situation were extremely evident, she noted. Less evident, though vital in consideration of the situation, was the role of women.

Women were carriers of water, managers, users, family health educators, motivators and agents of change. They were responsible in this regard not only for themselves, but also for the members of their families and the community at large.

Any strategy for women's participation needed to consider water supply and sanitation as an integral part of the entire development process along with other socio-economic sectors.

Within the international community, one of the mechanisms established to address the question of the role of women in water supply and sanitation, was the Inter-Agency Task Force on Women and the IDWSSD. The Task Force was part of the Steering Committee for Co-operative Action.

Within the framework of international co-operation, the United Nations International Research and Training Institute for the Advancement of Women (INSTRAW) was seeking to make an important contribution to the implementation of the objectives of the IDWSSD.

Mandated to act as a catalyst, the objectives of INSTRAW were to stimulate and assist, through research, training, and collection and dissemination of information, the advancement of women and their integration in the development process, both as participants and as beneficiaries.

Since its inception, INSTRAW had been working to improve methodologies for training. INSTRAW remained firmly committed to innovative approaches to training, recognizing the urgent need for a shift from didactic instruction to more participatory methodologies, involving communication and media support as essential ingredients.



As part of its programme, and with the support of the Government of Italy, INSTRAW and the International Centre for Advanced Technical and Vocational Training (ILO/Turin) had prepared the multimedia training package on Women, Water Supply and Sanitation.

The package reflected five years of research by INSTRAW, including a survey of material, projects and activities undertaken by other United Nations agencies and bodies, inter-governmental organizations, bi-lateral agencies and non-governmental organizations. Using a modular approach, the package aimed at two major target groups: national development officials and women's organizations.

The major objective was to foster awareness of the close relationship between women and water, and help to ensure women's participation at all levels and stages of water supply and sanitation programmes and projects.

Now before the package was reproduced in its final form and distributed world-wide, she said four national training seminars, such as this one, were being conducted to determine its applicability.

In closing, she said that in distributing the training package, INSTRAW sought to strengthen the institutional capacity of developing countries in water supply and sanitation.

In the discussion that followed, the participants were challenged to consider how much had been achieved in the country in the provision of water according to the objectives of the IDWSSD.

Representatives from the Ministry of Water Development informed the meeting that women were not excluded from training in water technology but that they tended to shy away from water engineering subjects. However, it was noted that it was the Ministry's policy to encourage more women in training related to water supply and sanitation. Over the past few years, it was indicated that the number of girls enrolling in training for water development and other higher technical institutes of training was increasing.

The Ministry of Water Development was also working closely with other Government Ministries to involve community participation in water supply development.

In order to increase women's participation in water technology, the participants felt that it was important to find out the root causes of women's lack of participation. Participation, it was felt, should not be



seen only in terms of numbers but how effective women were in the implementation of water programmes. A practical example was given from Kisumu, indicating the need for community participation for the success of water programmes.

In regard to the role and objectives of INSTRAW, it was felt by one participant that the organization only included women while the problem of water covered a broad spectrum of both males and females in the home. It was clarified that men were not excluded, but it was the women who felt more strongly the difficulties of lack of water.

The participants highly appreciated the insight of INSTRAW in organizing the seminar. At the same time it was lamented that such a seminar was long overdue and should have been held earlier.

A recommendation was put forth to collect data on the water and sanitation situation in Kenya, and the role played by women. This information would enable the country to assess its achievements and plan effectively for the future.

The group recommended that, because by 1990 the goals of the IDWSSD would not have been met, the "Decade" should be extended to the year 2000 to become "Water for All", and to coincide with "Health for All by the Year 2000".

B. Module II: Participation of women in planning water supply and sanitation projects

Module II, participation of women in planning water supply and sanitation projects was presented by a panel of four persons: Ms. Margaret Mwangola, Executive Director of Kenya Water for Health Organization (KWAHO), who had been involved with water supply and sanitation as well as social development in Kenya for more than twenty years. Mr. David Omambia, a research officer with the African Medical and Research Foundation (AMREF), whose work centered around social research in health in East Africa, especially in community based and primary health care; Mr. Wilson Kinoti, a Public Health and Health Education Officer with KWAHO, who specialized in environmental health, particularly education and training; and Mr. Anthony Waterkeyn of Water Aid, who was serving as a technical advisor to KWAHO, with 15 years of experience in civil, building and water/sanitation projects, mostly in Africa.

In their presentation, they noted that the role and importance of women in the IDWSSD has been viewed as crucial if the international community, especially developing countries were to achieve the Decade

objectives by the year 1990. The major question was, why had the role of women not been promoted as much as it should despite much rhetoric in conferences on their importance. Why had the participation not been as effective in participatory projects?

The major faults in WSS, they felt, might have been in the way in which the projects were planned, more so the kind of role the women were given in actively participating in planning activities that effected them directly. The women and community had not been made to feel a sense and spirit of belonging or ownership of the water project. In so far as sanitation was concerned a lot of socio-cultural data on sanitation practices had not been well collected nor analysed, in order to assess the potential of the community acceptance of practicing proper sanitation practices. No community/women perceptions about WSS related problems were analysed well in order to design appropriate health messages that gave impact to the community/women.

The importance and advantages of involving women in planning WSS activities could not be over-emphasized. Besides women being responsible for family subsistence production, they were the major providers of food to the family. The nutritional status of the family especially children depended on the woman. The family's health, greatly depended on the mother. In this case, therefore, food hygiene, through improved handling and processing of food, keeping a sanitary home environment through improved faecal and waste disposal, was the responsibility of the woman. There were therefore several advantages (as cited in module II), economic benefits, health benefits, etc. However, there were several other things to consider as far as planning of WSS projects was concerned.

Many projects in developing countries were being financed and implemented by development agencies. The approaches used in planning WSS activities had varied. However, many agencies claimed to have adopted a community participation approach or a participatory process where the community had the major decision making powers. What was evident in all these projects, though, was that these agencies had their own obligations, e.g., certain things had to be achieved within a specified project period, etc. Secondly, they gave funding for a specific activity: water and/or sanitation. The problem that occurred in this case was that of doing things in a hurry, and in most cases the issue of community/women mobilization had been too hastily addressed. In essence, the community was only informed of what had been planned for them by the development agency and the leaders. The important target groups, the users, who were mainly women, were neglected and only given a passive role, in many cases misinterpreted as an active role by project implementors. This was evident because in many projects as soon as the agency left the water project, it was likely to be abandoned and people resorted to old sources of water.



As far as sanitation was concerned, this had caused a lot of problems in implementation. Health problems related to water and sanitation were quite rampant in East Africa, e.g., cholera. In the past, legislative measures had been used to impose construction of latrines as a measure to control cholera. Studies had shown that in such situations, the major reason given by communities for the actual construction of latrines was fear of prosecution. While this measure could not be disregarded, community education, and recognition of what people knew and could learn had not been given prominence. Besides, the latrine technology devised and promoted was sometimes beyond the community's capability. The socio-economic status of the community and their socio-cultural pool of knowledge were important factors that project planners should take into consideration.

In order for women to be effectively involved, donor agencies, governments, etc., should first and foremost recognize the importance and role of women in their own context in order to make a WSS project relevant and appropriate. A situational analysis and problem-oriented approach was therefore needed in order to achieve effective mobilization of women towards achieving the goals of WSS projects.

In many cases an integrated approach was advocated but very rarely practised. WSS projects were planned in isolation of other development sectors, e.g., agriculture, livestock development, social services, etc. The major question that should be asked from the beginning was "after water what". Growing of vegetables would not only improve the nutritional status of women and children but become an income-generating activity. Livestock improvement through improved water would improve the milk yield of cows, as well as generate income for the families.

In planning these activities, women's expression of their needs and expectations was important. Their involvement from the initial stage of data collection was essential. The women knew and understood their problems. Their perceptions on the importance of their problems might have varied but the understanding existed. If a development agency addressed the problem and if the problem was water, then this would be an entry point to many development projects.

They noted that projects had been planned without finding out whether there had been mistakes before on similar projects. It was important that the women related what they had done or what existing mechanism was being used to solve related WSS problems. The activity of a donor agency might serve to supplement the women's efforts in the WSS projects. Water projects, to have long-term impact in the community must be well operated and maintained. What was normally done at the planning stage, though, was not clear, long term plans were made for project sustainability through operation and maintenance training. Training had

been given to men and/or people whose technical solutions made the women/community dependent on them, and no skills were passed on to the community. It was true that there were systems that women could not easily maintain without professional help, but there were others that were within the capabilities of women, e.g., protected springs, roof catchment systems, hand-pumps, gravity flow systems as well as simple diesel/petrol operated engines. Operation and maintenance training activities should be included from the planning stage. The capability of the women for these tasks should be assessed with their assistance at the planning stage.

Finally, they emphasized that monitoring and evaluation mechanisms simple enough for rural village women should be built into the project plans. These should be simple methods where women would be able to assess achievements so far, problems incurred and how solutions could be found for these problems. The regular feed-back system would act as an educational process among the women. For example, they should be able to count how many women had gotten latrines, boiled water regularly, had constructed dish drying racks, cut grass around their compounds, etc. These were very simple and quantifiable indicators of project development. Women could only do this if they understood the objectives of the project and played a major part in the planning of the project.

In the general discussion that followed, the participants felt that the presentation was very informative and that the importance and role of women had been explained well in the module.

They felt that donors should be more flexible in their approach and see themselves as partners. They should respond to the needs and priorities set out by the communities including allowing time for the programme to be implemented in conformity with local conditions. There should be a balance between community needs and donor support.

It was noted that women and women's needs were not well represented at the various stages of decision-making. For instance, representation at the locational and divisional District Development Committees (DDCs) was very weak. It was suggested that the Ministry for Water Development could fill the gaps between DDC and women at the grass-root level. Women should also be assisted in deciding their priorities. Their involvement should be communicated to relevant authorities and encouraged in planning, implementation and evaluation of projects concerning them.

In most parts of rural Kenya, it was noted, women had organized themselves into active socio-economic groups. Where such groups existed their potential should be fully tapped by the various agencies/bodies dealing with water projects in order to avoid ineffective activities.



It was revealed that in some semi-arid areas, where people's way of life was nomadic and a high premium was placed on ownership of livestock, programmes for water needed to give consideration to water for livestock. In such cases, it was suggested, wells should be designed to cater for both uses, livestock and domestic.

Regarding sanitation, the participants felt that it should not be limited to construction of toilets but should be broadly conceived to include other areas, e.g., personal hygiene.

KWAHO's example illustrated how sanitation was being improved through promotion of health education in the community and in schools. Such education gained by youth could permeate through the community on a long-term basis.

It was also stressed that a major problem that needed to be addressed was the cost of implementing a water and sanitation programme, especially in rural areas.

Finally it was felt that monitoring and evaluation should be included as components in the planning stage of the project.

The participants then broke into four working groups to discuss specific areas related to the modules. Their reports were as follows.

Group 1:      Identify ways and means of intervention of women within different stages of WSS projects.

Chairman:      Mr. P.G. Munoru  
Rapporteur:    Ms. P. Mburia  
Members:       Ms. J. Bund  
                 Mr. D.J. Makerere  
                 Ms. B. Okwaro  
                 Mr. W.O. Syeunda

The group confined itself to the planning stage. While they did not exhaust the discussion by the time the group disbanded, they had been able to look at the topic from three perspectives:

1.    Needs or Priorities

Identification of priorities varied from one community to another. In some communities, for example, men were at least concerned about where the water came from, whereas in others it was the responsibility of women only. That is why there was great need for intervention of women in determining the priorities.

It was the group consensus, therefore, that the social worker right at the grass-root level should be able to identify prominent women in the villages who would in turn be brought together in an informal forum to discuss what the needs of the particular community were. The social worker should also be in a position to infiltrate the existing women's organization including KANU/Maendeleo ya Wanawake and at the same time help organize women where such groups did not exist. The needs identified in these fora would in turn be presented to the development committee meetings. The local women should participate in nominating local representatives among themselves. These representatives should present the needs convincingly and not be seen as propagating the so-called "Women's Lib".

Recommendation:

The existing Women Development Committees should be strengthened and recognized at the DDC level. At the moment they only existed on paper. Also, all the women's groups should be registered with the Department of Social Services to facilitate co-ordination.

2. Gathering Information

The group felt that women should be involved since they were more knowledgeable about the uses of water and importance of sanitation. For example, if the baby got diarrhea, the mother was better placed to realize the possible causes. Through education from women's groups or the social worker, she knew how the problem could be overcome. But what information was this? Mainly cultural information which could be termed sensitive.

Recommendation:

Women should interact with the community in collection of this information. Men, on the other hand, could discuss the information with other men. The information should include the available water resources: type, distance, cleanliness, sanitation, etc. and the problems faced due to lack of it. These would form the basis for planning.

3. Choice of Technology

Although the women would not necessarily be involved in the decision of what technology was appropriate for the region, they should be integrated in handling the technology. The initial decision depended on geological factors.

Recommendation:

Appropriate containers, should be developed for drawing water. While considering the health aspect, the use of traditional containers should be encouraged. The water was initially treated by the Ministry of Water Development so that the community should be educated in storage of the water in sanitary conditions. Contamination usually took place in the house.

It was felt that the use of plastic containers which were meant for toxic chemicals should be discouraged; most of them were not easily cleaned.

Group 2:        Include women within human resources planning of water supply and sanitation projects:

Chairperson:	Mr. A. M. Matila
Rapporteur :	Ms. G. Woigo
Members:	Ms. E.K. Ibuutu
	Ms. S. Mbugua
	Mr. L. M. Musyoka
	Ms. J. T. Njeru
	Mr. J. Owindi

The group's discussion was divided as follows:

1. Planning - define planning: identification and development of projects at grass-root level, sub-locational to locational levels in water projects, within a certain environment.
2. Traditional Water Sources - the water sources identified by the group were: springs, wells, lakes, rain harvesting, bore-holes, swamps and dams. In planning, the stages were prioritized as follows:
  - (a) identify the traditional water source by the community;
  - (b) identify the need by the community or planner;
  - (c) mobilize the community (e.g., form a committee).
3. Feasibility Studies - include: siting and collection of data (e.g., population data); water quantity; water quality, costing.
4. Funding - identify the donors.
5. Construction - determine necessary materials and labour.



6. Maintenance - include revenue collection, purchase of spares, training of personnel.

7. Evaluation - to be conducted both by the community and expert.

The group then made the following recommendations:

- (a) Women should take positions of leadership from grass-root to national levels on matters pertaining to water and sanitation.
- (b) The Ministry of Water Development and other government departments, and NGOs should reach women at the grass-root level through programmes, seminars and training - thus creating awareness and positive attitudes.
- (c) Women should be included at every stage of planning.
- (d) The Government should make direct policies for communities to change to the use of sanitary facilities, such as latrines.
- (e) Water supply and sanitation activities should be integrated so as to include income generation; donor agencies should be guided in this regard.

Group 3:      Identify training activities especially those concerned with women

Chairman:      Ms. M. Ombai  
Rapporteur:    Ms. B. W. Mwaniki  
Members:       Ms. J. N. Kebathi  
                 Mr. W. Kinoti  
                 Mr. J. Kunguru  
                 Ms. L. Mbeo  
                 Mr. J. O. Onyango  
                 Ms. E. Wandeka

The three areas of training identified by the group were:

- (a) training for trainers, i.e., experts trained at university and other institutes;
- (b) training for promoters - opinion leaders among the beneficiary groups (training in leadership skills, basic health requirements, etc.);
- (c) training for beneficiaries.



Training in water usage and sanitation was a wide area and required well-defined interministerial linkages. These would also include the various NGOs currently assisting people to get water at the grass-root level. The Ministry of Water Development should be the co-ordinating ministry. With the type of water supply and technology at issue the ministry should be assisted by an interministerial committee. At the grass-root level, the existing women's groups should be used through special project task forces. In some areas, like Kitui, such groups as the Women Development Committees were strong. Where Women Development Committees did not exist, the promoters should be further trained to be a linkage between the grass-root level and the District Development Committee and women's participation should be further enhanced. Such promoters should also co-ordinate all other women's groups in the area, including those not water-related.

The promoters should also be able to consult directly with trainers provided that the NGOs were registered with the Ministry of Culture and Social Services. This was mainly because the existing linkages through the ministry needed to be strengthened.

The group then made the following recommendations:

#### Specific Areas of Training

##### 1. Training for Trainers

- (a) More women should be encouraged to train in those technical fields which have been traditionally male oriented, e.g., water engineering, water chemistry, etc. This could be done through the Ministry of Education and intensive campaigns through the mass media.
- (b) The students should also be exposed to other technical areas that indirectly relate to water, e.g., public health.
- (c) The students should be trained to carry out impact analysis of the water projects.
- (d) They should be exposed to simple water technology.
- (e) They should be trained to take account of the cultural background of the groups with which they are dealing.

## 2. Training for Promoters

Promoters should be trained for acquisition of simple skills especially in:

- (a) health education;
- (b) simple operations;
- (c) communication and mobilization skills;
- (d) techniques of identifying the community needs;
- (e) techniques of identifying water sources;
- (f) simple accounting methods;
- (g) simple project monitoring and evaluation.

## 3. Training for Beneficiaries

The beneficiaries of water supply and sanitation schemes should be exposed to all training given to promoters. In addition, they should be trained in:

- (a) water care skills;
- (b) ensuring cleanliness of water especially from catchments (e.g., roofs) to the storage points;
- (c) adult literacy material should include topics on water and sanitation use and maintenance;
- (d) personal and household hygiene for care of children, domestic animals, etc.
- (e) putting spilled or waste water to productive use, e.g., vegetable and fruit gardening;
- (f) simple reporting skills for water projects.

Group 4:      How integrated should WSS activities aimed at women be?  
Propose a strategy on how this integration can be  
implemented.

Chairperson: Ms. A. Wandie  
Rapporteur : Mr. A. J. Waterkeyn  
Members:      Mr. L. K. Biwott  
                 Mr. M. Kariuki  
                 Mr. D. J. Makerere  
                 Ms. W. Mitullah  
                 Mr. J. M. Ndeleva  
                 Ms. M. Njoroge

Women should be fully integrated in WSS. Unless women were fully integrated, health benefits would not materialize; nor would other potential development benefits, e.g., income generating activities, better nutrition, personal hygiene, etc.

Water projects, as entry points to further development must not be wasted.

#### Recommendations

1. Community development organizations and agencies should strive to guide women to take greater leadership roles and become more actively involved in WSS projects. Their officers should ensure that women's requirements are channelled to the DDC.
2. All planning, donor's contract documents, etc., related to WSS should clearly state the priority and necessity of integrating women in the project, and should define women's important role.
3. The DDC should focus more on women's involvement and should strive to attain stronger representation of women on different development committees, particularly on WSS projects.
4. KWAHO experienced the value of introducing locally chosen women from the community as Water and Health Assistants (WAHAS) at the early stage of programmes. WAHAS mobilized the community and actively encouraged the participation of women. This should be expanded.
5. The community should be encouraged to see WSS as a felt need and a vital necessity affecting their daily lives and all other development activities. WSS was a base foundation for all other development activities.



6. Adult education, health education and all other extension services should stress the importance of WSS with special emphasis on the role of women.
7. Direct support should be given to those women's groups involved in WSS. Leaders of such groups should be encouraged for their initiative and to seek support and guidance from the relevant ministries and other agencies.
8. A situation analysis should be carried out before selecting projects, and priority should be given to those projects which have been proposed by women's groups. Where women initiated programmes - their integration and success of the project were usually assured.

The groups emphasized that all programmes in WSS should define the integral role women must play.

In the general discussion that followed the reports of the working groups, the participants commended the Ministry of Water Development for its attempt to involve local communities in water projects. It was felt however that the community's participation in large scale projects was not very clear.

The following suggestions were given as to how local people could be involved in such projects:

- formation of community level committees to monitor and assess provision of water;
- involvement of local communities in digging of trenches and laying of pipes;
- protection of water installations from vandalizing and reporting of defects and breakdown to the relevant authorities;
- involvement of the local people in water drainage through social awareness and health education;
- division of large systems into various components to facilitate sharing of responsibilities, e.g., the community could be involved in water distribution while the Ministry was involved in treatment of water.

It was also noted that the Ministry of Water Development was encouraging town councils and municipalities to take up the management of large scale water projects, since these local authorities were much closer to the people.



Representatives of the Ministry of Water Development also revealed that there was a deliberate move to steer away from large projects and concentrate on smaller projects. The larger projects would in future be targeted for urban areas. It was also noted that the Ministry often had to abide with conditions laid down by donor agencies and this restricted their operations.

The participants also wanted to know whether there were any simple water treatment technologies which could be used by local women. Filtering, boiling and use of chlorine tablets were cited as some of the simple methods. Another alternative was to zone for uses of water, e.g., for livestock and domestic use.

The ideal method suggested was to avoid contamination of water from the source area. Women should also be educated regarding proper storage of water.

C. Module III: Involvement of women in choice of technology and implementation of water supply and sanitation projects

Module III, involvement of women in choice of technology and implementation of water supply and sanitation projects was presented by Ms. Anne Malm and Mr. Simeon Makondiege. Ms. Malm was a civil engineer who had been working recently in Kenya with the UNDP/World Bank Rural Water Supply Handpumps Project. She worked mainly with project planning and implementation, with emphasis on community participation. Mr. Makondiege was the Deputy Chief Engineer/Director in Charge of Operation and Maintenance in the Ministry of Water Development. He had been with the Ministry since 1974 and dealt with policy issues regarding long term considerations; water distribution and undertaking; community involvement; tariff and pricing; treatment processes and standardization.

In their presentation, an overview was given, and it was noted that failure of past water and sanitation projects could be blamed mainly on two things:

1. the use of inappropriate technology, and the
2. failure to involve the communities.

To rectify this, the community had to be involved at an early stage throughout the project and the technology must be specifically designed for the conditions under which it must function. The technology chosen should give the community the highest level of service that it had the institutional capacity to sustain; local manufacture to ensure availability of spare parts had to be promoted.

Cost, it was noted, played an important role in the choice of technology. To reach as many people as possible with the funds available, the choice must be carefully and properly made.

One of the most important factors for sustainability of projects was the involvement of women.

Water was a very high priority for women and as water drawers they could provide much useful information about existing water sources. They also had preferences on the siting and design of the facility.

Quick repair was deemed essential for not destroying the health benefits of the new facility. Women's personal interest and their regular visits to facilities made them more suitable to maintain and repair the facilities. It had been proven in many projects that women might have equal technical capacity as men.

Field workers were an important component in a project. To be able to communicate with all people in a community, at least some of them had to be women.

For better evaluation of women's participation and the functioning and use of facilities, projects should have medium-term more measurable objectives.

For sustainable water and sanitation projects, both women and men should be involved at all stages, from planning and design to implementation, operation and maintenance.

Looking at the situation in Kenya especially, it was pointed out that since 1983, two major relevant policy issues had come to pass. First, the District Focus for Rural Development Strategy had been introduced and accepted as a guiding factor. Second, the principle of cost-sharing had been introduced and accepted fully in Kenya. Therefore grass-root level participation was accepted and encouraged through Locational, Divisional, and District Development Committees. Any groups and especially women's groups were therefore challenged to come up with any viable project to be included in a priority agenda.

The technology choice it was noted, must include a number of aspects. These were: sociological, cultural, cost-effectiveness, organization and management, environmental, and engineering.

The technology choice was deemed to be part of the planning process; and those given to use the technology must be involved fully in the planning stage.



The Ministry of Water Development (MOWD) did not have full capacity to deal with the subject of community participation and involvement. The Ministry therefore depended heavily on KWAHO, the Ministry of Culture and Social Services and NGOs. With the advice of these organizations, it was hoped that the women/community would be involved in planning, with the MOWD providing the engineering requirements.

The scope of water supply and sanitation projects though, needed to envisage community involvement. In other words, the choice of technology must be simple, taking into account the above-mentioned aspects.

It was noted that MOWD was steering away from systems that were difficult to sustain through the efforts of community and women's groups.

One identifiable weakness of water supply and sanitation projects was that the community and women's groups took initiative only after a donor was identified. It was stressed that any water supply and sanitation project would have more success if the initiative was taken prior to donor identification.

It was recommended that women's groups be involved in both short and long-term plans of the area in which they were to be involved. Once a long-term plan was developed, it should be disseminated and discussed appropriately with all concerned parties.

Finally, it was emphasized that MOWD was encouraging communities and women's groups to operate, maintain and develop their projects to the extent possible. In the past, they were taken over to be run by the Ministry. This was no longer the practice. It was in the interest of the Ministry that all existing systems be run efficiently and effectively; and this could be improved by further training of the community and women's groups through formal and informal education.

In the general discussion that followed, the issue was raised of how to involve women in large scale water projects.

At the distribution point, it was felt, women and the general public who consumed water should participate in deciding on the best method of providing water and meeting the cost. Committees could be formed to look into relevant aspects such as proper maintenance and efficient distribution mechanisms.

It was suggested that the Ministry of Water Development should move away from favouring the implementation of large scale water projects and as much as possible encourage small scale projects which were relatively easier to implement and maintain on a long-term basis, especially if the local communities were to be involved. Regarding water treatment technology, effort should be made to avoid contamination of water at the



source. Users should be educated in necessary health practices when handling and using water especially for human consumption. Zoning mechanisms should be developed to separate water supply for humans and animals and avoid mixing drinking water with water for washing.

The participants then broke up into working groups. The following are their reports.

Group 1:        Identify the areas of intervention of women in the choice and transfer of technology.

Chairman:        Mr. P. G. Munoru  
Rapporteur:      Mr. M. Kariuki  
Members:        Mr. K. A. Ajode  
                  Ms. J. Kebathi  
                  Mr. W. O. Syeunda  
                  Ms. E. Wandeka

#### Definition of Question

The group agreed that the word "intervention" was inappropriate and instead preferred to use the word "involvement" because it implied that women would be consulted before the process of choice and transfer of technology started and not later. Intervention implied they would come in later.

#### Why Involve Women

The group further agreed that involvement of women in choice and transfer of technology was important because women were the main users of the technology, e.g., handpumps, sanitary systems, agricultural implements, collecting water, etc. Their views should therefore be sought.

Another reason for involvement of women was because they were more knowledgeable about alternative sources of water and their suitability and reliability. They had useful information about appropriateness of technology.

They then made the following recommendations:

#### How to Involve Women

- (a) Women should be consulted as to what type of technology should be used either individually or collectively. The concerned agency should establish a contact with women, such as, project committees, adult education classes, etc., in order to get their views about suitability of technology.

- (b) Women should be educated continuously as to what types of technology were available to them so that they may be in a position to think which of these was suitable for them. Although this was difficult to do, the initial dialogue, recommended above, should make it easier.
- (c) Women should be consulted on the cultural implications of the technology. For instance, in the case of sanitation systems it was important to know whether the toilets would be designed in such a way that was culturally acceptable to the women.
- (d) Women should be consulted as to what type of technology should be used in implementing projects, the aim here being to ensure that the technology chosen should not minimize the role that women played in implementing the projects.
- (e) Women should be consulted also in order to ensure that the technology chosen would make use of locally available materials which were cheaper and easier to obtain than imported materials.

Group 2:            Identify ways of intervention by women in the following activities related to the operation of WSS installation.

- (a) preventive maintenance;
- (b) simple repairs.

Chairman:        Mr. W. Kinoti  
 Rapporteur:     Ms. J. T. Njeru  
 Members:        Mr. A. M. Matila  
                   Ms. S. Mbugua  
                   Mr. J. M. Musyoka  
                   Ms. M. Ombai  
                   Mr. J. W. Owindi  
                   Ms. G. Woigo

I. The group first discussed water supply. They identified installations of water; treatment systems/plants; and water transmission/distribution. They then went on to highlight the activities in both simple repairs and preventive maintenance.

A. Installations of Water

(1) Pumping systems:

- (a) Hand pumps
- (b) Diesel or electric pumps
- (c) Windmills
- (d) Solar pumping systems/electric motors

- (2) Gravity fed systems, to be transmitted by pipes
- (3) Hydrams
- (4) Protected springs and water sources
- (5) Rain harvesting systems
- (6) Pans and surface dams

B. Treatment Systems/Plants

- (1) Slow sand filters
- (2) Three pot system
- (3) Rapid sand filters (use of allum 4 chlorine)
- (4) Storage
- (5) Boiling
- (6) Chlorox tablets for chlorination

C. Water Transmission/Distribution

- (1) Trunk pipes
- (2) Distribution pipes
- (3) Taps
- (4) Tanks for storage

II. They then went on to highlight the activities which women could carry out in preventive maintenance and simple repairs.

A. Installation of Water

- (1) Pumping systems
  - (a) hand pumps



- preventive maintenance

- (i) Greasing
- (ii) Tightening bolts
- (iii) Cleaning of the site
- (iv) Fencing of the area
- (v) Schedules of collecting water
- (vi) Record keeping

- simple repairs

- (i) Replacement of worn out washer
- (ii) Replacement of broken rods
- (iii) Replacement of leaking foot valves
- (iv) Replacement of broken handles

In case of major repairs the women would report the requirements to the experts.

(b) diesel or electric pumps

- preventive maintenance

- (i) Checking oil
- (ii) Loose nuts to be checked
- (iii) Greasing and oiling
- (iv) Fueling and checking water
- (v) Cleaning the area and pump
- (vi) Security

- simple repairs

- (i) Replacing belts
- (ii) Replacing bolts, washers, bearings, etc.

(2) Gravity Fed Systems

- preventive maintenance

- (i) Siting at the intake
- (ii) Fencing of the intake
- (iii) Afforestation with the right species of trees to conserve the water.

- simple repairs

- (i) Checking the line
- (ii) Replacing broken pipes and fittings

(3) Hydrams

- preventive maintenance

- (i) Intake must be cleaned
- (ii) Screens should be cleaned
- (iii) Silt should be removed
- (iv) Fencing of the intake
- (v) Regular checking of the rising mains
- (vi) Security

- simple repairs

- (i) Replacement of diaphragm
- (ii) Replacement of broken pipes
- (iii) Painting to prevent rusting

(4) Protected Springs and Water

- preventive maintenance

- (i) Fencing the catchment area
- (ii) Check the working of the spouts
- (iii) Care should be taken to ensure the 'eye' is higher than the wall
- (iv) Channel/drainage to be maintained
- (v) Maintenance of cattle trough, washing slabs, etc.
- (vi) Security

- simple repairs

- (i) Repair retaining wall
- (ii) Replacement of the spout

(5) Rain Harvesting Systems

- preventive maintenance

- (i) Rain gutters at the roof to be free of offensive material
- (ii) Checking the leaking tanks
- (iii) Checking loose taps
- (iv) Cleaning the tanks after every rain harvested

- simple repairs

- (i) Replacing taps
- (ii) Replacing gutters
- (iii) Sealing tanks, joints, etc.

(6) Pans and Surface Dams

- preventive maintenance

- (i) Fencing
- (ii) Developing different sections for water users
- (iii) Security

- simple repairs

- Replacing the fence

B. Treatment Systems

- preventive maintenance and simple repairs

(1) Slow sand filter

- (a) removing the silted top layer
- (b) replacing the sand
- (c) securing the filter

(2) Storage

- (a) checking any foreign bodies in the tank
- (b) checking cracks and leaks

(3) Boiling and chlorination

- educate the public about boiling water and chlorine tablets.

III. Regarding sanitation, the group felt women could make a great contribution in the following areas.

- A. Disposal of waste products
- B. Family/personal hygiene
- C. Vermin/rodent control
- D. Storing food properly



Women should be involved in the installation of the sanitation facilities so that they will be in a better position to repair them.

It was realized that simple repairs and maintenance involved money, personnel, material and technology. With this in mind, compromises would have to be reached and women would have to be educated on how they could tackle some of these issues.

Group 3:            Analyze and plan training activities in order to enable women to carry on WSS activities on a long term basis

Chairman:            Mr. D. Makerere  
Rapporteur:        Mr. J. O. Onyango  
Members:           Mr. J. N. Kingori  
                      Mr. J. Kunguru  
                      Ms. L. Mbeo  
                      Ms. B. W. Mwaniki  
                      Ms. H. Yego

The group identified three groups of people affected in this field. These were:

- (1) Experts or trainers
- (2) Promoters
- (3) Beneficiaries

The group also identified three types of training. These were:

- (1) formal training
- (2) on-the-job training
- (3) informal training

The formal training was seen to be undertaken in the following institutions:

- (1) Institutes of Science and Technology
- (2) Kenya Water Institute
- (3) Kenya and Mombasa Polytechnics
- (4) Universities, either local/or overseas.

Regarding formal training, girls in high school could be encouraged to take courses in the water sector through the following:

- (1) Now that the 8-4-4 system of education had been made compulsory for both girls and boys, to take science subjects they just needed more encouragement.

(2) There was an urgent need to create science labs and workshops to enable girls to study science subjects properly. It was found that in the past most girls had been taking art subjects, and as such most girls' secondary schools did not have science facilities.

(3) To be able to know the extent of the lack of science facilities in girls' secondary schools, it was felt that KANU/Maendelo ya Wanawake at the national level should conduct a survey to know what was required.

(4) Once what was required in girls' secondary schools was known, the women's groups in various parts of the country through KANU/Maendeleo ya Wanawake should mobilize resources to assist needy parents to use the facilities.

(5) Parents were also asked to encourage their daughters to take up science subjects.

(6) It was also felt that the counselling and guidance sector in the Ministry of Education should inform girls' secondary schools to raise awareness that there were many courses at Kenya Water Institute, where they could take various courses related to the water sector.

(7) Representatives of professional women's groups should undertake promotional activities to encourage girls toward studies and professions in technical fields, including those water-related.

(8) Enrollment for training, then, at the Kenya Water Institute, regarding the ratio of boys and girls, should aim at greater proportionality.

On informal education, which applied to promoters and beneficiaries, the following were recommended:

(1) To hold seminars or short courses on water for these groups. This could be arranged at the Farmers Training Centres.

(2) These two groups should make educational tours to various parts of the country to determine what was going on in such areas. These visits could later be extended overseas depending on the availability of funds.

(3) On the job training could also be arranged for promoters where they were involved in various projects.

(4) Films, slides and news reels could be used in publishing the importance of the water sector in the economy.

(5) A column could be introduced on women, water supply and sanitation in "Women's Mirror", the KANU/Maendeleo ya Wanawake publication.

Group 4:            How would women be involved in long-term development plans so as to allow donor support after the projects are initiated by women in groups?

Chairman:        Mr. L. Biwott  
Rapporteur:     Ms. M. W. Njoroge  
Members:        Ms. E. K. Ibuutu  
                  Ms. P. Mburia  
                  Ms. W. Mitullah  
                  Mr. J. M. Ndeleva  
                  Ms. A. Wandie  
                  Ms. N. L. Were

In deliberation of this issue, the group made the following recommendations.

1. The women's groups should be advised/guided to make project proposals which included long term development plans that would allow/attract donor participation in other related activities.
2. The initial project should seem to be producing results so as to attract donor assistance - for instance that the project was generating income in order to sustain it.
3. The Ministry of Culture and Social Services (MCSS) should investigate the existing groups to determine why some of them did not produce results and assist them in drawing project documents that could be supported. They could be given initial assistance to start. The members should make decisions on what to do with the funds.
4. Local authorities should have a women's group representative to co-ordinate activities within the urban centres so as to ease the work of community and social development workers. The groups should be advised to register and pay the nominal fee for the municipalities so as to be eligible for participation.
5. The Ministry of Culture and Social Services should try to increase their personnel who were experts with women's groups as well as group dynamics.
6. There should be inter-ministerial and inter-sectoral collaboration to provide necessary assistance and training for women in WSS at various levels required in projects. The MCSS should remain the co-ordinating body and be strengthened.



7. Donor assistance should be acquired to train women for implementation, operation and maintenance of water supply and sanitation projects, and project management skills.

8. Donor assistance in relation to water was normally channeled through the Ministry of Water Development and local authorities which supported large scale water projects. In order to include small projects by women's groups there should be interministerial collaboration for channeling donor funds through the Treasury Department.

9. Women's groups should be given chances to visit other women's groups so as to educate and motivate themselves with other activities and compare. The community development office should co-ordinate these visits. Provincial/regional competitions should be organized with trophies and/or certificates given.

10. The Government should encourage training institutions to include social work in their curriculum. There should be induction orientation courses for these officers who were not quite qualified for social work.

11. For areas that were very needy and did not have the capacity to solicit donor funds, the Government should make proposals for those groups, e.g., in Kitui.

In the plenary discussion that followed the presentations of the groups, it was indicated that maintenance of most water supplies was complicated and women alone without outside assistance, by the agencies concerned, might not manage. Since it was the District Social Development Officers who had the responsibility of guiding the development of women's programmes, it was strongly recommended that such officers be specially trained in various aspects of involving women in planning their projects, so as to enable women to plan more efficiently.

There was also a recommendation that the Women's Bureau within the Department of Social Services in the Ministry of Culture and Social Services should be elevated to a full-fledged department to facilitate the appointment and recruitment of additional trained officers, at all levels.

The participants were informed that efforts to train social development officers assigned to women's programmes in the district were being made by Government. Although in most cases, funds available for training were limited.

D. Module IV: Role of women in education and training activities for water supply and sanitation

Module IV, role of women in education and training activities for water supply and sanitation was presented by Ms. Lea Itta Kipkorir in conjunction with Ms. Leah Marangu. Ms. Kipkorir had been with the Kenya Institute of Education since 1970, and was appointed Director in January 1986. The Institute was a national curriculum development centre which produced all curricula from pre-school to post-secondary levels of education. Ms. Kipkorir was involved in many education activities and served as member on several educational boards. Ms. Marangu was Chairman of the Home Economics Department of Kenyatta University as well as Chairman of the Jomo Kenyatta Foundation, a Government publishing house. She was also involved with various women's groups, working on problems related to health and sanitation, nutrition and family life.

In presenting the module, it was praised as having been a well-researched document. It covered the issues in a very comprehensive way and each agency, organization or ministry would find many strategies which could be adopted or adapted in training programmes for women in water supply and sanitation.

It was noted that the cited examples in the module of some of the issues which might impede or speed up participation of women in education and training in some countries, was a very effective way of alerting participants to some which might exist in their own countries, but might not have been viewed as constraints as such.

Because water supply and sanitation programmes were in many cases likely to be community based, the need to involve all, not only women, in the community needed to be emphasized at all stages.

This was more so particularly regarding schools, churches, health centres and community development sectors for training and possible integration points for WSS. These were not entirely the domain of women.

On-site training was deemed to be an excellent idea, but it was also observed that exchange of visits to more established and successful WSS projects would further enhance, and motivate participants in their own projects. On-site training, though, could also be one answer to those women who had young children and had not been able to participate in training programmes away from home for lack of with whom or where to accommodate the children.

The idea of trainees and trainers working together as a team was considered to be appropriate and fostered group activity, and both would gain support from each other.

They found it necessary, however, to elaborate on the objectives so that at all levels of training, participants were very clear as to the overall intention of improving the lives of the individuals and the community. The objectives should go beyond the knowing stage to include understanding, recognizing, appreciating, and most important, practicing good personal and community hygiene and the contribution that water supply and sanitation could make towards it.

In formulating the training programme they felt that emphasis should be given in detail to the following processes:

- (a) information gathering - to identify the real needs;
- (b) formulation - to determine the objectives, be they short or long term;
- (c) planning - organizing the awareness, education or training objectives:
  - determining the methods and techniques to be used,
  - the teaching/learning activities;
- (d) selection and development of appropriate materials:
  - their quality and quantity,
  - their cost;
- (e) where possible a try out should be done in order to get feedback for revision;
- (f) implementation - scheduling provision of facilities and involvement of the wider community;
- (g) monitoring and evaluation.

On the whole, they found the materials to be detailed enough and the key issues identified so that with few changes to cater for local variation they should be quite useful for many developing countries.

In the general discussion that followed, the participants felt that the presentation was very informative and greatly complemented and clearly expounded the material in the module.

Participants recommended use of informal methods of training through visits to different communities in the country that were using different technologies. This, it was felt, could be effective in positively influencing change of attitudes. Pilot projects were also recommended as effective ways to test new programmes.



Participants were challenged to think out and recommend strategies that would succeed in motivating and promoting people to change some of their social practices that did not promote preventive measures in matters related to water use and health.

It was pointed out that although training facilities existed for women, most of them were unable to make use of such facilities due to their domestic work, such as caring for babies. It was recommended that organizations planning training for women should cater for day-care centres. An example was cited of the Lake Basin Development Authority which was taking into consideration mothers with babies and provided extra accommodation for the baby sitters.

Study tours were also recommended so that women could learn from other successful projects, e.g. Kwale Project.

On development of materials for WSS projects it was the feeling of participants that a central clearing-house should be established for use by various ministries and involved NGOs. The current situation revealed that there were a lot of materials in existence but scattered in various NGOs and Government departments. It was recommended that the information reference centre in the Ministry of Water Development should be revived and strengthened.

The videotape, "Prescription for Health" was shown and greatly appreciated by the group. However, it was felt that there was a need to make such films on a regional basis. Only then would local people identify with the training and activities of the film.

The officials from the Ministry of Information and Broadcasting revealed that the Voice of Kenya was working on a documentary on the Kwale Water and Sanitation Project. The Ministry of Health and Lake Basin Development Authority also informed the group that they were producing films and slides in health education and water.

The need of coordination in production of audio-visual material was emphasized particularly in order to avoid duplication.

The Kenya Institute of Education and AMREF could also be used as resource centres for WSS materials, it was felt

The following suggestions were also made by the group.

1. agencies/bodies that have any teaching material in the country should be identified;
2. all available teaching material should be documented, and where necessary translated and /or modified to suit local situations;

3. additional training/teaching material should be produced for use in educational situations;
4. information on available teaching material should be conveyed to all those concerned.

The participants then broke into three groups to address further specific issues. Their reports follow.

Group 1: Organize special programmes on health/hygiene within education programmes (formal and informal)

Chairman: Mr. J. Ndeleva  
Rapporteur: Ms. S. Mbugua  
Members: Ms. J. Kebathi  
Mr. D. Makerere  
Mr. J. Musyoka  
Ms. J. Njeru

The group divided training into formal and non-formal programmes.

A. Formal training programmes

1. Pre-primary
2. Primary
3. Post-primary
4. Secondary
5. Post-Secondary
  - Colleges
  - Universities.

Primary - health education was included in the 8-4-4 programme, i.e., personal hygiene, childcare.

In discussing this level, the following recommendations were made:

1. teachers should stress application - not just theory;
2. health education in schools should be supplemented by local health authorities and other experts;
3. teachers should have a more practical approach to matters relating to health, rather than rushing through the syllabus;

4. it must be made evident that change of behaviour and attitude has taken place;
5. learning through drama, songs and poems should be encouraged so that children are actively involved and possibly participate in actual composition of these activities; these must be built into the curriculum;
6. use of appropriate materials to convey ideas must be dramatic and relevant;
7. children must be exposed to practical construction of health/sanitation facilities in their day-to day learning activities, to enhance application in their communities.

#### Post - primary

1. scope existed for incorporation of health/sanitation measures within youth polytechnics such as:
  - drainage,
  - plumbing,
  - laying of water lines;
2. the use of a multidisciplinary approach should be emphasized, e.g., in sanitation matters.

Secondary - the curriculum had compulsory subjects, such as science and agriculture.

#### University

1. emphasize the practical approach;
2. expose students to appropriate technology with local and specific applications;
3. encourage applied research.

#### B. Non-formal training programmes

1. deliberate efforts should be made to include matters related to health/hygiene in general by the KIE and MCSS for women's groups and adult education;
2. regular visits to be made to other projects;
3. teaching through audio-visual aids should be encouraged;



4. research into diverse cultural values should be carried out for effective learning to take place.

The group also addressed the issue of identifying criteria to be used in the design of technical and pedagogical course to enable women to take part in training activities of WSS projects and programmes.

They identified the following criteria:

1. it must be culturally acceptable;
2. it must be affordable;
3. it must be sustainable;
4. it must be relevant and applicable to the local situation;
5. it must be designed relative to the level of trainees;
6. it must be relevant to the available local water resources;
7. it must have teachers that are acceptable to the group;
8. it must have built in flexibility within the training unit/materials.

Group 2:      Identify ways in which communities can be motivated to take more appropriate actions to improve sanitation within their environment.

Chairperson:      Ms. M.W. Njoroge  
Rapporteur:      Ms. B. Okwara  
Members:          Mr. W. Kinoti  
                     Ms. L. Mbeo  
                     Ms. B.W. Mwaniki  
                     Mr. J.O. Onyango  
                     Mr. W.O. Syeunda  
                     Ms. A. Wandie

The group first determined aspects of sanitation:

1. latrines and toilets;
2. refuse collection and disposal;
3. water supplies;

4. house and homestead improvement - environment around the homes;
5. food handling in the home;
6. personal hygiene and positive health habits.

Recommendations:

1. Communities should be educated in public fora on the dangers of negligence on all aspects of health.
2. A law should be passed to punish those who pollute their environment, especially in towns and public buildings.
3. Latrines:
  - a) Privacy should be used as a motivating factor to ensure that communities construct latrines for communities that have cultural inhibitions of different age groups and sexes using one toilet; they should be encouraged to build as many toilets as they find necessary.
  - b) Appropriate technologies should be used in areas where soils do not allow available raw materials to survive due to collapsing. A pilot project should be initiated within problem areas.
  - c) Communities should be advised to build latrines about 30 metres below the water point to avoid infiltration. They should also build them on the leeward side to avoid the smell.
4. Refuse Collection and Disposal
  - a) Communities should be encouraged to dig holes for refuse disposal which can form manure for their use later. They should also be encouraged to burn the papers.
  - b) A slogan should be devised to be broadcast over radio, television and other mass media facilities to raise the level of personal responsibility for keeping one's environment clean.
  - c) The urban authorities should intensify the process of collecting refuse in estates and providing dustbins in strategic places in towns.

5. Homesteads and House Sanitation

- a) All homesteads should have ventilations. Communities should be advised to keep animals separate from homesteads.
- b) Women should be educated on handling of food and clean storage. They should be encouraged to maintain personal hygiene when handling food.

6. Vermin and Rodent Control

Women should be encouraged to get rid of insect and rodents like bedbugs, mosquitoes, rats, etc. around them. Mosquito nets should be used in malaria prone areas. Communities should be encouraged to clear the area around homesteads.

7. There should be collaboration of all relevant ministries to educate communities on health and sanitation programmes.

Group 3:      Compile suitable materials to be used in training/teaching in WSS bearing in mind the availability and resources in different parts of the country.

Chairperson:      Ms. H. Yego  
Rapporteur:      Ms. W. Mitullah  
Members:          Mr. S.O. Makondiege  
                      Mr. M.K. Muriithi  
                      Mr. P.G. Munoru

The group first discussed the following issues:

Training Institutions

The existence of the Water Institute was noted. However, the following institutions were suggested as having the capability of being training institutions, especially for women's groups:

- farmers's training centers;
- institutes of technologies;
- district development institutes;
- adult education venues (schools, multi-purpose centres).

Training Materials

The need to find out what training materials existed was noted. Normally, information which already existed was not disseminated. It was suggested that District Information Centres be used as resources.



The following were identified as relevant training materials:

a) Audio-visual:

- transparencies;
- slides/tapes;
- videotapes;
- cassettes;
- film strips.

b) working modules

c) existing facilities for demonstration

d) printed matter:

- books;
- pamphlets;
- flip charts;
- newspapers;
- leaflets;
- posters.

Availability of Materials and Resources

It was realized that the issue of scarce resources limited the country as a whole and this would affect the availability of materials. Currently, many of the above-mentioned institutions lacked adequate or sufficient material or equipment. It was suggested that locally available resources be used and available materials from other organizations be borrowed.

The group then made the following recommendations:

1. Teaching aids related to WSS should be produced locally. The Ministry of Water Development should coordinate this with other relevant ministries.
2. District Information Centers should be enhanced and in cases where they did not exist, they should be developed to act as reference centres. The Ministry of Planning and National Development and Office of the President should co-ordinate this.

The group also addressed the issue of identifying criteria to be used in the design of technical and teaching methods in courses to enable women to take part in training activities of WSS projects and programmes.

3. They felt that at the national level, training institutes should have a positive bias towards women during recruitment, this would be done in cases where minimum requirements exist.
4. At the artisan level, women should be recruited as operators and lab technicians. Courses should be designed by semesters in order to suit women.
5. Also, correspondence course, adult education programmes and external degrees should be encouraged; and media programming should encourage girls to go into technical training.

In the ensuing plenary discussions, it was emphasized that the material production unit of the Department of Adult Education should be expanded to enable the production of materials on water supply and sanitation. To reduce cost in production of teaching materials, use should be made of existing institutions.

It was noted that although a lot of emphasis was being put on sanitation in rural areas, the situation in the urban areas was deplorable, especially in public buildings.

This had resulted from lack of responsibility among urban residents. There was also a tendency to depend totally on facilities. It was noted that due to increase in population, the facilities planned by the local authorities were no longer adequate. A recommendation was put forward of the need to create awareness among people regarding self-reliance and self-respect. This could be effected both at school and at home.

The code of conduct prepared by the government should be implemented.

Other means to motivate communities were given as follows:

- use of religious or women's groups;
- formation of water and sanitation groups;
- establishment of small scale industries for recycling of refuse.

It was indicated also that the curriculum in schools was theoretical. A recommendation was made to use local resource persons in the area for more practical teaching. Teaching should be expanded to include not only the teaching staff, but extension workers in the area should be involved as well.

On the criteria of selection of trainees in WSS institutes, it was strongly felt that girls should be encouraged to take up science subjects, but their entry grades should not be lowered. A deliberate effort should be made to encourage girls to take interest in science-related subjects.

E. Module V: Evaluation of water supply and sanitation projects

Module V, evaluation of water supply and sanitation projects was presented by Mr. Daudi Waithaka. Mr. Waithaka, a consultant with Matrix Development Consultants, had worked for over 13 years in rural community development, dealing with small-scale industries, marketing, vocational training, women's projects, community-based health care and nutrition. His main experience had been in appraisal, management and evaluation, grass-roots animation and implementation.

In his presentation of Module V, Mr. Waithaka said that the project development process was comparable to a journey from a known point, through generally uncharted territory to a vaguely known destination.

The key process milestones were identified as follows:

- conception;
- planning;
- resource mobilization;
- implementation (with continuous monitoring);
- evaluation.

It was common practice nowadays to build evaluations into the plans. (The cost of evaluation could be anywhere up to 10% of project cost.)

The evaluation process usually had the following key steps:

1. decision to evaluate: often at planning stage;
2. selection of the Team Leader: someone knowledgeable and experienced in the project areas - critical but also sympathetic towards the project;
3. establishing terms of reference: a job description including costs;
4. desk studies: this was research done on the subject before plans were made, including review of plans and other relevant documents;
5. field visits for evaluation and planning: during the field visit, a team leader would plan the logistics and make appointments, etc., with all the relevant people;
6. planning and focussing the evaluation: it was at this stage that the team leader decided on the samples to be taken, compiled questionnaires, etc.;



7. data collection: this was viewed as a field exercise in which interviews were carried out, workshops held, records examined, etc.;
8. data analysis: an assessment of data, drawing out findings, conclusions and recommendations;
9. draft report preparation: done or co-ordinated by the Team Leader;
10. presenting draft to the project participants: not always done but becoming essential in ensuring correctness of information, feasibility of the recommendations ensuring a clear understanding of these by the participants;
11. preparing final report: incorporating comments by the project participants.

Evaluators, he said drew chiefly from four major sources of raw materials:

1. plans;
2. monitoring and progress reports;
3. the participants within the project:
  - a) donors
  - b) beneficiaries
  - c) government officials;
4. past experience, documentation, etc., in similar projects.

Evaluators applied points of measurement, sometimes known as key or success indicators. These included, for example, latrines:

- have they been dug as per plan;
- have they been constructed in a manner that makes them safe for children;
- are there flies or dirt around them;
- are the latrines in use;
- do some people not use them, etc.

Reports should be prepared and presented appropriately - presentation could be nearly as important as the content.

A good balance between the successes and shortcomings should be maintained.

With regard to the module, Mr. Waithaka felt that it appeared to include all the key areas; it was simply written and would form a good guide for those involved in community development or those who ran water and sanitation projects.

During the general discussion that followed, the participants wanted to know the best timing for carrying out an evaluation. In the small, community based projects, three years after the implementation of the project was suggested as ideal.

Regarding methodology for evaluation, the participatory method was recommended as being the most appropriate, people should be encouraged to come up with recommendations for improving their own projects. However, in judiciary evaluation, it was felt that it was not always possible to include the participants due to the nature of the evaluation.

It was further pointed out that usually evaluation tended to only bring out the negative aspects of the projects. It was agreed that while the negative aspects were also an important part of the evaluation report, there was a need to strike a balance. The ideal situation would be to first highlight the strengths of the projects and then in mild language, point out the weaknesses of the projects.

On evaluation costs, it was pointed out that at times the costs were too high, even prohibitive. It was explained that the fees charged depended on various categories of projects, e.g., international agencies or organizations, NGO projects and community projects. On the latter type of project, it was noted that the fees were minimal.

The objectivity of the reports given by the team leaders was raised. However it was agreed that the team leader should work very closely with other members of the team.

On the value judgement of the evaluators, it was recommended that the evaluator should not make his situations the yardstick for the projects, but should make comparisons of similar situations, e.g., arid areas and situations should not be compared with areas with a lot of rainfall. The evaluator should try to be objective in his reporting.

The participants then broke into three working groups. The following are their reports.

Group 1:        Establish criteria for evaluation of WSS projects on a long-term basis

Chairman:        Mr. S. Makondiege  
Rapporteur:      Mr. J. K. Biwott  
Members:         Ms. J. Bund  
                   Mr. M. Kariuki  
                   Ms. J. Kebathi  
                   Ms. M. Ombai  
                   Mr. A. M. Matila

The recommendations of the group came largely from the presentation. The group repeated that "Evaluation" in itself did not improve anything. It must be based on proper planning with well-defined parameters and indicators. The recommendations took into account two main categories of projects, namely:

- projects being implemented;
- projects already underway.

One assumption to be made was that the long-term view was proper and well conceived by all interested parties prior to evaluation.

This meant that as such built-in evaluation techniques were included in the planning, implementation, operation and maintenance process.

The group recommended the following:

1. All projects should have built-in continuous evaluation methods and procedures.
2. For continued success of project implementation, operation and maintenance, a steering committee could play a vital role. Nevertheless, without properly defined and well-understood terms of reference, the potential of the effectiveness may be reduced. A steering committee with well defined and agreed upon terms of reference and suitable representation be formed for every project under implementation, or for operation and maintenance.
3. For day-to-day activities there must be a project implementation group subordinated to the steering committee. The success or failure of the project would largely depend on this group. Well trained and suitable leadership should be maintained at project level all the time.
4. For projects under operation and maintenance, certain critical expertise was deemed necessary. This expertise should preferably be community-based, i.e., the expert must be part of the community. In the



case of women's groups, the expert should preferably be a woman. This meant continual training of women. Suitably qualified and interested women should therefore be given the opportunity to train in identified training institutions.

Group 2:        Recognize and enhance women's activities within the evaluation of WSS projects.

Chairman:     Mr. J. W. Owindi  
Rapporteur:   Mr. D. J. Makerere  
Members:      Ms. S. W. Mbugua  
                 Mr. P. G. Munoru  
                 Ms. J. T. Njeru  
                 Ms. M. W. Njoroge  
                 Mr. J. O. Onyango  
                 Ms. A. Wandie

The topic was divided into four main subheadings and presented as follows:

A.    Decide to evaluate

The group came to a consensus that the first thing to be considered in this topic was to recognize the role of women as being the main beneficiaries of WSS projects. It was recommended therefore that there be deliberate action to actively involve women in evaluation of these projects at all stages of the project cycle. This would enhance and ensure the effectiveness of the project.

B.    Select team leader

As much as possible the team leader and the team as a whole should be sympathetic, experienced and knowledgeable with the subject. These could be men, but a woman in the team was a necessity as she could air concerns on matters affecting women. As much as possible it should include persons close to the recipients or beneficiaries, e.g., a member of the local women's group could be of great help.

C.    Decide on focus of evaluation

The group felt at this juncture that evaluation could have different objectives. As such there should be a deliberate inclusion of women's interests within the objective. Factors like technical conveniences on the side of women, privacy on the side of sanitary facilities, or issues like accessibility of the facilities to the affected groups were of great concern to women.

Besides these, in terms of data collection, it was advisable to interview the women who were in permanent contact with the WSS facilities.

D. Prepare recommendations and establish priorities

Prepare recommendations and make them available to the beneficiaries for commentary or do any collections and additions to the report before a final draft is made.

As a last stage to the above process, a follow-up of the recommendations should be made to ensure that all the recommendations had been put forth and implemented.

Group 3:      If you were the team leader for an evaluation of a community-based water and sanitation project, what indicators would you apply to measure:

- project operation
- project performance
- project impact

Chairman:      Ms. A. Malm  
Rapporteur:    Ms. G. Woigo  
Members:       Mr. W. Kinoti  
                 Ms. L. Mbeo  
                 Ms. P. Mburia  
                 Mr. L. Musyoka  
                 Mr. B. W. Mwaniki  
                 Ms. b. Okwara  
                 Mr. A. Waterkeyn

Project operation

Looking at the objectives, were they:

1. realistic;
2. achievable;
3. including women as target groups.

Project performance (both desk and field evaluation)

Check list indicators included:

1. how people felt about maintenance of WSS system: did they use it;
2. standard measures with other projects;
3. compare to other projects;

4. how much of the community was involved;
5. economy of the project (money collected/indicated);
6. was there income generation within projects, in relation to WSS;
7. operation and maintenance - records/charts:
  - (a) how many breakdowns,
  - (b) how many repairs,
  - (c) frequency of repairs;
8. separate interviews with:
  - (a) women,
  - (b) children,
  - (c) men;
9. general cleanliness of water/sanitation facilities;
10. usage;
11. responsibility of cleaning - looking at the roles;
12. traditional beliefs;
13. agenda of meeting;
14. frequency of meeting;
15. community records;
16. community perceptions;
17. water quality and quantity (clean enough);
18. did women involved in all facilities assist in integration of activities.
19. maintenance by user (women);
20. water storage - clean and available.

#### Project impact

1. how did women keep water before;
2. where were these water resources;



3. the economic impact;
4. other uses of water, e.g.,
  - vegetable growing,
  - tree planting,
  - pottery;
5. cultural changes - looking at positive and negative;
6. women trained to develop management skills;
7. new lifestyles introduced to the community (especially women);
8. health education message dissemination.

#### Health impact

1. report of diseases;
2. personal hygiene:
  - scabies,
  - eye infections;
3. quality of present and past life to the community;
4. increase of water usage;
5. community generation of ideas in project;
6. rise in people's expectations;
7. effect on the environment by the programme.

In the general discussion that followed, it was noted that there was a need to put more emphasis on participation of the local people in evaluation, especially those who understood the local language.

The issue of the measurement of indicators was brought out. It was suggested that the background of the project, policies and evaluation should form the basis for measurement for community based projects. The measure should come out naturally.

Indirect effects can also be used as indicators for the success of a programme.

The need to go deeper into a project to get other aspects of the success of the programme was emphasized. An example of Malawi was given where water supply was widespread, yet malnutrition was still very high.

## ANNEX I

### List of Participants

1. Ajode, K. A., Senior Public Health Officer, Ministry of Health
2. Arega, H. M., Information Officer, Ministry of Water Development
3. Biwott, L. K., Project Manager, Ministry of Water Development
4. Ibuutu, E. K., Planner, Ministry of Planning and National Development
5. Kebathi, J. N., Senior Education Officer, Ministry of Culture and Social Services
6. Kinoti, W., Programme Officer, Kenya Water for Health Organization
7. Kingori, J. N., Public Health Officer, Embu, Ministry of Health
8. Kipkorir, L. D., Director, Kenya Institute of Education
9. Kunguru, J., Kenya Finland Rural Water Development Project
10. Makerere, D. J., AMREF (Environmental Health Unit)
11. Matila, A. M., Chief Public Health Officer, Municipality of Kisumu
12. Mbeo, L., KANU/Maendeleo Ya Wanawake
13. Mbugua, S. K., Head of Department, Kenya Polytechnic Institute
14. Mburia, P., Producer (Radio), Ministry of Information and Broadcasting
15. Mitullah, W. V., Social Services Co-ordinator, Ministry of Local Government
16. Munoru, P. G., Provincial Water Engineer (Central), Ministry of Water Development
17. Muriithi, M. K., District Development Officer, Office of the President
18. Musyoka, L. M., Water Engineer, Ministry of Water Development
19. Mwangola, M. W., Executive Director, Kenya Water for Health Organization

20. Mwaniki, B. W., Chief Assistant Planner, Nairobi City Commission
21. Ndeleva, J. M., District Public Health Officer, Kitui, Ministry of Health
22. Njeru, J. T., Senior Assistant Secretary, Ministry of Education
23. Njoroge, M. W., Education Officer, Ministry of Education
24. Okwara, B., Information Officer, Ministry of Information and Broadcasting
25. Omambia, D., Research Officer, AMREF
26. Ombai, M., Assistant Project Co-ordinator, Lake Basin Development Authority
27. Onyango, J. O., Under Secretary, Ministry of Water Development
28. Owindi, J. W., Senior Social Development Officer, Ministry of Culture and Social Services
29. Syeunda, W. O., Principal Community Development Officer, Ministry of Culture and Social Services
30. Wandie, A., District Adult Education Officer, Ministry of Culture and Social Services
31. Wandeka, E. O., KANU/Maendeleo Ya Wanawake
32. Waterkeyn, A.J., Technical Adviser, Kenya Water for Health Organization
33. Were, N. L., Senior Inspector of Schools, Ministry of Education
34. Woigo, G., Women in Development Officer, Lake Basin Development Authority
35. Yego, H., District Adult Education Officer, Department of Adult Education



## ANNEX II

### List of Observers

1. Abbott, J., Technical Advisory Group, World Bank
2. Abdallah, A., Journalist, Kenya News Agency
3. Bund, J., Student, University of Toronto
4. Denoo, C., Assistant Liaison Officer, UNESCO
5. Keli, E., UNICEF
6. Laugesen, H., UNEP
7. Lorenz, G., Kenyatta University
8. Male, C., Adviser on Women's Training, ILO
9. Malm, A., Water Engineer, World Bank
10. Marangu, L., Kenyatta University
11. Mutuku, M., Consultant, Urban Basic Services, UNICEF
12. Namai, E., Project Communications Officer, UNICEF
13. Orlale, M. J., Assistant Programme Officer, UNICEF
14. Ramcke-Wyes, S., Programme Officer, UNEP
15. Scheer de Vela, S. L., Consultant, INSTRAW
16. Sinnatamby, G. S., Human Settlements Officer, HABITAT
17. Wind, M., Assistant Programme Officer, UNICEF
18. Young, J., Human Settlements Information Officer, UNCHS (HABITAT)

## ANNEX III

### WOMEN, WATER SUPPLY AND SANITATION

- a national training seminar -  
Nairobi, 9 - 13 November 1987

#### Provisional Agenda

1. Opening of the seminar
2. Election of officers
3. Adoption of the agenda and programme of work
4. Module I: Introduction of the International Drinking Water Supply and Sanitation Decade (IDWSSD) and the United Nations International Research and Training Institute for the Advancement of Women (INSTRAW)
5. Module II: Participation of women in planning water supply and sanitation projects
6. Module III: Involvement of women in choice of technology and implementation of water supply and sanitation projects
7. Module IV: Role of women in education and training activities for water supply and sanitation
8. Module V: Evaluation of water supply and sanitation projects
9. Adoption of the report
10. Closing of the seminar