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CRDA Workshop on Women in Water and Sanitation Projects

February 22 - 23, 1990

Table of Contents

	Page
Opening Address by Ato Hagos Araya, Deputy Executive Director, CRDA	1
Cultural and Practical Aspects of Women in Water and Sanitation Projects by Wzo. Zewdie Abegaz, Programme Officer, Women in Development Division, UNICEF	3
Discussion of Wzo. Zewdie's Presentation	7
Women's Involvement in the Planning, Implementation and Operation of the Dodota Water Supply Project by Ato Amsalu Negussie, Ethiopian Red Cross Society	8
Discussion of Ato Amsalu's Presentation	10
Group Discussions and Reports	11
Article: **The Dodota Water Supply Project** by Andy Meakins, Kale Heywet Church Development	16
Appendix I: Workshop Programme	

CRDA

Welcoming Address

by Ato Hagos Araya
Deputy Executive Director, CRDA

Ato Hagos welcomed the participants to the third workshop organized by the CRDA Water Resources Interest Group.

He noted that the two previous workshops organized by the group were among the best attended workshops at CRDA. This shows the value and need for a form to exchange ideas, experiences and innovations among NGOs involved in the water sector and between NGOs and the government. Interestingly, the topics selected by CRDA members for the workshops have concentrated on the "software" i.e. the social or management aspects of water supply projects rather than on the "hardware" the technical aspects. Ato Hagos pointed out that the present workshop follows this trend.

CRDA's Deputy Executive Director suggested that an appropriate title for the workshop could have been "Women the Consumer of Water". In his view, men have little to do with the collection and use of water, and yet they are the ones who are mostly involved in the planning, implementation and management of water and sanitation schemes. It is no wonder many systems fail because of the lack of interest from the men in the community. This lack of interest is the result of not being directly involved in the daily struggle to fetch water.

It is widely recognized that the key to success of any water or sanitation programme is to involve the women users from the very start of the project and to train them to look after it once it is finished. Ato Hagos noted that there have been some notable successes in Ethiopia using this approach. In the current workshop, participants would learn about the Dodota Water Supply Project, a large project supplying some 17 villages and three towns in the Arsi region. This fine project, owned and managed by the Revolutionary Ethiopian Women's Association (REWA), has not been duplicated on a large scale. The present workshop addresses why such projects have not been replicated and what can be done to ensure greater participation of women in water and sanitation projects in the future.

Ato Hagos proposed that the involvement of women in planning water supply and sanitation projects enables realistic and appropriate technologies to be developed by taking into account cultural, social, physical and financial aspects of the benefiting community. He asserted that lack of consultation with women regarding the technical aspects of water projects will lead to improper design and inadequate attention to detail. Failure to consult women in the siting of water points or sanitation facilities may find them going unused. Through involvement in the project, and through training and education, women will be in a position to influence their families and their communities and so to change attitudes towards water, hygiene and sanitation.

Ato Hagos explained that the workshop would seek to find ways for the NGO community involved in the water and sanitation sector to put these principles into practice in the varied Ethiopian settings.

CRDA's Deputy Executive Director stressed that the Association is seeking ways to change attitudes —attitudes of women, attitudes of men in the male-dominated community structures and the attitudes of men working for CRDA member churches and agencies and for the government.

Ato Hagos said that the participants had a challenging task ahead of them. He expressed his belief that the participants would be free to share their experiences and ideas so that at the end of the workshop, definite recommendations

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would come out which could be applied to future water programmes.

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Cultural and Practical Aspects of Women in Water and Sanitation Projects.

by Wzo. Zewdie Abegaz
Programme Officer, Women in Development Division, UNICEF

Wzo. Zewdie began by answering the basic question of why women should be involved in water and sanitation projects.

She explained that through the ages, women have been traditional drawers and users of water. Being universal water carriers, they spend between one and four hours a day in water collection and transportation.

Women decide where they go to collect water in the rainy season; and where to find water during the dry season. They also judge how often and how much they will store, use and re-use and what to do with the eventual waste.

Analysis of women's water use shows that source selection is a national process for which a number of important factors have to be balanced against each other, such as time, care and cleanliness. Women are the most concerned and motivated by the benefits of improved water supply and sanitation, e.g., distance, weight, health, time and workload.

The water source is also a meeting point for local women to discuss their communal concerns.

While women's roles in managerial decision-making and maintenance work of traditional water supply sources and in sanitation activities is nothing new, the modern water sector hesitates to involve women as active participants, as well as recipients, in all levels of water supply and sanitation undertakings. Water engineers and technicians tend to underestimate the ability of women to carry out responsibilities in water and sanitation projects.

Wzo. Zewdie presented some of the economic and health benefits involving women in water and sanitation projects.

Consultation with women regarding technical aspects leads to a more appropriate design and greater attention to detail which in turn ensures that the system will be used and maintained and that it continues to operate.

Women, as the primary users and managers of water supplies and as the main influence on family sanitary habits, can contribute a great deal to the better planning, functioning and utilization of the improved facilities when provided with appropriate training and support.

Involvement of women in all stages of a project and at all levels by building on their roles in domestic water supply and sanitation can be a contributing factor to the achievement of water supply and sanitation improvement.

By virtue of their domestic functions and being regularly in contact with water (which is often polluted) women are particularly vulnerable to water related disease which, according to WHO estimates, account for 80% of all sickness and disease in the developing world.

These health consequences additionally carry with them a certain set of economic consequences. For example, it has been estimated in one Asian country that 23 million working days are lost every year through sickness due to waterborne disease. The annual cost to this country in terms of medical treatment and lost productivity was estimated at about US $ 60 million, thereby contributing to the vicious cycle of poverty.

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Wzo. Zewdie outlined some specific ways in which women could contribute to water and sanitation projects.

Women can express their felt needs and preferences by providing information on site selection (is the site convenient for women?), removal of waste and treatment of waste and water collection, transport, storage, usage and disposal.

Women can participate in data collection. They can determine whether water is a need or not for the community. Women can also contribute by providing information on:

- location of facilities
- schedule for using facilities
- suitable design
- cultural appropriateness

In terms of design and choice of technology, it is beneficial to use women's knowledge about water, sanitation and the environment. They can suggest additional facilities for washing, animal drinking and vegetable growing. They can also suggest possibilities for the use of waste water.

Women can suggest appropriate engineering for women's use. Are handpumps too heavy to operate? Are they placed at a convenient height? At the wrong place or wrong location?. They can also provide information about customs and traditional beliefs in choosing the technical design and location of the project.

In terms of the construction of a water supply or sanitation project, women can provide unskilled labour, and with appropriate training,they can contribute skilled labour such as trench digging, pipe laying, handpump installation and repair and mixing cement. They can also makes a in-kind contribution in the form of gathering locally available construction materials, stones, wood and sand.

As well, women can provide back-up support to the construction workers in the form of food, water, etc.

Wzo. Zewdie stressed the usefulness of women's involvement in the operation and maintenance phase.

The establishment of water committees with adequate membership is essential. Women can oversee construction, operation and maintenance. They can perform simple repairs, keep the pump site clean and supervise the correct use of the pump or other water supply facilities. They can also provide hygiene education and collect water fees.

Women, as primary users can prevent misuse of equipment and keep the environment clean.

Wzo. Zewdie proposed that evaluation should specifically focus in discussions on women, on identifying concerns or interests of women related to the installation of water supply and sanitation facilities in their communities.

The evaluation should highlight women as users and decision- makers vis-a-vis water supply and sanitation projects. A segment of the evaluation process should be interviewing women.

Evaluation should assess the impact of women's involvement and the effects of water and sanitation facilities on women in the community in terms of time and energy saved as well as economic and health benefits.

Wzo. Zewdie recommended that women in the community should be involved not only in the actual evaluation (as interviewers as well as interviewees) but they should also participate in pre and post-evaluation activities of the evaluation process. As such, an attempt should be made to identify the concerns of women prior to the actual evaluation and these should be reflected in the terms of reference for the evaluation. Moreover, women should be members of the community group given the responsibility for im-

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plementing the accepted follow-up and recommendations of the evaluation.

Wzo. Zewdie then presented a checklist for planning water supply and sanitation projects.

Checklist

1. To what extent do people in a community see water as a felt need?

2. Is potable water supply a need for women?

3. Is the site convenient for women?

4. What is the water source?

5. How much water is needed?

6. Where should the water system be located?

7. What kind of equipment is suitable?

8. Is the equipment suitable for women?

9. Are women involved in deciding the technology?

10. Does the water system ensure not only pure water, but enough water?

11. Are women being trained?

12. Is training provided to enable women to operate, maintain and carry out minor repairs of the equipment?

13. Is the relationship between pure and sanitary practices and sickness and disease clear to women?

14. Are the systems installed adaptable to women's needs?

15. What are the benefits for women?

16. Is the technology the most affordable option?

17. Is there a strategy/strategies to promote education on safe drinking water and sanitation through schools, health services, community programmes and meetings?

18. Are women given special training for the elimination of contaminated sources of water, the safe storage of drinking water, animal excreta disposal, control of water pollution and control of diarrhoeal diseases?

19. Is the technology adaptable to prevailing health patterns?

20. Is the equipment appropriate from the point of view of design and performance as related to local attitudes, and its relevance to the objectives of providing perennial, potable water in adequate quantities?

21. Can the facilities be operated without adverse, effects on the environment, e.g. drainage system?

Wzo. Zewdie concluded that the experience and research over the last ten years has shown that involving women in the planning and implementation of water and sanitation projects can frequently determine the success of the projects. New initiatives to involve women by freeing them of some of their tasks and compensating them financially must be tried and information must be shared.

She pointed out that water and sanitation measures are only truly efficient if they complement each other. The users must be educated in the proper use of equipment and facilities. The importance of education about water usage as a key component of water supply and sanitation projects should be recognized.

Wzo. Zewdie stressed the need to involve women in water and sanitation projects. Women have to be consulted when new pumps and other equipment are being introduced. They need to be trained in maintenance and repair tasks. Water pump designs which are unsuitable for women and children may lead to lack of or inefficient use, causing damage and eventual breakdown.

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Women must be involved in the selection of new well sites. If new water sources are inaccessible or too distant, they will not be used properly.

Women must be seen as a resource for the on-going evaluation of every water supply project, well installation and maintenance in every sanitation project.

Even though engineering traditionally has been considered the male's domain and women the users of the engineering outcome, the ultimate success of water supply and sanitation projects depends upon the concerted efforts of engineers in enhancing women's participation as active agents in decision-making, generating ideas in policy, mobilizing labour, providing resources and disseminating and implementing innovations as well as technical work and health education programmes.

Wzo. Zewdie underlined that the emphasis on women's participation does not imply that activities should be carried out by women only, rather it stresses the need for both men and women to address the issue.

Nevertheless, women can play a pivotal role in the sustainability of water and sanitation projects through their involvement from inception to operation and maintenance of the completed schemes. The position of women in the community and the family gives them the unique role of communicators of health messages to future generations, i.e. the children.

Women presently represent a grossly untapped resource in Ethiopia. If water and sanitation programmes are to bring economic and health improvement to the population, there must be a genuine effort by government and its partners in the water sector to integrate women in their plans. Not merely as passive observers but as active participants.

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Discussion of Wzo. Zewdie's Presentation

Mr. Wally Eshenaur, BGCM, asked Wzo. Zewdie if she knew of any appropriate design for clothes washing facilities near potable water supply systems.

Wzo. Zewdie said that some rural women have suggested a circular design deep enough for water and soap but not too large for children to use. A cloth plug was suggested and a distance of not more than 50 metres from a tap was recommended.

She added that the spill-over water from the washing facility could be used for cultivation.

Mr. Gerry Garvey, OXFAM/UK, explained that in his agency's Welo programme, they have tried to collect data on time spent by women to fetch water. He noted that this was a very time consuming task for NGO staff. He asked whether local women would not be appropriate information gatherers.

Wzo. Zewdie advised him that it was better to recruit school children along with a few literate women for this type of data collection.

Ato Yabowerk Hailu, CRDA, asked what cultural hindrances in Ethiopia were in the way of the full use of the mental and physical abilities of women.

Wzo. Zewdie pointed out that the technicians are men who like to talk to men. In general, male technicians find it difficult to talk to the farmers' wives.

She suggested that there is a need to train women as water technicians and that this training should be done in the rural setting in order to accommodate the women.

Wz. Fikerte Haile, The International Labour Organization, proposed that when implementing water supply projects, there should always be multidisciplinary approach with women experts.

Sr. Zewditu Tadesse, CRDA, asked what roles the women of the Revolutionary Women's Association, Traditional Birth Attendants and Community Health Assistants could play in water supply projects.

Wzo. Zewdie agreed that CHAs can be involved in the health education aspect of these schemes. REWA on the other hand, does not have experts. It is a mass organization and can be useful for mobilizing labour and support for construction crews and can also select women for training.

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Discussion of Ato Amsalu's Presentation

Mr. Ken Issacs asked if the collected water fees were deposited in an account in the project's name or in REWA's name.

Ato Amsalu said the account was in the project's name.

Mr. Issacs asked what cultural problems were encountered in the project.

Ato Amsalu explained that taking women from their villages for training courses was difficult for both the women and their families.

Mr. Issacs asked how many women were in management positions in the project.

Ato Amsalu replied that apart from one male technician, all other management staff were women.

Ato Bekele Tefera, SCF/UK, asked where the money came from for the payment of the water technicians.

The presenter explained that the technicians were paid from the collected water fees. The fee is Birr .05 for 100 litres.

Mr. Daniel Schoranus, KHCDP, asked what the total budget of the project had been.

Ato Amsalu explained that originally Birr 3.02 million had been budgeted. The actual expenditures had only been Birr 2.4 million. This amounted to Birr 42.80 per beneficiary.

Mr. Rupert Talbot, UNICEF, asked if the Water Supply and Sanitation Authority (WSSA) had any role in the project and whether the project had been replicated anywhere else in Ethiopia.

Ato Amsalu said that WWSA had no responsibility in the project and that similar projects were underway in two other areas of the country.

Mr. Ian Shaw asked what the running costs of the project were.

The presenter answered that approximately Birr 60,000 a year are incurred in running costs.

Mr. Gerry Garvey, OXFAM, asked who reports the broken taps and who purchases and installs the tap.

Ato Amsalu explained that one women technician is responsible for one to two points. She reports breakages to the zonal office. A zonal technician is then sent out to do the repairs. PAs are held responsible for deliberate damage. The project keeps stocks of spare parts and fittings are done at the project's workshops.

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Women's Involvement in the Planning, Implementation and Operation of the Dodota Water Supply Project.

by Ato Amsalu Negussie
Ethiopian Red Cross Society

Ato Amsalu explained that before joining the Ethiopian Red Cross Society, he had worked as the Head of the Water Development and Soil Conservation Section for the Arsi Rural Development Unit (ARDU). During his work with ARDU, he was closely involved with the Dodota Water Supply Project.

Ato Amsalu then described the Dodota Project.

The project is located in Arsi Administrative Region, approximately 30 km. north of Assela. The project area covers 300 sq. km. and has population of 54,000.

The area ranges from 1400 a.s.l. to 2200 a.s.l. and has 600 mm. of annual rainfall. It is bound by the Awash River in the north and the Kaleta River in the south. These two rivers are 38 km. apart.

The people of the Dodota area were collecting water from the Awash and Kaleta rivers and digging ponds before the start of the project. The area is not very good for pond construction because of the problem of seepage.

Ground water can only be found at depths of 200 m. and more.

A study was carried out by a Swedish social anthropologist. This study concerned Dodota and another awraja and focused on the problems facing the women of this area.

The sociologist concluded that the most pressing problem facing women in the area was water and the second was fuelwood.

Meetings between the Swedish International Development Agency (SIDA) and government authorities at the wereda level confirmed the water problem in the area. SIDA then agreed to support a women's water project.

Technically, the project involves the supply of water from capped springs through pipelines by gravity over long distances.

REWA was asked to participate in the planning of the project.

At the national level, discussions took place between REWA and SIDA. Since REWA had no technical staff, the Arsi Rural Development Unit (ARDU) was asked to participate.

The project was overseen by a steering committee. ARDU chaired this committee and REWA acted as the secretary. The Water Resource Commission, Arsi Regional Administration and the Central Planning Supreme Council (CPSC) were also members of the committee. Under the steering committee were ARDU's Executive Committee for the Dodota Water Supply Project and the Arsi Regional Manpower and Resource Coordinating Committee.

The Project was carried out in three phases.

During phase one, two springs were developed; a 100 cu.m. concrete reservoir was constructed; 3.5 km. of pipe was laid to Huruta town; and a distribution system with 12 fountains was constructed.

In phase two, 20.5 km. of pipeline was laid between Huruta and Dera; three 100 cu.m. reservoirs were built; three 25 cu.m. pressure break tanks were constructed; and a

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distribution system to seven Peasant Associations was developed.

In the third and final phase, a 100 cu.m. concrete reservoir was built; a 25 cu.m. pressure tank was constructed; 75 km.of pipe was laid; and distribution systems to eleven Peasant Associations were finished.

During all these phases, REWA mobilized the community for voluntary labour. More than one hundred women were trained in the maintenance and repair of the system, in administration and management and in basic accounting.

REWA was assigned the responsibility for the selection of trainees and the type of training to be offered.

Three courses were designed for women trainees. One was technical, i.e. pipeline installation and repair and welding. A second concerned the organization of the accounting. The third dealt with the management aspect.

Ato Amsalu described how during the construction activities, REWA organized the participation of whole communities. In one case, 21 km. of pipe was excavated in ten days. The construction of the entire system was completed six months ahead of schedule.

Birr 200,000 was contributed by the beneficiaries.

Upon completion of the construction, the entire management of the project was handed over to REWA. Two unit offices were set up and 47 women trainees were hired.

Ato Amsalu noted that in the past two years, REWA has not once had to call on ARDU technicians for repairs.

He said that although the project should still be evaluated after five years, he believed that it was a successful project and would be sustainable.

Ato Amsalu presented several lessons learned during the project.

First campaign (voluntary) work cannot be continued forever. Fees must be charged to pay for workers. People must also be trained to mange the system. Technically, the system should be designed to require little maintenance. A simple gravity system has this advantage.

A video was then shown on the Dodota Project.

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Group Discussions and Reports

The workshop participants were assigned to three discussion groups where they examined the following topics.

Group 1. Needs Identification and Planning Water and Sanitation Systems.

Group 2. Implementation and Construction of Water and Sanitation Systems.

Group 3. Operation and Maintenance of Water Supply and Sanitation Systems.

After thoroughly discussing these topics, the three groups made their reports to the plenary session.

Group 1

The first group was given the following guidelines and discussion questions.

1. What specific activities must take place to encourage women to honestly express their felt needs when identifying community needs? How can an NGO encourage this process?

2. List possible ways in which women can be the decision makers in planning a water or sanitation project? What cultural hindrances are there which keep women from being involved in decision making and planning and how can an NGO assist in breaking these down?

3. What efforts can be made to lighten the workload of women so that they are able to spend time in planning a water or sanitation system? What can an NGO do to encourage this process?

4. When planning a water or sanitation project, what methods can be used to ensure that women are directly benefiting (e.g. design of public taps, placement of facilities, pump handle weight, technology level)? What can an NGO do to encourage women centred designs?

5. List possible ways in which women can be trained and encouraged to remain centrally involved during the planning process? How can the planning process be used to ensure that women will continue to be involved during the implementation stage?

In response to discussion question one, the group made the following observations.

The initial contact with women is important. Women must feel comfortable with the situation (e.g. they should know that the men of the community are behind the project).

Women trainers must discuss with the local women to obtain true and accurate responses, rather than only with men.

The group felt that it was impossible for men to carry out surveys with the women of the community.

They suggested informal meetings with the people of the community in a variety of settings.

Group One proposed that an NGO can encourage women to express their felt needs by making a conscious effort to recruit women as staff for their water projects. They could also use women from the general area to get information from the village women. The best information place to obtain information is at the water source where the women congregate, rather than from individual women in their homes.

An NGO should do a general survey of women in its project area. The NGO should study the cultural habits of the local community. It should attempt to build true trust of the community. Often the NGO must accomplish something first in order to build this trust. There is a "Catch 22" situation where the costs and lead time for surveys, needs assessment and building trust are not budgeted.

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In response to question two, above the group felt that women must be involved in the initial steps of the decision-making process.

There is a need to communicate/study local religious customs. NGOs should acquaint themselves with local religions leaders and stress the importance of communicating with women.

A mixed male/female composition is best culturally for a water team.

Formal community meetings are good, but often involve only the men and a few of the more outspoken women. Hence, informal meetings at the water source with only women would be useful.

Communication at all levels is important e.g. with religious leaders men and women of the community and informal contact with women.

The group felt that women must see that the men recognize the needs and problems before they will speak freely. It was thought that an initial "mixed meeting" of both men and women would be useful.

Finally, the group recommended that the NGO should be seen to be committed to supporting women's involvement in the water project.

Responding to question three, i.e. what efforts can be made to lighten the workload of women so that they are able to spend time in planning a water or sanitation system, the group concluded the following.

An NGO should use informal discussion at the water source to find out what consumes the women's time.

Project activities should be planned around the peasant calenders, i.e. local holidays and coustoms.

The agency should also begin to plant seeds in the thoughts of men so that they can help with some of the women's tasks.

It could also teach women labour saving devices such as fuel- saving stores/multiple stoves and introduce kindergarten services.

The introduction of mechanical grinding mills could also help free women for project activities.

The group noted that the needs of the women may be beyond the scope of a water supply project. A multi-sectorial approach is therefore often helpful. However, the group advised NGOs to refrain from working beyond their expertise.

The group also pointed out the possible benefits of developing carts to carry water.

Group One made the following observations with reference to question four above (i.e. methods to ensure that women are directly benefited).

An NGO should pay attention to matters such as good drainage, the height of the hand pump and a place to set jars for women to load them on their backs without assistance.

The group proposed that sometimes you must go through a period of trial and error to determine what the people like and do not like. At first, the beneficiaries do not have the basis on which to determine their preferences.

Group One suggested that NGOs should think to the future when using a particular technology. Do remote communities without road access really need handpumps? Maintenance and parts can be a problem. Water supply system that require going up hills should be avoided. NGOs should design systems which can be used by children and which relieve the workload of women (i.e. heights and tap design). Including a wash basin can be very helpful for women.

Finally, the group listed what it saw as possible ways in which women can be trained and encouraged to remain centrally involved in the planning process.

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They suggested women could be trained in making ciment, mortar, etc. NGOs should endeavour to provide good women role models who can demonstrate the involvement of women in water projects. They should promote strong water committees in which women will be involved.

Group 2.

Group Two was given the following discussion questions and guidelines.

1. List possible ways in which women can manage the implementation of water or sanitation projects? What cultural problems must be overcome? How can an NGO be involved in this process?

2. What efforts can be made to lighten the workload of women so that they are able to spend time in implementing a water or sanitation system? What can an NGO do to encourage this process?

3. What activities can be included during the implementation stage to assist women in other areas related to water and sanitation so that their understanding of health, nutrition, etc. will be increased?

4. List possible ways in which women can be trained and encouraged to remain centrally involved during the implementation process?

5. Once the water or sanitation project construction is complete and ready to be turned over to the community, what should be done to ensure that women will remain centrally involved in operating and maintaining the water or sanitation system?

Women can be mobilized to provide unskilled labour for construction. It was emphasized that the project work should be performed by the active community not just the women. The project must be seen as a project for the whole community and not as only a women's project is also unrealistic to expect the women to do all the work required by the project.

It is necessary to know the feelings and thoughts of women about all the installations.

The water point can also be used as place for education of women on a continuous basis.

With reference to cultural problems facing women in water projects, the group outlined the following. The male dominance of rural Ethiopian society manifests itself in the dismissal of women as competent in a technical capacity. This tendency could be fought by choosing women with particularly strong personalities for staff positions in water projects.

Muslim men cannot talk directly to Muslim women in a committee setting.

There is a need to build the women's confidence in their work potential.

A written contract can be useful in outining what the women's involvement should be.

NGOs can play an important role in introducing technology which involves men in the transport of water, e.g. ox carts, mules, donkeys, etc.

Overall, the group felt that NGOs must be subtle in trying to effect cultural changes.

In terms of lightening the women's workload Group Two suggested that NGOs could introduce child care schemes, e.g. women taking care of each other's children or a rotationd basis. Other ideas put forth by the group were: new food preparation/conservation techniques, grinding mills, fuelwood projects, water carrying systems (donkeys, carts etc.) and livestock raising.

The group suggested that the water point should be used as an educational point especially for health education activities.

It emphasized that women should be assigned decision-making jobs and roles. They must also be active in the water committee.

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Once construction begins, women should be trained in daily maintenance activities. This should be written into the contract with the community.

The group also suggested that the water attendant should be paid. If possible, communal land should be setaside for vegetable farming to support the running costs of the water system. Each water installation should be self-financing.

Group 3.

Group Three dealt with the issue of "Operation and Maintenance of Water Supply and Sanitation Systems". The group discussion was guided by the following questions.

1. List specific ways in which women can be involved in managing a water or sanitation system on daily basis. What kinds or specific tasks can women be centrally involved in? Could women operate and maintain a water system without the involvement of men? Why or why not? What can an NGO do to encourage women's involvement?

2. What can be done to lighten a women's workload so that they can participate freely in the operation and maintenance of a water or sanitation system? What can an NGO do to encourage this process?

3. What activities which directly benefit women(other than operation and maintenance of a water or sanitation system) can women be involved in which relate to or are affected by the water or sanitation system (i.e. small gardens, clothes washing facilities, composting)?

4. What on-going activities can be included in operation and maintenance to provides incentives for women to remain centrally involved in the water or sanitation systems?

5. What kind of training programme should be implemented to ensure the needs of women remain in the forefront? What specific training activities should women be involved in to equip them to operate and maintain a water or sanitation system? How can an NGO encourage appropriate training activities which include women?

The group suggested that the water point attendant should be a woman. They pointed out that the level of technology was an important issue in water and sanitation systems. In other words, the emphasis should be on appropriate technology.

The group concluded that both men and women should be involved in water supply systems. In some cases such as the lifting of heavy pumps during maintenance, the additional physical strength of men is useful.

It was proposed that NGOs should ensure that women are involved in water committees, caretakers should also be paid and a mobile training unit should be set up.

NGOs should staff their projects with more women both for the technical and social aspects of their programming.

It was suggested that NGOs could sponsor short-term water engineering training courses inside Ethiopia.

NGOs could, in general, provide more water points. They could also enhance their water systems with washing slabs, bathhouses and showers.

To lighten the workload of women so that they can participate freely in the operation and maintenance of a water or sanitation system, the group suggested that NGOs should employ an integrated approach. This included day-care and kindergartens and income generating activities.

Group Three also proposed that the following measures could be undertaken by NGOs to provide incentives to remain centrally involved in the water and sanitation systems.

- pay caretakers
- introduction of labour-reducing activities

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- women as part of the water committee
- spare parts should be available

In terms of training, the group suggested the following. Training should be brief but to the point. Training should be repeated at regular intervals. The training sessions should include bookkeeping and sanitation. The health education component of the training should be practical and related to waterborne diseases.

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The Dodota Water Supply Project

by Andy Meakins

Editor's Note — During the second day of the workshop, the participants visited the Dodota Water Supply Project in the Arsi Region. The following is an article on this project published in CRDA News by Mr. Andy Meakins of Kale Heywet Church Development Programme.

What makes the Dodata Water Supply Project different from other such schemes? The benefits are commendable - improved domestic and personal cleanliness, a decrease in water borne diseases, noticeably better growth in young children, the women report they are healthier and stronger and have all been recorded in other schemes.

Participants at a recent two - day workshop at CRDA organized by the Water Resources Interest Group discovered what makes this a unique project. The workshop, entitled "Women in Water and Sanitation Projects", attracted 67 participants including many women. Wzo. Zewdie Abegaz UNICEF gave a most enlightening talk on the first day on "Cultural and Practical Aspects of Women in Water and Sanitation Projects". This was followed by a presentation on "The Role of Women in the Dodota Water Supply Project" given by Ato Amsalu Negussie, who worked on the project from the outset. During the afternoon, discussion groups grappled with key issues surrounding women's participation in water projects.

50 members left Addis Ababa early on the second day of the workshop to see for themselves the Dodota Project. Dodota Awraja, 130 sq km south east of Addis Ababa in Arsi region, is sandwiched between the Awash and Keleta rivers. Traditionally these rivers were the only sources of water during the dry season, which meant women had to walk up to 5 sq km to fetch water. Catchment ponds in the area dry up quickly due to rapid seepage and evaporation. Ground water is very deep and previously the only motorized pump unit in the area attracted long queues.

On arrival at the Water Project office in Huruta the party was met by the Manager and some of her staff. the uniqueness of this project was apparent; it is run by women and owned by the Revolutionary Ethiopian Women's Association (REWA). Of the 56 operation, maintenance and administrative staff currently employed, 48 are women.

The Manager briefed the group on the project's achievements. The project was initiated in 1982 and inaugurated at the end of 1986 and is designed to serve eventually 56,000 people, i.e. the projected population of the entire awraja by the year 2000. Two springs deliver 8 and 10 litres/second by gravity to three towns and 18 villagized Peasant's Associations. The construction of the project was divided into three phases.

Phase I

- Development of the two springs
- Construction of one 100 sq m concrete reservoir
- Laying of 3.5 sq km of pipe to Huruta town
- Construction of a distribution system with 12 fountains

Phase II

- Construction of 20.5 km of pipeline between Huruta and Dera
- Construction of three 100 m reservoirs
- Building of three 25 m pressure break tanks
- Distribution system to 7 Peasant Associations

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Phase III

- Construction of one 100 m concrete reservoir
- Building of one 25 m pressure break tank
- Laying of 75 km of pipe including a line to Awash Melkasa
- Distribution systems to 11 Peasant Associations

It was reported 48,748 people contributed each about one day's labour to the project and collectively more than Birr 200,000 in cash. During the project the highest Priority was given to training women so that they could handle the running of the scheme. More than 100 women were trained in the maintenance and repair of the system, in administration and management and in elementary accounting.

Two offices were established around 21 km apart to mange the scheme. Each office is responsible for collecting water fees and maintaining the pipelines and fountains in their zone. Water point caretakers are in walking distance of their respective offices and can easily report breakages or other technical problems. Trained women technicians are then dispatched to make the repairs.

Ato Amsalu explained that the Dodota project came about almost by chance. A Swedish sociologist had made a needs study of two randomly selected awrajas, one of which was Dodota. Suggestions were taken mainly from women. In Dodota the most pressing need was identified as water. The Swedish International Development Authority (SIDA) agreed to support a women's water project in the area. REWA was involved from the start an acted as Secretary to the Dodota Water Supply Project Steering Committee and the Regional Manpower and Resources Coordinating Committee. Although REWA has a national structure from the village level up to national level, it does not have technical personnel. It therefore became the responsibility of the Arsi Rural Development Unit (ARDU) to design and construct the project.

REWA played a leading role in the project by providing the criteria for the selection of women for training, by organizing family and social aspects and mobilizing community participation in the project. At one stage 21 km of pipe was excavated in 10 days. Finally, total responsibility for the operation and maintenance of the Dodota Water Supply was handed over to REWA. Normally such schemes become the responsibility of the Water Supply and Sewerage Authority but its resources are already over strained and there is no local structure. At the end of the day, the success of this approach was clearly seen.

At the water workshop in Huruta a demonstration of the facilities was given by Wzo. Kebebush, a confident young women wearing overalls and welding goggles. She explained each piece of equipment and the way she modifies pipes and fittings to make repairs and extensions to the system.

While driving back to Awash Melkasa, the considerable area covered by the project was fully appreciated and so too was the dryness and lack of alternative sources of water.

By the end of the day the group concluded that the Dodata Project is a very successful project. The main reasons being:

Appropriate Technology - the scheme is gravity fed from springs. No pumping or chemical treatment is required keeping the running costs how and maintenance simple.

Operational Structure - this was established during the construction phase to ensure sustainability of the scheme.

Community Participation - the close involvement of the main user of water - the women - in the planning, implementation and management has created a system the people appreciate.

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Coordinated Implementation - the Steering Committee other functional committees representing the users and concerned government authorities, effectively pulled together the resources needed for the project.

Training - was given to local people mainly women, to ensure skills were available for running the scheme.

Workers Remunerated - all project workers are given responsibility and receive a salary from water fees collected. Other schemes fail because they rely on volunteer workers.

Follow-up - was made by the Steering Committee, REWA and ARDU. Additional job training was given when needed.

The Dodota Project is unique in Ethiopia in that it is owned by REWA. Other water projects are managed by women. Whether women should always take the leading role to ensure success or whether men should also be represented is still a matter of debate. But the lessons learned from Dodota need be applied across the country by CRDA members and government alike.

Mr. Meakins is the chairman of the CRDA Water Resources Interest Group. This

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Appendix I

Workshop Programme on Women in Water and Sanitation Projects
February 22 and 23, 1990.

DAY ONE

Registration	08:45 - 09:00 a.m.
Opening Address by Ato Hagos Araya Deputy Executive Director, CRDA	09:00 - 09:15 a.m.
Presentation 1 **Cultural and Practical Aspects of Women in Water and Sanitation Projects** by Wzo. Zewdie Abegaz Programme Officer, Women in Development Section, UNICEF	09:15 - 09:45 a.m.
Discussion on Presentation 1	09:45 - 10:15 a.m.
C O F F E E / T E A B R E A K	10:15 - 10:35 a.m.
Presentation 2 **Women's Involvement in the Planning, Implementation and Operation of the Dodota Water Supply Project** by Ato Amsalu Negussie, ERCS formerly Water Development & Soil Conservation Section Head, ARDU	10:35 - 11:05 a.m.
Video Show on the Dodota Project	11:05 - 11:30 a.m.
Discussion on Presentation 2 and the Video Show	11:30 - 12:15 noon
Lunch (Provided by CRDA)	12:15 - 01:15 p.m.
Groups Discussion	01:15 - 02:45 p.m.
C O F F E E / T E A B R E A K	02:45 - 03:05 p.m.
Reports from Group Discussion & Summing Up	03:05 - 03:45 p.m.
C L O S I N G	03:45 - 04:00 p.m.

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Day Two — Field Visit

February 23, 1990

Assemble at CRDA Office	06:45 a.m.
Travel to Nazareth	07:00 - 08:15 a.m.
COFFEE/TEA BREAK	08:15 - 08:45 a.m.
Travel to Iteya	08:45 - 09:30 a.m.
Visit Dodota Water Project (140 km from Addis Ababa)	09:30 - 01:30 p.m.
Travel to Nazareth	01:30 - 02:00 p.m.
Lunch In Nazareth	02:00 - 03:00 p.m.
Travel to Sirbana Godetti	03:00 - 03:30 p.m.
Visit MOA's Solar Powered Pump Installations	03:30 - 04:15 p.m.
Travel to Denkaka	04:15 - 04:30 p.m.
Visit Ibex (Afridev) Pump Installations	04:30 - 05:15 p.m.
Travel to Addis Ababa	05:15 - 06:15 p.m.

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