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Introduction

summary of the strategy paper: **strategies for enhancing women's participation in water supply and sanitation**

Recognizing the impact which women can have on the success of water and sanitation programmes, the United Nations Conference on Human Settlements (HABITAT) and the United Nations Water Conference adopted special resolutions recommending women's incorporation in these programmes. In addition, the 1980 World Conference of the UN Decade for Women adopted a strong resolution that specially mandated "Member States and UN agencies, including specialized agencies, to promote full participation of women in planning, implementation and application of technology for water supply projects" At its 10th meeting held April, 1982, the Steering Committee for Cooperative Actions to support the IDWSSD decided to establish an Inter-agency Task Force on Women and Water A strategy paper entitled "Strategies for enhancing women's participation in water supply and sanitation activities" was developed and distributed to international agencies including the United Nations agencies, the bilaterals and international NGO's as well as governments of the developing countries

This paper was addressed to planners, decision-makers and implementors of water and sanitation programmes at the national and international levels Its purpose was to emphasize the importance of women's involvement in water supply and sanitation projects and to underline the various tasks required to achieve the Decade objectives with a view both to enhancing effectiveness of these activities and to increasing the well-being of the women themselves and their families

The paper emphasized integration of women's participation as part of the general efforts in water supply and sanitation activities It urged that no new parallel structures for women's activities be created and that women's participation not be viewed in isolation from government or international agency activities It also emphasized that women's contribution was an integral part of community involvement and as such both men and women should address the issue

The paper put forward a number of proposals and recommendations for action to be taken at the national and international levels to enhance women's participation in water and sanitation activities It emphasized the fact that

the recognition and enhancement of the role of women in water supply and sanitation depends on firm commitment at the national level. It urged government planning agencies to integrate women's needs and involvement into national planning and programming for Decade activities It recommended that governments coordinate their activities with non-governmental groups, including existing women's organizations. The Strategy Paper also suggested that international agencies promote awareness of the importance of involving women in Decade activities, giving technical support to national efforts in this respect, and of sharing experiences of how to promote effective women's participation in water supply and sanitation programmes

purpose of the present paper: **insights from field practice**

While it is increasingly recognized that women have crucial roles to play in achieving the goals of the Decade, there is inadequate awareness of how to go about promoting women's optimal participation. To begin with, the nature and scope of such involvement and the benefits derived therefrom, must clearly be perceived in order to guide the practitioner in the selection of appropriate interventions Women's involvement in water supply and sanitation programmes is not simply as beneficiaries, i.e merely profiting from the time and energy saved or the health improvement gained from the new or improved facilities Experiences have shown that women, as primary users and managers of water resources and as the principle influence on family sanitary habits, can contribute a great deal to the better planning, functioning and utilization of the improved facilities when provided appropriate training and support

The immediate question, therefore, is how best to approach, train and support women for these levels of involvement To the extent possible these operational and training strategies should be based on what has actually been learned from country level experience How can women be best involved? By what processes and under what circumstances? What changes result where women participate as decision makers and not simply as labourers or beneficiaries? What training methodologies have been found useful in equipping women for these broader roles?

The intent of the present paper is to share some

ideas on how women can be motivated, organized and assisted at the community level; and to give a few examples of approaches which have worked or not worked based on the experiences gained from country programmes and field studies It is not intended for use as a detailed technical guide or how-to manual on women's participation in water and sanitation projects but rather to be supplementary to the Strategy Paper Strategies for enhancing women's participation in water supply and sanitation activities Its focus was on how women have been and could be involved in the project cycle at the community level Its audience could be planners as well as implementors of water and sanitation programmes

Members of Mother's Club in Surigao City, Philippines, laying pipes for water supply system.
UNICEF, MANILA

Women's Involvement Viewed in a Broader Context

community participation and women's involvement

The objectives of water supply and sanitation programmes are to provide more and safer water, not merely more wells or boreholes; more and better sanitation, not simply more latrines Engineers know how to design appropriate systems, but the problem remains of how to ensure that they are used and maintained and that they continue to operate A 1976 study revealed that nearly half of the improved facilities of water supply and sanitation were unused or inoperative within a few years of their installation While inappropriate technology and/or lack of spare parts was certainly an important factor, attention should be given to socio-economic considerations which influence acceptance, rejection or misuse of improved systems Consultations with women are necessary to understand these constraints and motivations Regretably, although the importance of community participation has become widely accepted, the importance of women's roles in achieving programme objectives, in particular the objective of responsible community participation, is less defined

Water supply and sanitation projects must be prepared and implemented with the full involvement of the user community and particular recognition should be given to the importance and diversity of women's role in these activities Special emphasis has to be placed on targeting women as the main users of water supply systems and principal overseers of sanitation facilities.

At the same time, a discussion of strategies for increasing women's involvement in community participation must address women as an integral part of the total community The community must be involved before we can talk of women's full involvement In real life, men and women have joint responsibilities, each with different but interdependent roles and women fulfil complementary roles during the identification, planning and implementation stages of water an sanitation projects. The Dutch-aided Buba-Tombali Water Project in Guinea-Bissau is a good example of men and women complementing each other in pump maintenance One man was selected to take care of maintenance of the pump including lubrication and report of break downs One woman was selected to keep the well and its surroundings clean Similarly in the training of community promoters, one to one men/women teams were utilized [1]

1 *Experiences from the Buba-Tombali Water Project, Guinea-Bissau, 1978-1981, published by the International Reference Center for Community Water Supply and Sanitation (IRC), The Hague, The Netherlands*

primary health care

In attempts to meet the target of providing all people with safe drinking water and improved sanitation by 1990, and health for all by the Year 2000, increased emphasis must be given to the interdependence of these laudable goals for enhancing the quality of life For the fulfilment of all such goals, community women must, in fact, function as frontline workers.

The essential elements of primary health care include an adequate supply of safe water and basic sanitation and health education The involvement and training of community level health workers and volunteers, including traditional birth attendants are critical aspects of primary health care Women often make up the majority of primary health care workers, especially at the community level They should therefore be provided with special training in the health aspects of water and sanitation in order to make their role more effective and to ensure that water-sanitation-health messages are learned together This would also provide links to other related activities, such as elimination of sources of water contamination, safe storage of drinking water, animal excreta disposal, control of water pollution and safe sewerage systems in semi-urban areas, control of diarrhoeal diseases, etc.

Other village community workers and development cadres, i e agricultural extension agents, community development agents, home economics agents, and school teachers, have important roles to play in primary health care, including water and sanitation. Women could increasingly be recruited for positions in these areas and could be provided with short term, in-service training on the health aspects of water and sanitation. This would broaden the scope of their involvement, enhance their roles and optimize the use of human resources in the implementation efforts

women and development

The strategy for women's participation needs to consider water supply and sanitation as an integral part of the entire development process along with other socio-economic sectors Improved water supply and sanitation facilities can have many direct benefits such as reduction of the drudgery of water collection, improvement in health, nutrition and food supply Moreover, there are indirect benefits in the form of improved potential for economic and social development through increased productivity, enhanced earning power and improved standard of living

In Pakistan, after the piped water supply system was brought to a village, women expressed hope that other activities, including income-raising schemes could be organized in concert with water supply schemes in order to put saved time to good use [2]

In Senegal, the government-sponsored integrated rural development programmes have assisted women to organize themselves and grow vegetables Women contributed membership fees to form garden groups This provided the basic capital fund to be used to dig wells and build fences and roads Women grew vegetables on individual plots in the collective garden This brought them increased income Some have opened bank accounts from their earnings This is an example of how improved water supply can lead to multiple benefits for women and bring them into the development process. In some villages, women initiated health and social service facilities One garden group donated money to build a village maternity centre.[3]

2 *UNICEF-assisted Integrated Water and Sanitation Programme in Azad Jammu and Kashmir, Pakistan Government—UNICEF Evaluation Report, Islamabad, September 1983*

3 *Women's garden groups in Casamance, Senegal, UNICEF, Assignment Children 63/64, 1983 p 133*

How Women Have Been and Could Be Involved in the Various Stages of a Water/ Sanitation Project Cycle

planning

Planning at the community level

This paper will focus on the ways and means of involving women at the community level For women to be involved at the community level, it is necessary that,

(a) governments and cooperating external agencies adopt an unambiguous policy of commitment to the involvement of women in development and in Decade activities in particular and that funds be earmarked to make this possible;

(b) budgets be prepared taking into account time, money and the personnel required for activating full community participation, including women,

(c) the intention to involve women in the water supply and sanitation programmes be clearly enunciated by the programme planners and clearly defined in the programme document

As situations vary from community to community, there is no single model of women's participation suitable for all situations In community level planning, one has to begin by studying and understanding the status of women in the particular community Women's status in the community, viewed from the social, cultural and economic perspectives, may generally fall into one of the following three categories Different approaches need to be developed for involving women, according to the different situations as suggested by the examples

(a) A society where women are actively involved in economic production Culturally the women are free to participate in community life They are well organized into women's groups or organizations Under such circumstances, a higher level of women's involvement is possible

The Surigao rural water supply project of the Philippines is an example of full participation of women in planning and implementation In Surigao City, women are very well organized into Mothers Clubs which are under the supervision of the City Health Office These clubs are active in primary health care and income generating activities As women used to travel 3-5 kilometers up the mountain to fetch water, they approached the city administration for assistance to build a gravity flow water system to bring water to the villages The City Administration responded positively to these requests and subsequently the Surigao

rural water supply project was developed The Mothers club worked closely with the project technical team in the feasibility study, the design of the system and its implementation After water was brought to the village, mothers clubs organized environmental sanitation activities including the building of toilets, disposal of garbage, and promotion of personal and domestic hygiene The village sanitation has improved greatly [4]

4 *"Rural Water Supply Project of Surigao City, the Philippines", Water and Sanitation Team, UNICEF, New York, September, 1983*

Women sanitation promoters at work in Azad Jammu and Kashmir, Pakistan UNICEF, ISLAMABAD

(b) A society where women have no apparent role in decision-making either at home or in the community Segregation is practiced between men and women Under such circumstances, it is more difficult to promote women's involvement However, it is not impossible to involve them if correct approaches are taken

In the Pakistan Integrated Water and Sanitation Programmes of 1981-1986 in Azad Jammu and Kashmir, one component is to train sanitation promoters whose duty is to motivate and help promote latrine building in the villages Since segregation between men and women is practiced in the villages, the government officials are convinced that special efforts needed to be made to train female sanitation promoters together with men This was the first time the local Government and the Rural Development Department had tried to recruit women To begin with, out of 44 sanitation promoters trained during 1982, 8 were women An evaluation of the project carried out in 1984 showed that considering the social, environmental and organizational difficulties, the female promoters were doing a remarkable job.

The most important experience learned here is that in order to reach the women, one has to enlighten the men

first. Accompanied by community development workers, union council secretaries or sanitary engineers, the women sanitation promoters first organized water and sanitation committee for men Once they have won the trust and support of the men, they proceed to organized water and sanitation committees for women One women sanitation promoter told her story "I first organized men's committees, then I organized a women's committee of five women and trained the committee members to keep their houses clean, burn the garbage and motivate them to build latrines When these committee members were motivated and trained to keep their houses clean, other village women followed them Women motivate other women as well as male members of their families This is how the message of sanitation and health can soon reach every household in the village and the village itself can become much cleaner "[5]

5 *See (2)*

(c) A society where there is a large number of female-headed households, either on a temporary basis due to out-migration of male workers or on a permanent basis as a result of widowhood, divorce or abandonment, etc Under such circumstances men may still hold official positions of authority but women have influence in decision-making and often assume responsibility for project implementation

In Lesotho, over one third of the households are female-headed largely due to labour migration About 50 percent of the adult males are employed outside the country Naturally, women do most of the work in the home and community including installing new water systems, digging trenches, laying pipes and carrying rocks needed to construct water reservoirs When the Government embarked on a programme to train water minders or handpump caretakers to ensure sustained proper use of systems, it encouraged the village water committees to select women to be trained together with men Between 1981 and 1983, of the 348 water minders trained, 115 were women

Matsotang Molibeli (37), a mother of six, was given a five-day training course in the importance of potable water supply, the operation of the handpump and the potential breakdowns of the handpump She was also instructed in public relations, personal hygiene and environmental sanitation Supplied with a kit of basic tools, she returned to her

village, Matlohelva, to take care of the system Matsotang is also responsible for mobilizing her neighbors to help cut the grass around the water source and clean the distribution tank and seal boxes, collecting money from each family every month to defray the cost of diesel for the pump engine, maintenance of spare parts, transportation and the engine attendants' wages During winter when snow lies 2-3 metres deep, she ensures that the pipes are covered with earth lest they freeze and burst

Women water minders, according to Seth N'toi, the Technical Training Officer, have proved to be more reliable than men Because many men do not believe in doing voluntary work, they often abandon their responsibilities As a result of the work of the water minders, systems work more efficiently now [6]

6 *"Lesotho's Women Water-minders" by Hilda Paqui, UNDP Information Adviser*

Needs assessment

Communication/information and dialogue with the community is the first step for involving the community and women in project planning Through both informal and formal consultations with a broad spectrum of community members, including traditional and functional leaders, the attitudes, beliefs and values of men and women need to be obtained separately, requiring a separate sampling from each This is very important since men and women have different views on the importance of water supply and sanitation, while women might identify a water supply project as the first priority as they are the ones who have to walk long distances to fetch water, men may not feel the need for a water supply system The same is true of sanitation facilities A survey in Bangladesh carried out in December 1976 reveals that the sanitary latrines are primarily used by women, as it was they who felt the greatest advantage in having a latrine installed close to home In a few cases, two latrines can be found in one household, one for the males and the other for females In general, however, males and children hardly use latrines.[7]

7 *People, Water and Sanitation, UNICEF, Assignment Children, 45/46, 1979, p 141*

The following means for involving women at this stage have been suggested·

- **to work through existing structures, women's organizations, women's groups, traditional women's leaders, birth attendants, etc.;**

- **to ensure that information about meetings or activities reaches the women;**
- **to arrange that the time and venue of meetings and activities are conducive to women's ability to attend;**
- **to encourage active participation of women in discussions during consultations;**
- **to use female staff and volunteers to liase with women;**
- **when necessary, to hold special meetings with women; and to use key local women in segregated communities such as teachers, nurses or village birth attendants, to provide indirect representation of women in water supply and sanitation project decisions.**

The Baldia project in Karachi, Pakistan is a successful example of improving the sanitation in a slum area Since the project was launched, 70% of the households have built soakpit latrines. The initiative for latrines often came from women. It is women who suffer most the inconveniences and indignities when there are no toilet facilities in the home. It is also women who have to take care of the needs of their children and any aging housebound relatives. Almost half of the work of constructing latrines has been undertaken by women All the health committees formed have women representatives among their most active members [8]

8 *Baldia Soakpit Project, UNICEF, Pakistan, 1983*

Data collection

A socio-cultural study should be carried out as part of project planning The overall guidelines for such an exercise are clearly described in "Methods for Gathering Socio-Cultural Data on Water Supply and Sanitation Projects" (Simpson-Herbert TAG Technical Note No. 1, The World Bank, Washington, 1983) In an earlier publication, a basic questionnaire was adapted for various case studies to suit local conditions. ("Socio-Cultural Aspects of Water Supply and Excreta Disposal, Elmendorf and Buckles, Vol. 5 in Appropriate Technology for Water Supply and Sanitation, The World Bank, Washington, 1980)

In household surveys, to elicit information merely from men would not suffice since women have more personal, day to day experience of family water use and hygiene habits Therefore, in the selection of interviewers, there is a need to consider both male and female community members It is also important to hold separate inter-

views for women so that they can express their views more freely. In many situations, women are shy about discussing defecation and water use practices when interviewed in the presence of men Men naturally assume the role of the spokesman for women as well as themselves and often give erroneous information inadvertently

For water and sanitation project planning, it is recommended that persons carrying out data collection live in the villages for a few days and participate in the daily lives of the people As many activities concerned with environmental sanitation occur at dawn or dusk, living in the villages for a few days can yield valuable data The importance of involving women—both as observers and as observed—in this early planning cannot be overemphasized

Thailand is one of the countries that has achieved a remarkable level of success in trying to achieve the goal of the Decade. It is quite likely that almost every village household in Thailand will have a minimum of 2 litres of safe drinking water per capita per day and a sanitary household privy by 1990 It is estimated that by 1984, 44% of rural households already had their own latrines The

9 *Barry Karlin, "Community Participation, Romanticism or Reality?" 1984*
10 *See (4)*
11 *R McDonald, USAID Engineer, P C 1983*
12 *"Water and Sanitation "Cultural Consideration" in Water Resources Development, ed Peter Bourne, Academic Press, N Y 1984 Mayling Simpson-Hebert, 1984 p. 187*
13 *Buckles, Patricia K "A Behavioral Case Study Two Rural Communities in Guatemala" One of the Seven Case Studies of Rural and Urban Fringe Areas in Latin America Edited by Mary Elmendorf Vol 8 Appropriate Technologies for Water Supply and Sanitation Washington, D C The World Bank Department of Transportation, Water and Telecommunications, in press*

Women being trained to maintain pumps. SARVODAYA MOVEMENT OF SRI LANKA

great majority are water seal latrines Most are models designed in Thailand, cast right in the village or in a nearby village, and are widely accepted for their convenience, privacy, dependability, lack of odors and low cost Thailand's experiences in delivering village water and sanitation services are pursue a bottom-up, decentralized approach, responding to community requests but not imposing or imploring them To achieve this, a vigorous attempt is being made to strengthen and work through district and village level organizations Project funds go directly to district committees composed of elected village headmen and elected village elders Village committees apply for these funds after villagers have decided how to go about meeting their own perceived basic needs To help them do this, village committees are given easy-to-use questionnaires and are taught how to collect information from each household and how to analyze their findings [9]

the design and choice of technology

In reaching technology decisions, full advantage must be taken of women's knowledge in water and sanitation aspects of the environment, including water source and water quantity during dry and wet seasons Women as water drawers can provide important information For example in the Surigao rural water supply project in the Philippines, women told the engineers the short-cut trail leading the spring source to the village The engineers found that the amount of pipes and fittings requested originally for 11 systems could be used to extend service to eight more villages [10] In Panama, women took the engineers to a fresh water source on the shore of the island which had not been found during the feasibility survey [11]

Women should also be involved in decision-making on the design of additional facilities for washing, bathing, hand washing, animal drinking, vegetable growing, and other activities In rural Khuzistan, Iran, communal laundry facilities built were large rectangular sinks, at adult waist height However, Iranian women traditionally wash clothes and dishes in a squatting position As a result, the laundry basins were not used [12] In Guatemala when standpipes had to be shared by three families, women helped in deciding which groups could share They also made adaptations for laundry and other uses [13]

Consulting with women on the design of latrines can often result in simple technological changes which make latrines more acceptable to users For example, in Nicaragua the latrine was not used by women because their feet could be seen from the outside. In Yucatan, Mexico, the engineers recommended a squat plate type instead of a pour-flush latrine because they thought women would refuse to carry water from the standpipe However, after consulting the women there, they found that the women rejected the squat plate and preferred the pour-flush.[14] In 1980 in Honduras, a pour-flush vitrified stool latrine was introduced in small numbers to rural areas This type has since been requested by women in many Central American countries, and is now manufactured in several countries An improved model is being tested in Brazil.[15]

14 *Elmendorf, Mary, and McGarry Michael "A Behavioral Case Study Chan Kom, Mexico" One of the Seven Case Studies of Rural and Urban Fringe Areas in Latin America Edited by Mary Elmendorf Vol 8· Appropriate Technologies for Water Supply and Sanitation Washington, D C The World Bank Department of Transportation, Water and Telecommunications, in press*

15 *Krudenink—Elmendorf UNDP INT/83/003 report 1983*

implementation
construction

In most low-cost water supply and sanitation projects for low income communities, women motivate and contribute a substantial part of the labour input in construction of water supply systems or latrines. In Malawi, for example, it is estimated that women provide up to 70% of the labour in most of the piped water schemes implemented.[16]

Aside from women contributing unskilled labor, attempts have been made to involve women in skilled jobs In a UNICEF-assisted water supply project in Nepal, a pilot project trained a few women to lay pipes These trained women are doing well.

In Thailand, rather than train villagers in district or regional centers, they are trained in villages at sites designated as "Transfer training centers", usually in the shade under a village headman's house. People to be trained as craftsmen are carefully selected jointly by village committees and health workers based on a candidate's reputation for honesty and community spirit Now half of all trainees will be women who will work alongside men in learning to mix concrete, pour latrine bowls and cast rainwater jars. Many school children and their teachers, the majority of them are women, have been trained [17]

During the construction phase of a project, women can be motivated to contribute materials which are locally available. This may take the form of bricks, sand, stone or

16 *WASH Field Report No 105, Malawi Self-Help Rural Water Supply Program A Mid-term Evaluation of the USAID-Financed Project, December 1983*

17 *See (9)*

timber In Burkina-Faso, formerly known as Upper Volta, women participate in the building of earthern dams by collecting the rocks and preparing the gravel stones needed for construction [18]

In nearly all cultures, women provide back up support to the construction workers in the form of food, water, etc

18 *"The Women's Dam" by Soon Young Yoon, Consultant, Water and Sanitation Team, UNICEF New York, September, 1983*

operation and maintenance

In most low-cost water supply and sanitation projects an operation and maintenance system that involves the community is always more effective The experiences in Malawi have demonstrated methods to establish a suitable organizational structure and to involve women to play their role

In the Malawi gravity feed pipe scheme, the chief instruments of implementation and maintenance activities are the organization of a network of village committees At the apex of the network of committees is the "project committee" It oversees the long period of construction and continues to oversee the operation and maintenance of the system In larger projects, there are section or branch committees that perform similar functions for major parts of the system After the completion of a water supply system, "tap committees" are organized These committees enforce the rules surrounding water use and are responsible for care of the tap, its surroundings, replacement of washers and broken tap parts Most members of the "tap committees" were women A one-year study of this community maintenance indicated successful results with an average of nearly 90% level of service [19]

19 *See (16)*

The following examples show how women are trained as caretakers of the water supply system The Responsibilities of caretakers of water supply systems vary with the different systems and their technology. A caretaker's responsibility varies from simple repair to simply keeping the pump site clean, supervising the correct use of the pump or other water supply facility and/or providing hygiene education In Bolivia as an adjunct to an agricultural development project, bi-lingual indigenous women, 17 to 25 years of age, were trained to administer immunizations, provide information on child nutrition and lecture on the proper maintenance of water and sanita-

tion facilities A number of these young women were reportedly in complete charge of repair and maintenance of the facilities [20] In Angola where women have been recruited as water source monitors, the breakdown rate has declined decidedly [21]

In Sri Lanka women have been trained as caretakers during nearly a decade. Women are also manufacturing pumps in a pilot project sponsored by the International Development Research Centre in Canada and the national Sarvodaya movement of Sri Lanka The new skills learned can help them later with operation and maintenance in their communities

In South India, a village level maintenance of handpumps for deep wells was developed In 1978, two years after the project began, 620 caretakers had been trained One of the most serious contradictions in having young men as caretakers was that they themselves do not collect water The women did not even know who the pump caretaker was The most effective source of young women caretakers was a voluntary rural development organization, called "The Island of Peace", which had a cadre of women workers based in about 40 villages The women were all trained as pump caretakers at UNICEF camps Some of them proved to be particularly effective Those who were nearest to the pump can ensure that the pump is properly used and the area around it kept clean Caretakers also have the support of a women's group, the village "Matra Sangam", that pays for the repairs [22]

Different types of simple, low-cost handpumps which can be village level operated and maintained (VLOM) are being developed and tested with support from a UNDP/World Bank project Some pumps can, and will be maintained by women. The new designs will be lighter and easier to operate, especially for women and children It is hoped that this will encourage women's participation in operation and maintenance

The following examples show that women could become successful managers of water systems In Honduras, at the suggestion of a women's legal society in Tegucigalpa, barrio women enlarged their group to a community wide action committee headed by women They made a formal request to the city authorities to get four

20 *J Stein, Water Life or Death, International Institute for Environment and Development, Washington, 1977*

21 *Elmendorf, Mary, and Isely, Raymond B "The Role of Women in Water Supply and Sanitation Programmes" World Health Forum, 1983*

22 *Postcards, pumps and an 'island of peace', Tirunelveli and Thanjavur districts, Tamil Nadu State, South India, London, Earthscan, International Institute for Environment and Development, 1983*

standpipes installed in their hillside slum. They put two standpipes near the top of the hill and two near the bottom, protected by little wooden shacks One of each pairs is open five hours a day in the morning, and the other five hours in the afternoon Community woman, usually from a female headed household, is hired by the committee on a rotating basis to be in charge of the standpipes, to collect set fees for water and to keep the water sites clean [23]

In Panama, a USAID project trained and educated women to participate in the piped water system In many committees, women had initiated steps to obtain the improved water system. They contributed during construction by carrying heavy loads of sand and by preparing food for laborers They were involved in maintaining the system and in several communities they collected water fees Women are said to have emerged as local leaders and successfully managed the collection process [24]

23 *Krudenink-Elmendorf UNDP INT/83/003 Report*

24 *R Meehan and A Viveros-Long, Panama Rural Water, AID Project Impact Evaluation Report No 32 Washington D C , U S Agency for International Development, 1982*

monitoring and evaluation

It is recommended that the Minimum Evaluation Procedures (WHO/ETS/83 1, CDD/OPR/83 1) be used for the assessment of the functioning and utilization of water supply and sanitation facilities Methodologies for monitoring and evaluating both women's impact on the project and the project's impact on women themselves are being developed by the UNDP Project INT/83/003

The following types of information need to be collected to establish whether women have been involved and the extent of their involvement in the project

- **Are there women sitting on the existing village water committee or its equivalent? If so, what is the percentage of women and what role do they play?**
- **Are women consulted on the choice of technology, the selection of well sites or pump sites? Are they consulted on additional facilities such as washing, bathing facilities?**
- **Are women involved in the construction? If so, what is the percentage of women's labour input in construction? Do women contribute in other ways, i.e. food, laundry, etc.?**
- **Are women given training in maintenance of water supply schemes? If so, what is the percentage of women trained as preventive maintenance workers/ caretakers/ managers of the facilities?**

- **Are women trained as health/hygiene educators? If so, what is the percentage of women trained, as compared to men? What is the relative impact made by trained men and women? A further survey could be done to check the turn over rate of trained women as compared to trained men.**

To evaluate women's impact on the project, studies are needed comparing the functioning and utilization of a project without women's involvement and that of a project where women have been involved Such surveys will contribute to raising the awareness of planners and engineers of the impact women have had on a water/ sanitation project Recently, a study in Bangladesh was under taken to compare the performance of women caretakers and men caretakers The study was carried out jointly by DANIDA/UNICEF from March to July 1984 60 villages were selected and 377 caretakers, 256 men and 121 women together with another 377 users were interviewed The preliminary findings show that over 90% of the tubewells are functioning well The women tubewell caretakers are doing the same simple repair work of the No 6 Handpump as the men caretakers The women caretakers interviewed indicated their general disagreement with the conventional belief that women mostly depend for the repairing and maintenance work on their husbands In fact, 76-86% of the women caretakers performed repair on their own Only 8% took direct help from their husbands/sons. However, the purchasing of spare parts in the market was done by men since women in Bangladesh villages do not often go to markets In terms of cleanliness of pump sites, women caretakers are found to do better then men 20% of the tubewells taken care of by men were found unclean compared to only 10% of the tubewells taken care of by women On the other hand, 40% of the women caretakers cleaned their platforms at least twice a week while only 20% of the men caretakers did the same [25]

To evaluate the impact of water projects on women, time saving as a project objective can be easily identified and evaluated Time budget studies of women's daily routines on a seasonal basis will indicate whether or not time has been released to women and how women use the time released Such a study should investigate the following types of questions

25 *A comparative Study of the Caretaker System of the DPHE/UNICEF Rural Water Supply Programme and that of the BRDB's village Health Workers Project, UNICEF/DANIDA, Dhaka, Bangladesh, 1984*

Women's vegetable garden in Casamance, Senegal
UNICEF, NEW YORK

- Do women derive economic benefits from the released time? How women use the saved time for income generating activities such as sewing, handicrafts, vegetable growing; for greater involvement in the local market system; for education and training or learning new skills; or others.
- Do women achieve health improvements? The type of benefits received: more time to take care of children; more water for washing, bathing, personal hygiene; acquire more knowledge about hygiene and water related diseases, change of behavior in water usage, food preparation, personal hygiene, environmental cleanliness, better disposal of wastes, etc.
- Do women receive any income during the construction of the project?
- Do women learn new skills?

training

From the examples already mentioned above, women together with men have been trained to be community level workers as caretakers, managers of improved systems, sanitation promoters, even skilled workers, etc Women who were trained have made positive impacts However, the percentage of women being trained is far below that of men To ensure that women be included in the training programmes of water and sanitation projects, the following aspects need to be emphasized

(a) Selection criteria for trainees

In addition to the general criteria for selection of trainees, special provisions should be made so that a certain percentage of women are recruited In Nigeria, the Imo State Water project trained village based workers to carry on health education One of the criteria of selection of trainees was that each village must select both men and women So some village selected 2 men and 2 women, others one man and three women, or vice versa This ensured that a certain percentage of women were selected and trained[26] posts where some financial remuneration from the government is available, it is men who are usually selected as trainees Whenever feasible opportunities should also be given to women

26 *Maggie Black, Special Study from Nigeria Spreading good news about Water and Sanitation, UNICEF News, Issue 116, p 13, 1984*

(b) Special measures facilitating women trainees' participating in training

Short-term training would be more desirable for women's participation. Training sites located in the villages would facilitate women trainees' attendance Sometimes, simple child care facilities should be provided so that young mother trainees can bring their young children with them.

(c) Women trainers and retraining of existing field staff

It is necessary to train women as trainers at the village level in order to reach women Special supplementary modules should be prepared to extend learning into homes Women should be involved in developing training materials Sometimes, there needs to be retraining and refresher courses for existing field staff to improve communication skills with women

For example, in Sri Lanka, special workshops were set for selected community development workers to train them

to work with rural women in designing income-generating activities with health and sanitation components.[27]

27 *Elmendorf, UNDP INT/83/003 report 1983*

(d) Support for voluntary workers

For men and women trained at the community level, most become voluntary workers More women than men work as volunteers at the community level Community might be mobilized to support them either in cash or in kind or exemption of obligatory labour Sometimes if they are not paid in money or in kind, some recognition or appreciation shown to these voluntary workers will also help A rise in status can serve as incentives for voluntary workers, as was noted in Togo where volunteer pump caretakers who were given positions on the village committee performed better and felt rewarded [28]

28 *Lane Hoffman, P C. 1984*

(e) Co-ordination of training community level workers

In communities where there are trained health workers, every effort should be made to promote collaborative activities integrating water and sanitation components in the primary health care programme At the community level, since many different outreach services aspire to benefit women and depend on women's active and responsible participation, it follows that institutional responsibility for training must be shared While sharing the responsibility to implement training, however, precaution must be taken to ensure that it is conceptually integrated Nothing could be more confusing to the recipients of services than to be approached by staff with conflicting philosophies and methodologies of field work

health/hygiene education

Providing water supply systems without sanitation and a support programme of health/hygiene education is not enough to bring about health impact In integrating this support component, it must be remembered that this is an area where women's involvement could have the greatest impact The following ways of involving women are recommended

(a) Education of women as users

Hygiene education, both personal and household, should be first of all focused on women, bearing in mind primary strategies related to knowledge, attitudes and practice

- Knowledge. Increasing knowledge of the water/infection and the excreta/water/food/infection relationships by linking information to existing beliefs and new practices,
- Attitudes Promoting positive attitudes toward hygienic use of transport vessels and storage receptacles, without neglecting the necessity of ensuring that appropriate vessels, receptacles, and cleaning materials or supplies are available locally and at prices within reach of the population,
- Practices· Promoting water handling, excreta disposal and food preparation practices that contribute to better health, use of clean, covered transport and storage vessels, hand washing after defecation and before food preparation, covering leftover food, toilet training of toddlers, proper disposal of infants' stools, and proper use of care of latrines,

(b) Train women as promoters and educators

Women themselves have been found to be the most effective promoters and educators in programmes where they are the primary focus Women workers generally understand more intuitively the problems and issues faced by other women and can communicate more openly with other women In Bolivia, young women 17 to 25 years of age were trained in the proper maintenance of water and sanitation facilities as an adjunct to a training programme in primary health care [29] In Mexico, the initial success of village water supply in 1958, as well as its continued operation and improvement over two decades, is due in great part to young women who assisted in the early planning stage and then to local women whom they trained to become ac-

29 *See (20)*

tive members of the water committee [30] In Pakistan, women sanitation promoters were trained together with men promoters One woman sanitation promoter observed Only a woman can tell another village women how to keep her house, her street and her children clean, as well as to take care of the food they eat If we succeed in convincing one woman, she can motivate other women and male members of their families, their friends and relatives [31]

(c) Work with and build on existing social structures

Too often, health/hygiene education are being looked upon as simply giving information through media, radio or posters Experiences have shown that by merely bringing across messages is not enough to change the people's attitude and behaviors Communications/information should be followed up by motivation and organization of the community to take actions to improve their environmental sanitation or change attitudes and behavior in order to improve their health condition This could be done by strengthening of existing women's groups or the creation of new ones as necessary to build peer support for desired change Community organization work should in fact focus a priori on existing structures and their enhancement In addition to the enhancement of women's groups, other ways should be found to mobilize the more general community organization to take action in changing attitudes and behaviors in sanitation and hygiene

One example is the Surigao Rural water supply project in the Philippines. Mothers Clubs organized activities to promote village sanitation, including latrines, garbage disposal, domestic and personal hygiene, even beautification of the village by growing flowers Every year, a convention was organized and prizes offered to the village that has done best in environmental sanitation As a result, the overall cleanliness of the villages was very refreshing [32]

30 *Elmendorf, M L Public participation and acceptance Environmental Impacts of International Civil Engineering Projects and Practices, New York, American Society of Civil Engineers Publications, 1978.*

31 *See (2)*

32 *See (4)*

Conclusions

This paper is an attempt to put forward some practical ways and means to involve women in water and sanitation programmes. In order to bring to life the specific recommendations and suggestions, many field examples were cited However, the examples cited were far from exhaustive New examples are being developed as more and more agencies are promoting women's involvement in their water and sanitation programmes The recommendations and suggestions made in this paper are also not exhaustive They should be viewed as an introduction to more comprehensive studies being carried out by agencies of the United Nations system and bilaterals. To name one example, the selected and annotated bibliography and literature review on women as users of and contributors to community water supply and sanitation prepared by the UNDP/NORAD project INT/83/003

Moreover, a number of symposiums and seminars were held in 1984 on the subject of women's involvement in water and sanitation activities, to name a few

- The International Seminar on Women and the International Drinking Water Supply and Sanitation Decade, sponsored by the United Nations International Research and Training Institute for the Advancement of Women (INSTRAW), held in Cairo, 12-16 March 1984,
- The symposium "Local Decade men, women and agencies in water and development" organized by the International Reference Centre for Community Water Supply and Sanitation (IRC), held in Amsterdam, 20-22 June 1984, and
- The Seminar on Women's Issues in Water and Sanitation organized by the International Development Research Center (IDRC), Canada, held in Manila, 24-26 September 1984

During these seminars and symposiums, experts from countries all over the world participated, discussed and shared experiences on the issue of women and water The papers submitted to these meetings and the reports coming out of these meetings provided a wealth of information and recommendations on the subject of women's involvement in water and sanitation activities This paper has been prepared drawing and building on recommendations and case examples of all these meetings Therefore this paper remains open-ended and will be updated as new experiences emerge

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