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# WOMEN, WATER AND SANITATION

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*Or counting tomatoes*  
as well as pumps

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**PROWESS/UNDP**

Involving Women in Water and Sanitation:  
**LESSONS STRATEGIES TOOLS**

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This is a "discussion paper" from the PROWESS programme. Based on six years' work on drinking water and sanitation needs in well over a thousand communities in all developing regions, nevertheless it is decidedly not an "answers paper".

Instead, the purposes of the paper are to:

- describe the immense variety of issues and approaches involved in encouraging genuine participation by women and wider communities in water/sanitation projects.
- distill from this experience some of the questions and lessons of interest to those who plan and carry out participatory programmes.
- share some insights from conducting community level research, respecting some wholly unexpected answers and sharing more realistic measures of progress.

The paper is intended as an invitation to discussion between PROWESS and other actors in participatory water/sanitation projects. The hope is to stimulate further collection of ideas and practices which are emerging from the fortunate wider scope being gained for community-managed development. PROWESS is committed to continue the assembly and sharing of such experience.

For dissemination:

Beyond distribution as a printed booklet, this paper is also going out in a novel format: on compact disc (CD), as the keynote for a collection of publications on women, water and sanitation.

A compact disc can store up to 230,000 pages of printed materials as binary data. Played on a standard turntable for CD recordings, the disk then displays text for reading on a computer screen and generates paper print-outs. Unlike a book, the disk permits electronic scan and search and is virtually indestructible.

The women-water-sanitation collection forms part of a larger "library-to-go" of materials, documents, papers and books entitled "Women as Partners in Development". Further information on this title and others can be obtained from CD Resources -- Libraries-To-Go, 1123 Broadway, Suite 902-26, New York, N.Y. 10010. The production was, in part, supported by INSTRAW.

Siri Melchior  
PROWESS/UNDP

May 1989

**WOMEN, WATER AND SANITATION  
OR  
COUNTING TOMATOES  
AS WELL AS PUMPS**

by

Siri Melchior

PROWESS/UNDP Technical Series  
Involving Women in Water and Sanitation  
LESSONS, STRATEGIES, TOOLS

May 1989

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## 1. AN OPENING OF QUESTIONS

I hope you will find this an opening of questions rather than closed answers, because I believe that is how development works -- no one has all the answers, yet. It constitutes my personal opinion, and it is primarily based on my experience as part of a team working with over 1,000 communities in twenty countries through the PROWESS/UNDP programme (see back cover). Many of the thoughts have also been developed in consultation with members of the interagency Steering Committee for the International Drinking Water Supply and Sanitation Decade and in particular with its Task Force on Women (please see reference paper 20 of the bibliography for more details). Thus I consider these to be current topics for the Decade as a whole.

To me, the field of water and sanitation is a wonderfully clear example of the importance of women in the development process, as well as of how a sector of development is coming to grips with this fact, not only clarifying concepts but translating them into practical action.

To quote Saul Arlosoroff, the manager of the World Bank/UNDP water and sanitation programme: "I don't want women's involvement in water/sanitation projects just because I like them, but because otherwise the projects don't work".

With this realization, much can be done to advance.

## 2. WHAT DO WATER AND SANITATION HAVE TO DO WITH WOMEN?

"Water and sanitation are a women's sector" is something I hear increasingly from engineers (often men) working in international assistance in this field. They say this because they have observed at least some of the following facts:

### - Water

Women (and to a lesser extent children) are primarily the ones who draw water for household use, transport it home, store it until it is used, and use it (for cooking, cleaning, washing, watering household animals). It may be a matter of life or death to them and their families to know about water sources, their quality and reliability, restrictions and advantages of their use, acceptable storage methods, etc.

Women may spend as much as 6-8 hours a day collecting water. In Kenya, it is estimated that three million women spend an average of three hours a day. Quantities carried vary greatly, but as an example the World Health Organization usually sets 18-20 litres per person per day as the minimum acceptable. This would mean 108 to 120 kilos, or 238 to 264 pounds per day for a family of six.

The energy expended on this task may consume a third of daily caloric intake -- not negligible in populations where malnutrition is already a threat. Apart from various infectious diseases associated with poor water quality, trauma induced by the heavy load is common. As Ingrid Eide, former Director of UNDP's Division of Women in Development, says: "It is astonishing that women, the so-called weaker sex, always carry so much".

### - Sanitation

Women are generally the main guardians of household cleanliness and tend to the sick (they are even frequently the ones with major responsibility for funerals and mourning rituals). They are the principal teachers of hygiene behaviour to their children. To quote Dr. R. Rugunda, former Minister of Health of Uganda: "Women are the front-line health workers".

Men, women and children in various societies usually have specific and different customs related to cleanliness and defecation. Frequently, children's faeces are considered harmless and their defecation anywhere therefore acceptable; however, the fact is that millions of children die every year because faeces are not disposed of in a sanitary way. On the other extreme, women's defecation practices in this respect are often surrounded by more shame than for men. Frequently they must relieve themselves in secrecy, for example at night -- a difficult feat in areas with endemic diarrhoea, if defecation has to be done in fields far away from the home. In some societies a husband may not even be aware of his wife's problems in this regard, which would not be appropriate for her to communicate this to him.



Whether or not women face greater problems, practices often encourage separation of women and men - they may be unable to use the same facilities (as in modern office buildings) or to bathe in the same part of the stream. They therefore also have different priorities with respect to services. Programmes which ignore this are therefore in danger of providing services which at best can be used by one sex only.

- Other essential factors

Some facts which are not sector-specific have particular relevance for water and sanitation project design. To mention a selection: women and men in developing countries frequently have separate incomes, savings, and financial responsibilities. For example, women may be responsible for buying or producing household food, men for children's schooling.

Thus, responsibilities are separate and traditionally complementary.

There is apparently a growing number of female-headed households - most countries fall in the range of 10 to 40 per cent. In many countries women may be unable to own land (e.g. for placement of pumps) and have no access to credit (e.g. for purchase or maintenance of facilities). Finally, women almost universally, by practice or by law, have less power in decision-making than men, in private and particularly in public spheres.

I hope the above demonstrates that women are not a special interest group in water and sanitation, they are a mainstream interest group. They need to be both beneficiaries (a lessened burden being a prerequisite for contributing to other development activities) and partners (without their involvement, projects risk being inappropriate, and failing).

Unfortunately the above facts are as yet rarely translated into action terms in projects. It may be a women's sector, but most projects do not reflect this, and fail to reach their full potential. Why is this? This paper tries to examine this question and related ones: how far have we come, and what are the challenges for the future?

### 3. WHAT HAS BEEN THE RESPONSE? WHAT IS HAPPENING IN THE WATER/SANITATION SECTOR?

A major step forward in the water and sanitation sector was made by the UN General Assembly in declaring 1981-1990 the "International Drinking Water Supply and Sanitation Decade".

At the beginning of the Decade, some 46 per cent of the world's people had access to clean drinking water (100 per cent have access to some drinking water, or they would not survive) and 33 per cent to adequate sanitation. The goal was 100 per cent coverage by 1990. Some "Decade Approaches" were agreed upon as being essential, if these goals were to be met:

- integrate water/sanitation, link up with other sectors (e.g. health)
- use affordable, simple technologies which can be easily maintained
- maximize community involvement, particularly women's involvement
- strengthen institutions, train personnel at all levels
- promote self-sustained action, including cost recovery
- maximize co-ordination among the various actors

What has happened since then?

On the negative side, although services have expanded, the population unserved - that is, the remaining task - may actually have increased marginally. Even if the 100 per cent coverage goal is recognized as unrealistic, these results could be seen as disappointing. Why are they so low? About 300 million additional people were provided with services 1980-85, but this barely kept pace with population growth of 2 per cent per annum.

Many other negative factors intervene, but here I shall mention three that are of particular concern to us.

- (a) Despite the investment of tens of billions of dollars, depressingly high levels of services break down very quickly. In many countries, less than 50 per cent of pumps or other water points, as well as latrines, are still functioning, let alone used, two to three years after installation.

Reasons include hardware which is inappropriate to villagers' needs and difficult to maintain, or which the Government expects villagers to maintain and villagers expect Governments to maintain.

- (b) A statistic occurring repeatedly in policy documents on the Decade and in individual project agreements is that 80 per cent of disease in the developing world is caused by impure water and poor hygiene. Yet the health impact of improved water and sanitation services at this point remains controversial, at least in the short run. Some international assistance organizations have at times debated reducing funding because

health improvements are difficult to demonstrate or other measures cost less. In-depth country reports often show that even in cases where tap water has been introduced in houses, unhygienic handling of water between tap and mouth may pollute the water, and children's health does not improve. Limited knowledge of the process of contamination by those who handle the water is one major reason.

- (c) Another concern is lack of funding. Whatever could be expected from outside donors, whether international or governmental (with the latter far more important) it is not enough, especially not enough to pay for long-term maintenance. Thus, although this is also a controversial point, there is increased agreement that beneficiaries may have to shoulder some of the costs.

Despite these negative points, I personally believe the Decade has been an unusually positive success. Some reasons:

- (a) A major step forward has been the development of hardware which can be maintained at community level. Pumps used ten years ago were often imported (including their spare parts), needed complicated tools and skills to maintain, broke down easily because they were designed for use by a single household rather than 16-hour days of use by whole communities (say, 200 families per hand pump), needed a crane and several strong men to lift them out for repairs, and were sometimes even too high for the smaller women and children in developing countries to reach.

After years of development and local testing, robust pumps which are light enough for two women to lift and which can be repaired with a single tool have now been developed. They are produced locally, at a fraction of the cost of the more sophisticated systems such as piped water. If used widely, they could lower the cost of reaching Decade goals from US\$600 billion to a quarter of that amount. This in itself is an astounding development. Low-cost and effective latrines and other technologies have been developed with similar improvements.

- (b) Equally important is that the Decade has encouraged cooperation and concerted action amongst the different "actors" which, although nowhere near optimal, is high for the development field. This has produced a pooling of experience, agreement on principles of operation and general institution-building which, if allowed to continue, could be the basis for efficient action and high impact.

One area where attitudes have changed during the Decade is with reference to community participation, and in particular women's participation. The Mar del Plata Action Plan was still quite general in this respect, accounting for only two rather general recommendations in about six hundred.

However, recent international policy documents are a great deal more precise. The Interlaken Donors' Meeting in October 1987 in its report

suggested a change in the goals of water and sanitation programmes to go beyond counting numbers of installations toward socio-economic aspects, and called for precise work plans, budgets and expertise for the software aspects, including women's participation. Most agencies now have policy statements which refer to women's participation.

The creation of the PROWESS programme itself was a manifestation of the frustration felt by several actors in the Decade, that there were not enough concrete field experiences to back up the policy commitment for women's participation.

From a more impressionistic angle, many men and women involved in the Decade have told me that the atmosphere has gone from one where mention of women was met with ridicule and anger, to one where those who present their experiences in this field are welcomed, acknowledging them as partners in reaching objectives.

Why this change? One reason was simply that practitioners realized with time that their projects did not work without community/women's participation. Another, that the new hardware made community participation more realistic. Furthermore, numerous small-scale field demonstrations of community participation began to be implemented, working more or less well, but adding to the impression that it could be done.

To me, these measures of progress and change in the whole orientation of a sector, with its thousands of actors, are striking, and pose a challenge for the future. The goals, which were in any case very ambitious, may not all have been met, but the basis has been laid for rapid progress.

Yet, with respect to community and women's participation, most experiences are at a small scale. The basic knowledge is there. The attitudes are favourable. The policies are there. Some of the tools have been developed. What are some obstacles to full-scale implementation? These are discussed in the next section.

#### 4. OBSTACLES TO FULL IMPLEMENTATION

Working with development planners, sectoral specialists project practitioners and community leaders from all over, we hear many problems, obstacles and unanswered questions being voiced about women's (and community) participation. In a search for what works, and works most effectively, their objective observations and their subjective attitudes both present real issues we have dealt with.

We have gathered many, and selected eight, quotes which seem to reflect these concerns most aptly, as given below. In section 5 thereafter, we discuss more deeply the main factors involved in obtaining real community involvement that makes a difference.

"I don't understand what women's participation is."

Women's participation is still seen as something mystical, something that only women can do, whatever it is. There is a need to explain what it is, break it down into components described in the usual language of projects, relate it to the basic "Decade approaches".

"Women's participation is marginal to project success."

Many still do not really believe it makes a difference. There is a need to develop indicators of progress with respect to many of the "fuzzy" concepts involved (e.g. women's level of participation) and to show, in a rigorous way, that it does make a difference, both with respect to maintenance, use and impact. Demonstrations are of little value without data.

"It costs too much, takes too much time, is too complex managerially."

There is a need to show how much it costs (and how much it costs not to do it), and to devise practical workplans which will allow field managers to manage responsibly a flexible process with uneven progress. Indicators of success beyond service installation need to be developed, or the field managers will face pressure from their superiors who wish to hear how many pumps were installed this month.

"Coming from outside the community, I can't work to encourage community/women's participation, it is too sensitive an issue."

Ways need to be found to make it strengthening rather than weakening for the social fabric, to make it less threatening.

"I tried to get women's participation, but they wouldn't come to my meetings."

This is a statement I often hear from project managers at the field level. There is a need to produce guidelines, drawing on tested methodologies for community and women's participation, indeed, "how to do it".

"Those engineers don't care about development", and its opposite "Those social scientists are too academic, too micro-level oriented".

We have to recognize that we are trying to adapt very different approaches to each other. This takes trust, which only develops over time by building up respect for each partners' technical capabilities and needs.

"It's all very well that you have successful projects at small scale, but basically all demonstration projects are a success - can you do it large-scale?"

There is a need to implement such large-scale projects, to find methodologies which, even if not perfect, are realistic, and to establish their cost in financial, social and political terms.

"We've 'done' women in our agency - there is a policy statement which says women are important and we have a WID office.\* Now we want to get on to other matters".

Generally, policy statements do not go beyond overall statements, and need to be translated into programmatic terms.

It has been recognized that a "hardware" approach is not enough. What still has to be recognized fully is that "software" approaches are, in their way, as technical as the hardware approaches. They need time, funding and expertise to develop and implement.

What follows tries to address some of these issues in a preliminary way. One of the purposes of PROWESS/UNDP has been to show how women's involvement can be achieved. Therefore, although this paper is intentionally anecdotal, as indicated throughout the text as well as in the bibliography, it is part of a programme of publications which includes, for example, conceptual frameworks for planning and evaluation, field guides for training and research, in-depth case studies etc.

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\* WID = Women in Development

## 5. ISSUES TO BE FACED IN PLANNING AND IMPLEMENTING PROJECTS

### 5.1 What is community participation?

Those of you who are WID specialists, please forgive me if in this paper I discuss women mostly as part of their communities. I am aware that they exist beyond the communities. I am aware of the opinion that if there were more women engineers, flood control specialists, economists and so on, it might have a profound influence on the field. I am aware that women are often marginalized into the lowest level of decision-making. Yet, there are a lot of women in communities who have little access even to the lowest level of decision-making. The following considerations are particularly geared to recording our experience at that level.

To me, a basic issue is: do we really want community participation, and what do we mean by it?

One problem with past community participation efforts, in my opinion, was that they often reflected only a very narrow range of the community and of participation.

Communities have been taken as a homogeneous mass: if you talk to the headman, you know what the community wants/needs/can do. Yet, within communities there may be many different groups - old/young, rich/poor, Hindu/Muslim, men/women/children - each with different priorities, vulnerabilities and talents.

Participation has been seen as contribution of labour, ideas, materials, not as a partnership for decisions, e.g. regarding what type of facility, when, where - whether or not to participate in the project in the first place - who will be the community representatives.

"Decision" is an operative word. Many may see, at least with a little encouragement, that water is a women's task. However, it may take more effort to demonstrate that decision-making outside the home setting can be a woman's task.

There is a range of methodologies presently used to improve community involvement in water and sanitation projects. For example:

- A didactic approach might be a health education programme where villagers are informed about health hazards, and taught to wash their hands after defecation.
- Another approach is social marketing. This basically relies on extensive research on beneficiaries' views, beliefs and skills, and tailors education programmes to overcome obstacles in accepting the planned programme.

- The participatory approach has a different basic objective: to strengthen and enlist local problem-solving and decision-making capacity (individual and communal). This skill in turn is used by the communities to better benefit from and sustain development activities, such as water/sanitation.

Our experience at PROWESS is primarily with the participatory approach and what I state in the following pertains particularly to that approach.

Each approach has merits and costs, which depend on the task at hand, and often a combination may be desirable. The intention with all these approaches is to reduce the gap between the "supply" of services presented by governments, donors etc., and the "demand" for services by the intended beneficiaries.

As Paula Roark says:

"Communities always have the last word - if they don't like the project, they won't use it" (see PROWESS/WASH publication number 18 in the reference collection).

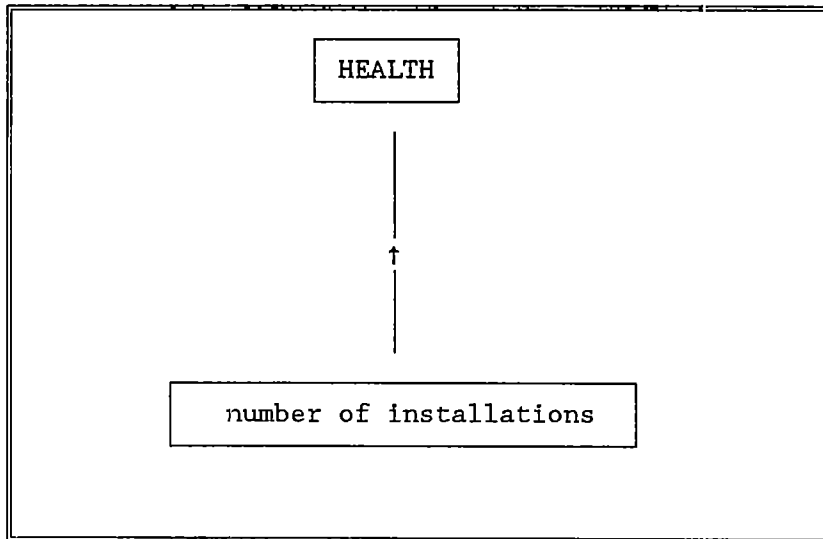
## 5.2 Avoiding Illogical Project Documents

First, a few clarifications. For better or for worse, both governments and donors often operate in terms of "projects" or "programmes". These are often described in "project documents" or plans.

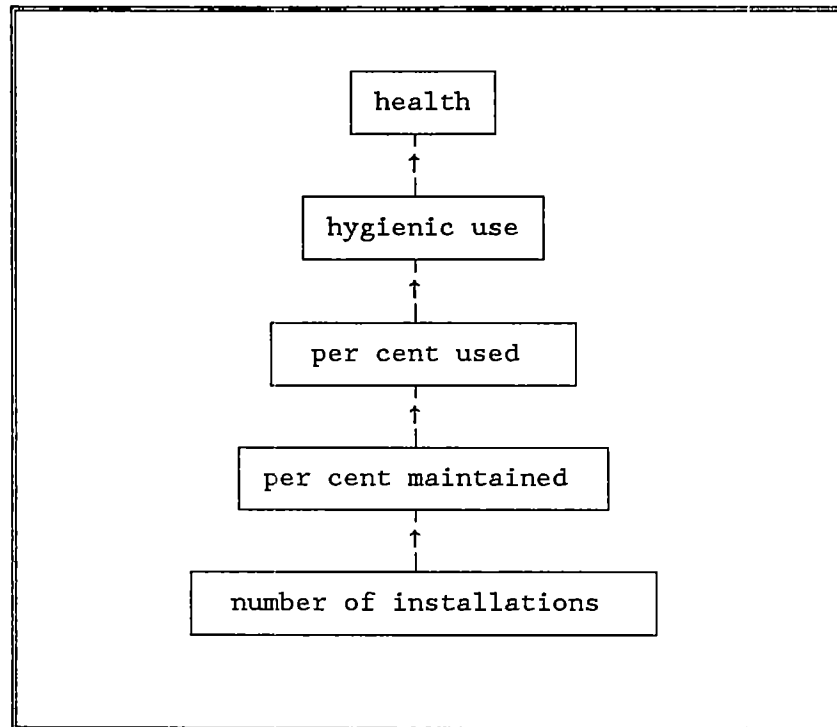
We review a large number of such project documents from various organizations. Repeatedly, I am struck by the project designs which seem to make success difficult to achieve - partially by so to speak closing the door to software aspects. Let me give a few examples.



Example 1. Many project documents give as justification for their existence the fact that 80 per cent of diseases are caused by unsafe water and inadequate sanitation. The planned activities under the project deal with installation of facilities, say pumps, and the budget deals with the people and materials needed to install the facilities. Thus, the indicator against which progress will be measured is the number and timing of installations. The implied logic seems to be:



Rather than accepting this heroic leap of faith, we find an analysis of intermediate steps helpful, not to say essential. For example, one might believe:



In reality, even this is a very simplified model, and not everyone may agree with it. Very few projects will be able to show impact on health within the time frame foreseen. Clean water may be a precondition for health, but so many other factors intervene that a simple relationship can rarely be found. However, the point that does seem clear is that installation of facilities will not lead to any benefits unless they are maintained and effectively used.

Example 2. A project has been ongoing for three years. So far, different types of hardware have been developed and chosen; no software component has yet been introduced. In the next phase, 25 per cent of the cost (cash) contribution from villagers is foreseen. To achieve this, project management will rely on introducing community participation.

This would be ambitious even if software methodologies had been developed and tested during the first phase, but part of the difficulty is in the idea that one can simply release community participation at a later stage, after decisions on the parameters of the project (e.g. institutions/type of technology) have been made.

Example 3. A project document states that, at present, 50 per cent of pumps in a given country are not functioning, since they are not maintained. To improve this situation, the document states that the planned project will place major emphasis on community participation. However, whereas other

budgets, work plans etc., are specified, activities to improve community participation are not. The explanation given is that this will be the responsibility of the Government.

Example 4. A project document recognizes that women's involvement is essential for the health impact of a water project. It also states that women will be "involved" in its planning. The activities foreseen, however, are merely a survey of women's knowledge, attitude and practices with respect to health - women are not foreseen taking part in decisions.

The above are examples of apparent shortfalls in planning - we have much experience in that. There is less, but ever increasing, experience in more effective ways of planning projects.

Here are some suggestions:

Suggestion 1 - Objectives At the least, objectives, indicators of success, and the relationship of activities to objectives should be analyzed. This of course could be true for any project. We have found it useful to use the objective sustainable and effective utilization of services, looking also at replicability (see also items 12 and 19 in the bibliography). Analyzing sustainability, for example, naturally brings up questions related to women's role as a way to reach objectives.

There are constraints to this. The organization(s) initiating the project must at least tolerate such an approach. Many still simply analyze plans in terms of installation cost per capita, with no indicators for sustainability, in which case for example, the cost of health education, may be considered a luxury.

Suggestion 2 - Who formulates the plan. There is a close connection between a project, a project plan, and those who formulate the plan. In the past, plans were often formulated by one or more hardware specialists. Increasingly, organizations attempt to bring software specialists into the formulation process. However, at this point, they are still often brought in at a later point, after major decisions have been made, institutions defined, etc. Their findings may be presented in a separate chapter under "special considerations", and often wind up being irrelevant or even disruptive to the rest of the team.

We have to recognize that there is a communication gap. There may be a large number of software specialists, but they have different premises, working styles and jargon than the hardware specialists. To build up "creative tension" rather than "abrasive tension" between the different specialists, time is needed. Our experience seems to show this does happen much more when the software specialists are there from the beginning and become part of normal working patterns. Of course, they also need appropriate working tools, adapted to the bureaucratic and other realities.

Suggestion 3 - Be specific. It can be argued that community participation is even more difficult to plan precisely than construction of a water system.

Certainly, many questions need to be left flexible. However, one can at least furnish the means to develop answers and act on them. A project document incorporates many such provisions; it can:

- identify institutions and staff to undertake these activities.
- plan a sizeable budget for them.
- leave sufficient time for the activities to start up before installation begins (e.g. if a budget is approved in phases, approve software costs first. If vehicles are to be ordered, order them for community participation field work first. See item 21 in the bibliography for an example.
- establish a work plan which speaks of how software and hardware can be braided together. If possible, describe decision points where communities have a role (e.g. will communities be able to decide whether they wish to participate? Will women have a role in this? Who will give the green light for the drilling of a well - the engineer, the community extension workers, or the villagers?) Also, methodologies for hard-to-reach groups such as women can be described, or at least the situation analyzed.

### 5.3 Measuring the unmeasurable

Many consider rural surveys to be less than perfect. For example, Robert Chambers, a British sociologist, declares (and I agree) that rural surveys may be considered one of the most inefficient of industries, as data collected are late, wrong, irrelevant and costly, if data are collected in an inappropriate manner.

However, in our experience they can be a superb tool if crafted well and used sensitively.

- Not all projects need the same quality/quantity of data. For demonstration projects major emphasis must be placed on this aspect. Other projects may need less data, but they need some.
- We have found collection of some types of data particularly aggravating to field staff and villagers. One example of a hated question: precise type of use of water (how many litres used for what purpose). Field staff consider this tedious and intrusive to collect. This is why adjustments should be made in timing and style, to arrive at realistic plans. As Andrea Doucet (PROWESS/COWATER) says: Even staying in the village one night can give you wonderful insights - they may be biased, but are probably better than nothing.
- Obtaining good data on a village - the priorities, beliefs, attitudes and other facts of its various population groups - is an important way of making a project appropriate in design and monitoring.
- The act of participatory data collection (less so traditional data collection) is in itself a method of energizing a community to deal with

its problems, as the community members discuss and think through the situation.

- Project planners fear data that are too academic, too late, too critical. Our experience is that collecting data within the auspices of the project itself (rather than by a separate research institution) improves chances that data will be helpful rather than threatening or useless. Some of the data do not even need to leave the community; making the feedback circle as small as possible (data producers/users) can improve efficiency.
- The reality is that in the past, many studies of more "sensitive" issues, such as knowledge, beliefs, attitudes, practices, were biased. There are two reasons for this: the powerless of the community, such as women and children, were hard to reach for comments (although they may be the primary intended beneficiaries); and answers to direct questions are notoriously wrong, as respondents try to please those who interview. Examples: the woman who says she washes her hands after defecation although she has no water; and the project planner who says s(he) includes women's concerns, although s(he) does not know how to do it. In our experience, participatory techniques and other open-ended techniques are particularly helpful in uncovering some of these facts (see item 12 of the bibliography).
- There are many fuzzy concepts, e.g. what is the level of participation by women, or the status of women before and after the project. We have experience with numerous field surveys which specifically try to tackle exactly such fuzzy concepts, and we have what we find to be useful indicators which can produce quantitative data. As Rud. Horner of CARE says: it is useful for field managers to have data such as these, which take seriously what everyone is talking about, to demonstrate to their headquarters staff that what they know is happening, is quantifiable.

The bibliography contains several items related to data collection, and particularly data on the participatory process e.g. items 3, 4, 7, 12, 13 and 19.

#### 5.4 After water, what? The question of priorities

One of the most important questions to be determined for each community, and four sub-groups of communities (where men and women often differ), is the question of priorities. One has only to listen to the election speeches of local politicians to hear that improved water supply is a priority for a majority of communities. Improved sanitation very rarely is, although more so in highly populated areas.

Usually, little connection is seen between health and improved water/sanitation. Instead, the reasons for desiring improved services are often to reduce burden (e.g. time spent drawing water) or to improve aesthetics and cleanliness (to avoid smelly latrines, to be able to bathe one's family and oneself). Any person will avoid drinking water if it can be demonstrated to contain fecal matter otherwise invisible, even if s(he) does not believe in any connection to health; health itself may not be a top

priority for villagers and governments. Most cultures have strong rituals revolving around cleanliness and purification, although the manifestations of this may not be seen as such by outsiders.

In the activities we support, we try to build on such priorities and habits, so that we meet a need, rather than "create" a demand. In other words, bring the process as close as possible to what is commonly called "demand-driven development".

In a community where women walk six hours to collect water, more convenient water is a first priority. It is a precondition for liberating them for other activities such as income-production and other desired improvements. On the other hand, in a community with plentiful, polluted water, women may see income-production as the priority, and think water less important. Ideally, one could decide to go to another community where water/sanitation is a priority - this would be true response to demand, but many do not find that practicable. Instead, one can tailor the project to bridge the gap in perceptions. For example, some practitioners feel that health education actually increases the priority placed on water/sanitation demand. In particular, it is our experience that associating income-producing activities with water and sanitation projects may increase their attractiveness/priority to community members. It also reduces reliance on volunteers - a practice which makes projects less sustainable in our experience. Furthermore, the participatory process usually strengthens a community to the point where it is ready to use its new strength for other ventures, and it would be a waste not to recognize this. As Margaret Mwangola of KWAHO in Kenya says: "After water, what?"

Many donors are beginning to recognize this fact, and are experimenting with approaches. Logically associated activities such as vegetable growing, composting and recycling of human waste (what we call "brown gold") or small-scale forestry are components in at least some projects of donors such as the World Bank, GTZ (German Technical Cooperation) and DANIDA (Danish International Development Agency)

#### 5.5 Don't participatory projects cost a lot?

A quick answer would be: "Yes, but not nearly as much as projects with no participation, which are manifestly wasteful".

Cost estimates are becoming available, which indicate start-up costs for software activities in the order of 10 to 25 per cent of total cost, depending on the situation (see for example items 5 and 6 in the bibliography).

A few factors to be considered:

- Conventional projects often underestimate actual costs, e.g. by not including costs for maintenance, spare parts etc., nor costs to the community (time, labour, finance).
- In all projects assisted by PROWESS/UNDP, communities are contributing financially, at least for maintenance, sometimes for capital costs. Our overall conclusion is that communities are willing and able to pay, if

they like the project. They are, of course, more skeptical if they have had experiences with failed projects in the past, and also if they see another donor in a neighbouring community providing "hand-out" projects.

What is women's role in this? As stated in the beginning, this varies from society to society, and little can be taken for granted. As a very general rule, women are more interested in water/sanitation, and therefore more likely to want to pay. They may or may not be seen as capable of handling money - in one country in Africa they were perceived as too soft for that, in another they were perceived as more trustworthy community treasurers than men. Some have little access to money, some are major financiers like the "Mama Benz" of West Africa (so-called because they ride in Mercedes Benz).

#### 5.6 Doesn't community/women's participation take a lot of time?

There is much discussion of how long participation activities take. Some believe two years are needed before, for example, pumps are installed. In our experience, this depends very much on how it is done.

If community/women's participation is seen as an integral component from the beginning, and its results are braided into the hardware plan, then it may not be necessary to plan for more than a few months of activities to start with. In fact, it can sometimes be undertaken faster than hardware activities, and then the issue becomes one of villagers being impatient with the tempo of hardware installation. If, on the other hand, it is turned on like a tap, well into the project, then indeed disruptive readjustments and slowdowns may take place. Some findings:

- If financing is approved in several stages, then software aspects should be included in the first part to facilitate early startup.
- Projects usually gather data of some sort or another before start-up, e.g. on water sources. If the community participation field staff are put in charge of certain aspects of this (for example, data which can be collected from household members), they can give useful additional data for planning - e.g. how community members perceive the location, quality, reliability, seasonality of sources.
- It is useful if the hardware planners can set down certain parameters, within which the software technicians can fine-tune operations. Thus, in an area of 300 communities, software technicians can help to identify 100 where preconditions dispose to implementation. Said differently, let the plan be event-driven rather than calendar-driven; when a community signs a contract, it gets a pump. This presupposes some co-ordination among project personnel and an acceptance of uneven progress in different areas.

### 5.7 Participatory Techniques Can Speed Up the Process

There is no magic to participatory techniques and they are not new. Part of it has to do with listening.

"We introduced the idea of maintenance funds, but we had to be very cautious about how we did it. You see people can get the impression that this is a government project and that the government will take care of everything... We had to make the people realize that they themselves will have to take care of this waterpoint. They will have to take the responsibility.

"We asked them exactly what would they do if a part of the pump broke. 'We'll need to get a spare part'. 'How will you get it?' 'Oh, we'll need money then'. Where do you think you'll get this money? 'Aha! Just give us time and we'll let you know what we have done about it'.

So, many villagers have now got quite good maintenance funds kept under the control of their water committees. Of course, the idea isn't really new in Kenya, because of 'Harambee'".

Rose Mulama, KWAHO, KENYA

One problem, in past experience, is that development workers are not encouraged or used to listening to people at the village level, and villagers in turn are not used to telling development workers what they know. If a good listener stays in a village for two years, s(he) can probably gradually develop a relationship of mutual trust with villagers, discuss views, help groups get organized to undertake improvements.

However, we often do not have the luxury of two years' preparatory time. Acknowledging this, many people working in this field have developed "tools" to help speed up and improve the quality of the process. A hammer is not the same thing as a house, but if you want to build one, it helps to have one. In this case, the "tools" are not mechanical, but managerial.

These tools have many purposes - one is simply to be a "hearing aid" - field workers who use them have an easier time listening. More important, they are tools for the community members themselves - they can be used to plan, to gather statistics, to discuss and negotiate.

Let me give one example: "Story with a gap". This is a well-known method which uses visuals to simplify the planning process. A problem situation is shown in one picture (e.g. a dirty broken down latrine) and another picture shows a desirable situation (e.g. a clean functioning



latrine). Smaller pictures show steps that could be taken to overcome the problem, and villagers can handle, discuss, and prioritize these actions. One can open up the process further, for example by adding cards that may seem unrelated, or blank cards for villagers to bring their own solutions - this depends on the situation. (The main description of such methodologies is in item 14 of the bibliography -see also 10, 15 and 16, which give sample adaptations at country or regional level, and item 11 which is a short video film).

We find that women who otherwise do not speak up or believe themselves able to make decisions are surprised and delighted when they find ways of doing so through the participatory techniques (and this delight is generally shared by their husbands). The delight in and enjoyment of the process promotes creativity, which is essential for problem-solving.

#### 5.8 "Won't the men object? Is this too sensitive?"

Development implies change, including some social change. However, it is naive and counter-productive to think participatory approaches can or will be allowed to play a social awakening role in a society which is not ready for it.

Our experience is that many measures can be taken to maximize benefits and minimize disadvantages.

One is to work as much as possible with local organizations and expertise. Such local expertise will generally choose (and has long experience) approaching communities through established channels and traditional (often male) leaders. When approaches such as these are used, we find that men are generally very supportive of the women, increase their esteem of them, may even follow their example (especially if income is produced). Another approach which we have encouraged is training and consultations, with highly heterogeneous groups together (e.g. several levels of the hierarchy, staff of different ministries). One of the most striking pieces of feedback we have had is that field practitioners are very pleased with the training of heterogeneous groups - it may necessitate some adjustments in the early stages, but leads to better complementarity and mutual respect in the long run.

In the long run, this institution building, where the different parts, including communities, function better together, is perhaps one of the most cheering aspects of the participatory process.

#### 5.9 What about the children?

We find that children are often disregarded in projects. Although this paper is about women, the village reality is that women and children are too closely related to separate. Yet the children's situation is special.

For one thing, we find children are very knowledgeable (after all, they are their mothers' helpers in this field). They know of health risks in the environment, water sources, health habits. They are often more frank than adults, sometimes have more time and are more open for innovation. Projects often have special impact on them - e.g. if new water sources are closer, children may be sent for water instead of women going. Attendance at school of course is affected by the children's duties.

The conclusion is simply - take special notice of children. In our experience, they are important partners too (see item 8 in the bibliography).

#### 5.10 Who is equipped to undertake this?

Water and sanitation projects classically are undertaken by organizations such as the Ministry of Public Works or of Water, or by a technical department within the Ministry of Health. Staff have generally been engineers and technicians, and field staff have been few - only those needed for drilling of boreholes, construction of latrines, etc.

On the other hand, for community participation, you need more field staff, and staff trained in skills related to community participation, rather than "technical" skills.

This is an absolutely critical question, once you try to implement large-scale activities. Enthusiastic personnel can be found and if necessary trained for small-scale activities. What happens when you up-scale?

In our experience, there are several major possibilities, none of which involve hiring new staff:

- Train the existing extension workers (say in the Ministry of Water Development) in participatory techniques.
- Identify and link with other government agencies with a larger field presence, and whose extension workers have community level experience, e.g. Ministry of Community Development, Health Education or Primary Health Care workers in the Ministry of Health. This can be bureaucratically difficult, but we have a number of examples where it works.
- If such a link-up of organizations is difficult, some governments actually place responsibility for community water/sanitation with a Ministry or agency which already has a strong field presence (e.g. the Rural Development Department of the Ministry of Agriculture).
- Identify and link with non-governmental organizations (NGOs) which have "grassroots" experience.

Whichever of the above models is appropriate obviously depends on the situation (and is not necessarily a matter of choice, at least not for outsiders). For example, there is a question of the scale and stage of the

programme: a small-scale pilot or test, a sub-national "dress rehearsal" under replicable conditions, or a full-blown national programme.

This is particularly important with respect to NGOs. Right now, there is justifiable interest in further developing the link between governments and NGOs. Most countries have literally thousands of NGOs with unparalleled experience in community participation - they are potentially very helpful. However, it should be examined exactly what their most useful role can be, and this depends on the country situation: in many countries NGOs are particularly helpful in developing methodologies at the pilot or test scale, but do not have the capacity for large-scale action. For that scale of action, the crucial question of institutional responsibility must be faced, as early as possible.

Tomatoes again

So where do the tomatoes come in?

On the island of Timor in Indonesia, people in four villages were installing new handpumps as part of a drinking water and sanitation project. Throughout the project, the collaborating agencies -- Ministries of Health, the nationwide NGO "PKK", local university groups and PROWESS/UNDP -- were naturally watching closely to see how it was going.

In addition, eight months into operations, researchers returned to the villages to learn from the people with as much precision as possible whether and why (or why not) the project was succeeding, was the water being used, were there health benefits, were women's water carrying burdens reduced, etc.

To the researchers' surprise, almost as much time was being used for water collection as before, the reason came out when, no matter what they asked, people started talking of tomatoes and vegetables:

Are your pumps being used?

Oh yes, we use them to water vegetables.

Do you have income?

Of course, we sell vegetables.

What is your opinion about women's role in the village?

Why, they are very important people -- they grow vegetables.

For the researchers, this was a lesson in listening, in hearing what was actually being said and why, without filtering out the unexpected; pump installers and health ministries do not normally ask, and get excited, about tomatoes.

So my opinion is that, if you want to see the real success of the Decade, then you should count tomatoes, as well as pumps. Water/sanitation projects will be more successful, and be seen as more successful, if they are seen and planned as entry points for development -- meaning, development in the directions that communities themselves define and seek.



LESSONS, STRATEGIES, TOOLS  
PROWESS/UNDP Publication Series

General

1. International Reference Centre in collaboration with PROWESS/UNDP: Participation in Water Supply and Sanitation - Roles and Realities - by Christine van Wijk-Sijbesma, 1985, (English/French) pp.191. A literature review and annotated bibliography.
2. PROWESS/UNDP: Women, Water and Sanitation - or Counting Tomatoes Instead of Pumps, by Siri Melchior, March 1989, (English/French). Update on overall issues and lessons learned to date. (Also available in a reference collection on compact disk, Library-To-Go, by Decade Media with support from INSTRAW).

Case Studies, Country Reports, Field Research

3. PROWESS/UNDP: Report of the Process Evaluation Mission of a CARE-assisted project of water systems in Rwanda, by Jean Beaudoin of Coopération d'Animation et de Collaboration, et.al., 1987, (English/French) pp.27. An example of techniques to evaluate the process of participation.
4. PROWESS/UNDP: India - Twenty Lessons Learned from Social Feasibility Studies, by Lucy Goodhart, 1988, (English) pp.20. Based on four social feasibility studies of rural sanitation in India.
5. PROWESS/UNDP and the World Bank: Kenya - People, Pumps and Agencies, by Deepa Narayan-Parker and Mary McNeill, 1989, (English) pp.36. A case study of the South Coast Hand-Pump project with particular emphasis on Kenya Water for Health Organization (KWAHO), describing partnership between a Government, an NGO and donors.
6. PROWESS/UNDP: Dhaka - Volunteers Against Diarrhoea, by Elsie Shallon, 1988, (English) pp.25. A description of a programme working with women volunteers in an urban slum area to improve health education and action.
7. PROWESS/UNDP: Indonesia - Evaluating Community Management, by Deepa Narayan-Parker, August 1989, (English). A case study of PKK/Ministry of Health Activities in West Timor. Particularly rich in data on such aspects as change in women's lives, water use, economic effects, etc. Slide show on Indonesia experience will be available at cost.
8. World Bank and PROWESS/UNDP: From Pilot to National Programme - Rural Sanitation in Lesotho, by P. Evans, D. Narayan-Parker, R. Pollard, M. McNeill, and R. Boydell, planned for mid 1989.
9. World Health Organization/South East Asia Region and PROWESS/UNDP: Final Review of Case Studies of Women's Participation in Community Water Supply and Sanitation. Report of a Workshop held in Kupang, Indonesia, May 1988 (English) pp. 40. Recounts lessons learnt from experience in four case studies conducted in Nepal, Thailand, Indonesia and Sri Lanka in terms of research methodology and implementation approaches.

Field tools, Training Aids

10. PROWESS/UNDP: Field Training Manual, Lesotho, by Willie Sampson, 1987, (English) pp.70. An example of field training manual for a sanitation project in Lesotho using participatory techniques.

11. PROWESS/UNDP: Video on Regional Training Workshop in Tanzania, 1988, (English); March 1989 (French). Describes the process of a workshop for personnel from national institutions in anglophone African countries, methods used, results.
12. PROWESS/UNDP: Goals and Indicators for Integrated Water Supply and Sanitation Projects, by Deepa Narayan-Parker, 1989, (English/French) pp.16. Emphasis on design of indicators for planning and evaluation.
13. PROWESS/UNDP: Knowledge Generation and Use in Partnership with People, by Deepa Narayan-Parker, planned for Fall, 1989. A tool for planners in field projects. Emphasis on use of participatory data collection techniques for planning and evaluation of community managed projects.
14. PROWESS/UNDP: Community Participation - A Challenge for Trainers - by Lyra Srinivasan, planned for Fall 1989, (English/French). A tool for trainers in field projects. Particular emphasis on SARAR methodologies, experiences in application in PROWESS/UNDP activities.
15. PROWESS/Africa: Report of a Regional Participatory Training-of-Trainers Workshop held in Tanzania, September 1988, published Spring 1989 (English). Description of training workshop, methodologies and analysis of results.
16. PROWESS/Africa: Femmes, Eau et Assainissement - Penser et Agir avec les Communautés Rurales: Atelier Regional des Pays Francophones et Lusophones, Ouagadougou, April 1989 (French) pp. 26. Report of second PROWESS regional training of trainers workshop.

#### Guides, Strategies

17. World Bank and PROWESS/UNDP: Involving Women in Sanitation Projects, by Heli Perrett, 1985 (English). A guide for project planning and design.
18. PROWESS/UNDP and WASH: Design and Management of Sustainable Water Supply and Sanitation Projects, by Paula Donnelly-Roark, 1987, (English/French/Spanish/Arabic). A guide for project workshops for project design, assessment and review.
19. PROWESS/UNDP: PEGESUS, by Deepa Narayan-Parker, 1989, (English). Analytical framework for designing and assessing projects and programmes, concentrating on goals and management tasks.
20. PROWESS/UNDP and INSTRAW: Interagency Task Force on Women - Proposals for 1989-90, 1988, (English). Reviews progress with respect to women's participation aspects in UN organizations active in the water/sanitation decade, assesses major challenges for the future, proposes a work plan for agencies concerned
21. UNDP Technical Advisory Division in collaboration with PROWESS/UNDP: Programme Advisory Note, planned for 1989, (English).

Select reports on country-specific activities are also available for limited distribution. Extra charges are made for these reports to cover the costs of copying.

## PROWESS/UNDP

PROWESS stands for "Promotion of the Role of Women in Water and Environmental Sanitation Services". It focuses on women, in the context of their communities, because they are the main collectors/users of water and guardians of household hygiene and family health. In the past, even field projects with community participation focus have often neglected to involve women in decision-making, for lack of knowledge about their role or difficulties in reaching them.

The PROWESS programme is demonstrating ways of involving women in wider community planning, operation, maintenance and evaluation of drinking water and waste disposal schemes. Its experience so far in well over 1,000 communities in Africa, the Arab States, Asia and Latin America shows that:

early and wide participation by women and their communities pays off in better maintenance, higher cost recoveries, improved hygienic practices and other socio-economic gains for the community.

Based in the United Nations Development Programme (UNDP), Division for Global and Interregional Projects (DGIP), PROWESS works interregionally in support of the International Drinking Water Supply and Sanitation Decade (1981-1990). Starting with funding by Norway in 1983, it has since received financing from Canada, Finland and the U.S., as well as from UNDP. It collaborates with many national and international organizations, both governmental and non-governmental.

### PROWESS/UNDP Technical Series

PROWESS/UNDP is developing, documenting and disseminating information on the participatory methods it promotes and on the outcome of their use. This can help to enrich policies and programmes, both nationally and internationally.

Part of this effort is the PROWESS/UNDP technical series called "Involving Women in Water and Sanitation: LESSONS - STRATEGIES - TOOLS". It includes:

- case studies, project reports and country profiles giving lessons from specific experience;
- guidelines, for project analysis, development and evaluation, and other strategies of action; and
- data collection and research instruments, training methodologies, materials production and other tools for field work.

(see overleaf for listing)