UNDP / PROWWESS

Water and Sanitation for Health Project

WASH TECHNICAL REPORT NO. 52

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NEW PARTICIPATORY FRAMEWORKS FOR THE DESIGN AND MANAGEMENT OF SUSTAINABLE WATER SUPPLY AND SANITATION PROJECTS

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Prepared for Office of Health,
Bureau for Science and Technology,
U.S. Agency for International Development
under WASH Activity No. 336

and

PROWWESS - Promotion of the Role of Women
in Water and Enviromental Sanitation Services,
United Nations Development Programme,
under publication series
Alternative Strategies for
Involving Women in the Water Decade

by

Paula Donnelly-Roark

November 1987

Water and Sanitation for Health Project
Contract No. 5942-C-00-4085-00, Project No. 936-5942
is sponsored by the Office of Health, Bureau for Science and Technology
U.S. Agency for International Development
Washington, DC 20523

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ACKNOWLEDGMENTS

Thanks are due to the many individuals instrumental in the development of this concept paper.

Ms. Sally Timpson, now of the UNDP/NGO office, started this collaborative process. At USAID, John Austin, S&T/H, and Kay Davies and her staff in the WID office encouraged and supported the collaboration with UNDP. At WASH, Ellis Turner, Jim Jordan, Phil Roark, Craig Hafner, and Fred Rosensweig participated in interviews defining and reviewing the product; Betsy Andrews, WASH Editor, spent many patient hours "bridging the gaps." Dr. Rudi Horner at the CARE office in New York reviewed the document.

Special thanks are due to CARE/Sierra Leone staff, along with Kathy Tilford, CARE, Regional PHC Advisor/WA, for testing the recommendations in this paper and showing that they work in the field.

PREFACE

Background

In its approach to water supply and sanitation projects, WASH emphasizes the users and their involvement and ownership of the improved systems in their communities. WASH recognizes women as the most important users of the systems and the critical group for behavior change.

PROWWESS, as the section that follows describes, seemed a natural project to collaborate with and develop a product useful to both.

With the above premise in mind, WASH invited Dr. Paula Donnelly-Roark to develop a scope of work that would be of interest to both projects. After carrying out in-depth interviews with all activity managers at WASH and the then project manager at PROWWESS, Ms. Sally Timpson, the scope of work called for a concept paper that would become, at a later date, the basis for a training program. This concept paper addresses an approach to community participation which technicians at WASH and in the field found to be very useful.

PROWWESS is an acronym for Promotion of the Role of Women in Water and Environmental Sanitation Services. It is an inter-regional project of the United Nations Development Programme (UNDP) in support of the United Nations International Drinking Water Supply and Sanitation Decade (1981-1990). The aim of PROWWESS is to demonstrate ways of achieving women's effective involvement in planning, designing, implementing, operating, and maintaining drinking water and waste disposal schemes and in related health improvement activities.

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HOW TO USE THIS CONCEPT PAPER

Instructions for Developing an Action Plan
for Participation in a WS&S Project

This concept paper is intended for engineers, project officers, and technicians managing water and sanitation projects in the field. It was developed in response to numerous field requests from donor decision-makers and field-level personnel who understand the importance of participation but do not know how to promote it. It is hoped that the paper and the description of how it can be used will assist project managers to develop an operational work plan for implementing participation.

Project staff should put aside one working day to discuss this paper and to develop a work plan to implement community participation involving women. The work plan should designate staff responsibilities, schedules, and the resources required for implementation. The following is a guide for field project officers. It provides a framework around which project changes can be implemented so that participation is ensured and project sustainability is planned for.

TASK 1 - Project Classification: Read the concept paper, noting the differences between the "initiation" and "responsibility" approaches to community participation. In reviewing your project, how would you classify its approach?

TASK 2 - Participation Definition: Identify the existing institutions in the community and the process used by the community to make decisions, focusing specifically on water and/or health.

Rationale: One way communities say "no" to water and sanitation projects is by neglecting the systems built. If projects are to be sustained people must take control of and accept responsibility for them. People's sense of ownership of the systems is a function of the systems' technical viability (or appropriateness) for that context as well as the community's preparedness to integrate the technology into their daily functioning. This is where the technical and nontechnical factors come together. If the project's emphasis is on water quality and the community's need is for quantity and reliability, it is unlikely that they will take care of the system.

Discussion and Activities: Outline the project's management functions and discuss how those functions can be made more flexible so that the community's inputs can be incorporated.

Chapter 2

NEW ANALYTICAL FRAMEWORKS

2.1 Historical Outlines

People working in rural water supply and sanitation programs have been grappling with the concept of sustainability in the guise of maintenance and appropriate technology for over 15 years. The first publication that suggested that local people and their ideas needed to be included in the planning and implementation of rural water supply projects was Drawers of Water (1972) by G.F. White et al. This was the first effort to define and analyze the criteria--quantity, access, reliability, and quality of water--that were important to local people as they made decisions about whether or not to use and maintain a specific water point. Several years later, when statistics from the Organization for Economic Cooperation and Development (OECD) indicated that 35 percent to 50 percent of pump installations in developing countries were inoperable three to five years after installation, the development community was galvanized into new directions. Community participation, women's involvement, and project learning were recognized as important and incorporated into the established project methodologies; however, the overall development paradigm that focused on project initiation remained intact. The long path to the recognition of sustainability as a problem and a goal had begun.

2.2 New Starting Points

To develop a new analytical framework for sustainability, one can start by viewing development as a learning process rather than an input-output process. However, this view is not focused enough for project decision-makers who are involved in a hands-on manner with water supply and sanitation projects. For them the question still remains: What kind of analytical framework can be applied to ascertain whether or not there is sufficient emphasis on sustainability? In this context, "sufficient" means that it is reasonably certain the improved water points will still be maintained and used at least five years after all project supports have been dismantled.

A more specific and applied starting point for a new analytical framework comes from a critical analysis of how sustainable technology change and development actually evolve in communities. Here, the first question is what factors substantively contribute to the community's taking responsibility for the long-term sustainability of a water point. To answer that question, one must know:

- -- WHO needs to be involved?
- -- HOW is the process of involvement managed?
- -- WHAT is the desired outcome of the involvement?
- -- HOW is the process of evaluation conceptualized?

When these questions are asked from the "initiation" perspective, one gets different answers than if they are asked from the "responsibility" perspective. Thus, substantive differences in the two perspectives emerge. See Table 1 for a comparison of these differences.

Since there are quantifiable differences in approach between the two perspectives, donor decision-makers can ascertain how much substantive emphasis is being placed on sustainability in any given project by asking the project staff the four questions listed below during planning, implementation, and project wrap-up or transition.

1. Have local management systems been identified and are they being used?

2. Have two-way information systems been established for decision-making between communities and project? Are these systems being used?

3. Has the issue of local responsibility and control been negotiated with the community?

4. Are planning, implementation, and transition efforts being evaluated by project staff in collaboration with the community as part of an on-going process?

If donor decision-makers are going to ask these participation-focused questions of their project staff, they must also be prepared to assist project staff members as they strive to implement participation into the day-to-day life of the project. This is no easy process. When the focus of action is on "initiation and mobilization," it is possible for the donor decision-maker to delegate participation-type activities to field staff as a discrete component. But when the focus is on "responsibility and participation," it is not possible to isolate the technical and organizational actions from the "responsibility and participation" actions.

It may be tempting to the project decision-maker to continue using "initiation and mobilization" practices because they are easier to administer. However, as the focus on sustainability grows and the paradigm completes its shift, both programs (long-term governmental activities) and projects (activities with a more limited time frame) will be evaluated primarily in terms of their sustainability. For the project decision-maker, this is a little bit like having the rules of the game changed at half-time or walking a rope bridge over a river that has just washed out a four-lane highway. It is not a comfortable situation, and some of the first people to feel the pinch of these paradigm changes will be donor decision-makers whose projects and programs are evaluated on an objective that was not given any particular emphasis even four years ago.

Donor decision-makers therefore need to plot new directions and to identify the implications of these new directions for project management and evaluation even while the shift in paradigms is in motion.

Table 1: Comparative Frameworks

Sustainability Factors	Project Action For Initiation	Project Action for Responsibility	Criteria for Evaluation of Sustainability
Who needs to be involved?	Local political and cultural leaders within the formal recognized system.	Local management groups of existing water points. These are people that actually do the work.	Quantitative -# of local management groups -# of men & women in each group -# of Water Committes formed Qualitative -definition of responsibilities of both genders in local mgt. groups
How is the process of involvement managed?	Mobilization of the people to participate in project activities. Proof of adequate interest is in contribution to and participation in implementation of project.	Participation of the people in information exchange and decision making for design, implementation, and maintenance of the project.	Quantitative -# of meetings needed to effect adequate exchange of information Qualitative -description of local mgt. organization and decision making process
What is the outcome of the involvement?	Successful provision of decided upon inputs, and utilization of these inputs by the local people.	Joint definition and negotiation for specified areas of local responsibility and control, as well as successful provision of decided upon inputs.	Quantitative -# of discrete points of information gained by communities -# of discrete points of information gained by project -# of changes in perception by community and project because of new information Qualitative -description of acceptable criteria for service of water point -understanding on both sides of social, economic, and management implications of technologies under consideration -negotiation and agreement as to responsibilities and control -ongoing maintenance and responsibility of water point
How is the process of evaluation conceptualized?	Focus on "what" happened, usually at midterm or end of project. Emphasis on assessing effectiveness of inputs and outputs.	Focus on "how" events evolve, so as to be able to make adjustments throughout life of project. Process begins at planning stage of project.	-Qualitative measurement is accomplished by documenting learning process through people's changing perceptions of problems & solutions. -Quantitative measurement is accomplished by measuring both anticipated and unanticipated project outcomes. -Assessment and evaluation begins at planning stage when design and mgt. plans are begun.

The key difference between the initiation and responsibility perspectives is the kind and level of community involvement and participation that is expected with each approach. The initiation perspective focuses on mobilization of the community for project support. The responsibility perspective focuses on assisting local people and communities to assess information and make decisions so that they are able to take responsibility and control--and therefore power. In this way local people can sustain projects and initiate needed interventions themselves.

The hard questions that donor and national agencies have avoided until now are how outside organizations come to terms with the power-sharing that is implicit in sustainable projects at the local level and what power-sharing implies in terms of long-term organizational policies and short-term operational procedures. In other words, for both the community and the donor organizations, moving from an initiation to responsibility locus of project action calls for a number of changes. Donor decision-makers are key players in making these changes.

Chapter 3

MAKING PARTICIPATION AND WOMEN'S INVOLVEMENT WORK EFFECTIVELY

It is a major contention of this discussion paper that the effectiveness of community participation and women's involvement has been diminished and distorted because, until now, they have been used within the development paradigm that assumes the primary and essential locus of action is initiation. Now, with the notion of sustainability challenging that paradigm, community participation and women's involvement can become powerful tools for success.

When the locus of action is on initiation, both community participation and women's involvement are used to mobilize people's support for the project or program. This often gives an illusion of working towards community maintenance, but upon examination there is little there that contributes to long-term sustainability.

For example, almost all water projects, recognizing the need for community maintenance, allocate resources to assist communities to set up local water committees. Most donor decision-makers, when they see a high number of committees established and meetings taking place, assume that the key component for sustainability is in place. They may or may not be right.

If the locus of community participation action has focused only on initiation, the existence of water committees means that the people want an improved water supply and are willing to mobilize and organize themselves to support the project that will give them this improved source. However, it does not necessarily mean that the community is therefore prepared to take over the long-term maintenance, nor does it indicate the probability of long-term sustainability. Only if the locus of community participation action has focused on responsibility can a fairly high degree of maintenance and sustainability be assumed. Focus on responsibility entails, first of all, an exchange of information between community and project so that the implications of the improved source in terms of use, maintenance, and sustainability, both economic and managerial, are well understood. Second and most important, a focus on responsibility entails negotiation of who is responsible for what, based upon an adequate understanding of the long-term implications.

Community participation action which attempts to focus on responsibility has been a peculiarly vulnerable and fragile process up until this time. In any given project, there are usually several people who attempt to focus on responsibility. Often they are the community-based, field extension people. The problem is that many of the outcomes that are used as a measure of success--such as the establishment of water committees--are "initiation" actions. Because a focus on initiation is less time consuming and can be managed as a discrete component of a project, as mentioned earlier, the original intention to focus on empowering the community is often subverted and becomes merely mobilizing the community. Most field-based people are in agreement at this point that the responsibility locus of action necessitates the strong and continuing support of the involved donor decision-makers at every level.

However, as stated earlier, the strength of a paradigm change is that it offers not only new solutions but also new problems. If project success is now being judged in terms of sustainability by the donor agencies themselves, that means that perceptive donor decision-makers and project managers can allocate resources to promote it. Before sustainability became an issue, decision-makers had to go out on a limb to advocate a participation process that emphasized responsibility and a strong focus on the involvement of women. Now, when the perceived problem is sustainability, these strategies make sense.

When participation had been viewed as "mobilization" and women viewed as "active beneficiaries"--family health educators or water committee members--neither community participation nor women's involvement has had much of an impact as a development strategy. However, when participation is viewed as negotiation and definition of expected areas of local responsibility and women's involvement is predicated on the understanding of their roles as local managers in traditional water-supply activities, powerful and long-term impacts can be expected.

Chapter 4

HOW-TO STRATEGIES FOR SUSTAINABILITY

A re-definition of participation is a necessary starting point for any strategy on achieving sustainability: Participation is the learning process by which communities control and deal with technology, change, and development. It is a necessary component of every water-supply project that has maintenance and long-term sustainability as its objective. This suggested definition, based on field assessments of how sustainable technology change and development actually evolve in communities, forms the base for the strategies suggested below.

Donor decision-makers and project managers need to assist and supervise their staff in the utilization of new planning, implementation, and evaluation strategies if they want to focus on responsibility and sustainable projects. These are: 1) analysis of the level of change in a suggested project; 2) identification of local management systems; 3) establishment of two-way information systems between community and project; 4) negotiation of local control and responsibility; and 5) learning documentation evaluation. Background and some implementation techniques are suggested below for the first four items, while evaluation strategies are discussed more fully in Chapter 6.

4.1 Analysis of Change

Background. The amount of change that will be experienced by the community as it undertakes the management and maintenance of a new water point is the key indicator for success and long-term sustainability. If there is little or no change involved, sustainability is fairly easy to achieve. For example, if a private voluntary organization assists a village to deepen its hand-dug wells so that there will be water throughout the dry season, no new management, economic, or social factors are involved. This project can be classified as a service project. Service projects can be successful with the minimal participation techniques of mobilization and communication with local leaders.

On the other hand, change projects introduce the necessity for change on the part of the community, usually through the decision to use new or different technologies that demand increased economic and management inputs by the local people. Change projects call for the intensive participatory learning focus to clarify along the way the implications of the changes for the people involved, and to reach a decision on whether they want to make these changes.

Implementation Techniques. The Appendix includes a checklist that can indicate to donor decision-makers whether a specific project is most likely a change or service project. It should be noted, however, that most projects undertaken by the larger donor agencies are change projects.

4.2 Identifying Local Management Systems

Background. Local management systems are usually subsets of the political and cultural leadership of a community. Therefore, they include the working people--the men and women--who actually do the work and make the everyday management decisions concerning the water-point systems they are responsible for. These workers are a repository of complex and well-developed information and of resource allocation skills that have successfully balanced the production and environmental trade-offs necessary for survival.

Women are often (and in Africa almost always) local water managers. They need to be involved in any decisions pertaining to new water points because it is they who often make the day-to-day maintenance decisions. For example, in southern Burkina Faso, as the local water managers, women made decisions on what water points, both traditional and improved, were to be used and maintained. These decisions determined the long-term sustainability of donor-funded and government-improved water points, but the decision criteria the women had for maintenance--quantity of water available and reliability during the dry season--did not coincide with the type of technology that the donor agency was advocating and that the local male political leaders had approved.

Implementation Techniques. Knowing who makes up the local management systems is a key for valid decision-making and the substantive involvement of women. In many community meetings, when people are asked who is in charge of water-supply decisions, the answer almost invariably identifies male political or cultural leaders. But if questions are rephrased focusing on how production decisions are made, the answers ("The women are responsible for that" or "The young men take care of that") begin to reveal the existing local management systems. For areas where traditional communal orientations have begun to break down or did not exist to begin with, the same focus on how helps to define responsibility and power within the household and extended-family production systems.

4.3 Two-Way Information Systems

Background. Developing successful methods of communication between project and community is the key to successful collaboration and partnership in the short term and to sustainable interventions in the long term. Two-way information strategies are based on sharing access to information. It is not a simple and straightforward process but rather one of great complexity because of its relationship to power. Keeping the community at arm's length during the design and implementation phase, then expecting community members to take over and maintain the new interventions, whatever they may be, is both naive and manipulative.

It is surprisingly rare for communities and projects to exchange anything but the most rudimentary type of information before program implementation begins. Too often, preliminary decisions on the design are made by the donors with some consultation with the community but little or no two-way exchange of information. Often, the expatriate team will assume that one specific factor, such as increased quality and cleanliness of water, is the most important area

of interest for the community. For the community quality might not be all that important. The community must consider whether the water improvements will be reliable and diversifiable under stress in the long-term and whether the recurring costs will be affordable.

Implementation Techniques. Two-way information systems should allow the project staff to learn about existing local knowledge and resources, perceptions of acceptable risk, conflict and resource inequity within the community, and assessments of interdependencies of production systems by the local managers themselves. At the same time, the local management groups can obtain information on all the options available to them and the implications of the proposed changes--including their financial costs, their impact on existing cultural customs, and the changes, including increased skills, that will be needed in existing management systems to maintain and sustain the proposed intervention. It is important to emphasize that this two-way information strategy must include not just the political or cultural leadership, but the local management system also. Otherwise information obtained may be skewed towards a male and elite point of view and may not reflect the community or local management groups at large.

4.4 Local Responsibility and Control

Background. Local people always have "local control." They have the ability to say "no," by deciding not to use or not to maintain or sustain project inputs, causing the project to be ultimately classified as a failure. This is a wasteful way of exercising control, but it is often the only type of control that the community has at its disposal. It makes sense for donor decision-makers to recognize this negative but effective level of control and to collaborate with communities so that they can exercise control in a more productive manner. They should not be forced to choose between static traditional technologies or inappropriate new technologies.

Implementation Techniques. Environment governs technology selection. For instance, some projects assume that the handpump is the lowest level of technology that should be installed. Nonetheless, the women's local management systems, because they often define reliability as their major concern and realize that mechanical systems always break down, may be more interested in an improved modern hand-dug well that can be operated with rope and bucket. If the objective of a project is sustainability within a short period of time, the rope and bucket level of intervention should be implemented. If, on the other hand, the project has the long-term resources to help sustain higher technologies over a period of years, other more sophisticated technologies can be considered.

Another example shows the primacy of environmental factors. Local management control of projects that build new water points in fragile agro-pastoral lands should be considered an absolute necessity, but, in fact, this rarely happens. Installation of new water points has contributed to the destruction of marginal land in Africa basically because the water points are open year-round and therefore undermine the traditional rotation systems that kept herds moving and gave the land time to replenish itself. If the existing agro-pastoral local management systems were given the negotiated rights to close certain wells at certain times of the year, the water from the new wells

would become a resource that could expand agro-pastoral production over the long term, rather than a short-term resource that quickly destroys a fragile environment.

In summary, what these "how-to strategies" for sustainability mean to donor decision-makers is that the participatory learning process at the local level must be given a central place on the organizational docket, along with the present focuses on organizational management and technical expertise. This implies that the donor institution's long-term organizational policies and short-term operational procedures will need to be reassessed.

Chapter 5

CASE HISTORIES IN "HOW-TO" STRATEGIES FOR SUSTAINABILITY

Every international organization that is committed to positive and sustained development is currently attempting to add substance to the rhetoric of community participation and local control. Brief examples of how two different organizations are progressing illustrate that success is possible.

5.1 CARE: Rwanda

In 1985 the staff of CARE headquarters decided that they wanted to increase the participation of local communities in CARE's rural development work. To begin this new focus CARE held an eight-day workshop in Sierra Leone on community management and water supply for representatives of CARE offices throughout Africa.

A final portion of the workshop was devoted to a discussion between a senior staff member from New York and the CARE field staff on what the implications would be for the organization and for individual personnel if this "learning and participatory management framework" was actually implemented. On the one hand the field staff voiced great enthusiasm for this approach--as one person said, "It is for this type of approach that I am in international development work." At the same time, all staff voiced great skepticism that CARE headquarters would be willing or able to handle the management and organizational implications of a participatory approach. In response, the senior staff person stated, "All I can say is try us. We want to do this!"

Directly after the workshop, a CARE water engineer and a Water and Sanitation for Health (WASH) Project social scientist consultant went to Rwanda to assist in the design of a rural water supply project with the community participation focus that had been presented at the workshop. A major portion of the design work was predetermined because the communities had selected a gravity-fed technology for the water points. In addition, the government had recognized the water committees as legal entities. When it came right down to designing the project, however, so that changes could be made by the individual communities as needed, there was an initial time of having "cold feet." The consultants could not state with assurance how many water points would be installed, or how many miles of pipe would be laid, or how many people would be served. The gravity-fed system was technically viable and acceptable to the communities. The technicians prepared the communities by explaining the implications of a gravity-fed system: people living on the downhill side of the system would receive better water flow. To install a pump to provide water on the uphill side of the slope was beyond the financial capability of the communities. This difference in service and accessibility had to be dealt with. In addition, it was impossible to pin down schedules and budgets. Working in this mode made quantitative output indicators almost impossible to ascertain, and often the qualitative learning indicators were the only ones that were appropriate. Would CARE be able to buy this level of flexibility and ambiguity? The design team decided to go ahead and find out.

The move to behavior change through community participation was a result of several factors. In putting together the project team, CARE hired a Rwandan social scientist trained in health education. She worked along with an engineer from CARE. This two-person team shared professional responsibility for project management. The technical officer was willing to be a partner rather than instructor in this team. He made sure that none of the technical aspects took place before the social preparation and acceptance had been achieved. The schedule of inputs or work plan designed by the management team interwove the community preparation and participation along with the technical interventions, in contrast to planning schedules which treat the social and technical aspects as parallel but unrelated. The project built on an officially recognized community system (water committees) already in place. Representation of women on these water committees expanded the participation of women in the water supply project activity in general.

Two years later, the project is going strong. The design team water engineer is the project manager, and a senior Rwandan educator, seconded from the government to CARE, is the key participation coordinator. Major changes in the scope and design of the project have been implemented by the communities and the district advisory boards. Because of these changes the project is currently behind in its technical schedule, and, as with all projects, there are some ongoing problems. However, there seems to be a growing feeling of commitment, local control, and success on all sides.

Can we say then that the CARE organization was indeed able to handle the ambiguity and flexibility called for by a true participatory project? Probably not at this point. No organization can expect to come to a real consensus on such tough issues as quickly as that. However key CARE decision-makers at the project, country, and headquarters level gave the organization the extra nudge or push it needed to begin the process.

5.2 UNDP: Kenya

In 1984 the project decision-makers of a World Bank handpumps project decided to retain a local Kenyan non-governmental organization (NGO), Kenya Water for Health (KWAHO), as the social analysis consultants for their project rather than bringing in expatriate consultants. Subsequently, both UNIFEM, a U.N. organization set up subsequent to the Women's Decade to focus on women's issues, and PROWWESS, a UNDP regional project, became involved in providing resources for KWAHO to do community training and participation activities.

These international organizations became involved because there was a strong belief and commitment on the part of several of their key donor decision-makers that the utilization of local NGOs at the field level was necessary if a strong and viable partnership was to emerge between local community concerns and national initiatives. In addition, there was a similarly strong commitment on the part of senior decision-makers at the national water agency that local NGOs could be valuable long-term partners in water development initiatives.

KWAHO became an instant success. KWAHO's consultants were good at what they did, they had charismatic leadership, and, as with all success stories, the timing was right! Two years later, the project was coming to an end and a number of good things had been accomplished. KWAHO had not had time and resources, however, for planning and documentation of replicable, successful experiences in community participation. Despite its programmatic success, KWAHO, like most African NGOs, was having financial problems in meeting its core staff needs. The government and some donors viewed KWAHO as an implementer of outside ideas. KWAHO felt it was evolving a process, which was a combination of its own initiative and donor-sponsored projects. Donors were willing to fund the direct costs of the field staff involved in the donor's projects, but few were willing to fund the indirect costs of the core staff.

This problem became a key discussion point of the final review session hosted by UNDP in May 1986. It became clear to all concerned that the propensity of donors to regard local NGOs merely as implementers of donor-planned projects, rather than as initiators and planners in their own right, contributed to the present trend in funding. In addition, this funding trend continues to support a focus on short-term initiation rather than on long-term responsibility. Therefore, in collaborative problem-solving sessions, the decision was made for UNIFEM, PROWWESS, and UNDP Kenya to fund an organizational development project for KWAHO that would support core staff for several years and assist the organization to become self-sustaining through specific, agreed-upon endeavors.

Donors would provide funding for KWAHO to analyze its process for participation. This would allow KWAHO to take the rope of designer and implementer rather than only carrying out donor instructions. KWAHO has needed time to formulate those ideas and experiences into a policy and process.

It is now a year later and the proposal has not yet been funded, but there are high hopes all around. It has taken longer than expected for a consensus to evolve on the need for self-sustaining NGOs that actively attempt to negotiate and guide donor agencies in the field.

This short case history underscores the difficulty that all key decision-makers of international organizations will experience as they try to move their organizations towards objectives and funding procedures that underwrite responsibility and sustainability. But if asked, all of the players in this case history will attest to the need for these kinds of changes.

Chapter 6

IMPLICATIONS FOR PROJECT MANAGEMENT AND EVALUATION

6.1 Project Management

Top-down project management organizations and styles continue to exist for two very good reasons--efficiency and replicability. It is only now with the emergence of sustainability as a problem and concern that the top-down methodology is being seriously challenged.

In terms of efficiency, donor decision-makers have long recognized that one can get things done with greater efficiency if the project manager does not share control or collaborate in decision-making with the intended beneficiaries. The question that has been discussed within the development community for a number of years is whether this short-term gain is illusive, when the output of a project--new water points, latrines, health education schemes--are neither used or maintained by the intended beneficiaries. However, within the old paradigm of "initiation" this question could not be validly addressed, although many donor decision-makers and project managers made valiant efforts to do so. Their efforts, although often short-circuited in terms of actual project sustainability because of lack of follow-through, were certainly instrumental in creating the shift in paradigms that we are all now experiencing. It can be assumed that many, if not most, donor decision-makers recognize the long-term efficiency of projects that recognize and work with the need for local responsibility and control.

However, the real obstacle continues to be replicability. Projects that are based upon participatory learning and partnership collaboration have a very strong stereotype among donor decision-makers as "unique" and "one-of-a-kind." The very voicing of the word "unique" will make any good manager look for an escape hatch, because in development organizational structures and management procedures are based on the assumption that there are established patterns and/or models to be followed irrespective of the individual situation.

However, once again we find that the assumptions of development workers were strongly limited by the "initiation paradigm" and its major emphasis on input-output. The prevailing stereotype is partially correct and partially incorrect. It is true that there are no replicable models in the strict sense. For instance, a successful water and sanitation project in Ghana cannot be transplanted to Kenya, or even to Burkina Faso for that matter. But within the new "responsibility paradigm," with its focus on participation and learning, there are replicable processes that exist and are identifiable as non-culture-specific, necessary components of any project that seeks to be sustainable for the long term.

The essential elements of this replicable process, referred to as the "local management participatory process" (LMPP) have already been described and discussed in this paper. In brief, the LMPP focuses on three elements--identification of local management systems, recognition and negotiation of local control, and establishment of two-way information systems. To use this

replicable process, the donor decision-maker and project must plan, provide for, and manage each of the three elements if sustainable projects are to be achieved.

This replicable process will not be efficient or quick in the short term, but it does provide donor agencies and donor decision-makers with the essential elements of a new project management framework for water supply projects. The specific implications of the LMPP need to be documented and assessed at the field, country mission, and headquarters level for a number of projects in a number of different sectors. Then the management process for collaborative participatory projects would attain the consistency and predictability that it does not have at present.

6.2 Project Evaluation

The initiation type of project with its focus on inputs and outputs calls for evaluation tools that measure the what or the efficiency of delivering tangible products. The responsibility type of project with its focus on sustainability calls for assessment and evaluation tools that primarily document the how or increased problem-solving capacity and learning expansion of the community; then measurement and analysis of this learning expansion in terms of management and maintenance capacity indicates whether or not the project is successful. Some evaluation indicators for projects that focus on responsibility are defined in Table 1.

Assessment and evaluation that focus on quantitative measurement of outputs and efficiency of project management can be carried out by outsiders in a specified amount of time at the middle and end of the project. Assessment and evaluation that focus on how events and capacities evolve, so that adjustments can be made throughout the life of the project, must be carried out by insiders in a participatory and collaborative manner and must start at the beginning of the project.

6.2.1 Playing "Catch-Up"

Participatory project evaluation techniques are also based on the LMPP analytical framework discussed earlier. They focus on two-way information exchange and local responsibility and control. However, it should be of great interest to donor decision-makers that "participatory evaluation" methods can be used in the middle or at the end of projects that have emphasized input-output management.

The major objective of these "catch-up evaluations" is to allow the community to develop and implement its own assessment and evaluation of the project. In some cases, communities can design and administer their own questionnaires with the information being relayed to the project in verbal form through workshops. In others, communities work with an assigned evaluator to design and implement a workshop forum where project assumptions, implications, and impacts are discussed and analyzed by the community. The information and learning resulting from these types of endeavors allows the necessary "inside-out" perspective to emerge.

6.2.2 Future Action

In order to measure the capacity for sustainability, development workers must first divest themselves of the idea that only quantitative criteria can be "rigorous" while qualitative criteria are, by their very nature, "fuzzy" and therefore unreliable. However, at the same time, they must attempt to identify rigorous and accepted indicators that can measure the learning, capacity-building, and expansion of development that focuses on responsibility and local control, rather than initiation and dependence.

Chapter 7

CONCLUSION

What the concept of sustainability does is re-illuminate, in a particularly substantive and compelling fashion, the true goal of development. That goal is for communities and nations everywhere in the developing world to initiate, implement, and maintain their own programs, projects, and endeavors. Given the problems that developing nations face, this has often seemed to be a futuristic goal. Sometimes, however, in the intensity and commitment to complete their work plans development workers may forget that events sometimes overtake us all. That may be what is happening now. All over the world people, communities, NGOs, and governments are reaching out and saying--yes, we need your help and would like your assistance--but based on our knowledge, our resources, and our terms. Hopefully, the development community has learned enough over the years to answer with a resounding YES.

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APPENDIX

Change Analysis

APPENDIX

TABLE 2—CHANGE ANALYSIS

	'Motivation to Change'
1. yes ___ no ___	Is there management of the existing technology? This indicator measures the existence or absence of traditional or adapted techniques used to manage the water supply environment.
2. yes ___ no ___	Is there control of information at the community level? This indicator measures the control of information the community has. If the information is found to be one-way, either in or out, there is an absence of control. Two-way information indicates dialogue, and some form of control.
3. yes ___ no ___	Is the new technology incremental in change? This indicator measures the amount of technical change between the existing water supply technology and the proposed new technology. Incremental change that does not demand new organizational patterns is considered to be ideal.
4. yes ___ no ___	Is the new technology congruent to present water values and water organizations? This indicator measures the congruency of new organizational patterns and values demanded by new technology to existing knowledge patterns.
	'Capacity to Change'
5. yes ___ no ___	Is there a national rural water supply institutional infrastructure? This indicator measures the existence or absence of budgeted and professionally staffed national institutions responsible for the improvement of rural water supply.
6. yes ___ no ___	Is there a regional resource and administrative rural water supply infrastructure? This indicator measures the existence or absence of adequately budgeted and staffed institutions a the regional level for the improvement of rural water supply.
7. yes __ no ___	Is there a maintenance infrastructure with a local or regional manufacture of pumps? This indicator measures the existence or absence of an adequately budgeted maintenance department within the national and regional institutions.
8. yes ___ no ___	Is there a regularly scheduled and maintained service, with supply of parts to existing water supply installation? This indicator measures the existence or absence of demonstrated regular scheduling for maintenance service and a regular supply of parts. Normally this would mean access to locally or regionally made pumps.

*See Successful Rural Water Supply Projects and the Concerns of Women by Paula Donnelly Roark, Sept. 1980.

--Eight "yes" indicators.....service project
--Seven "yes" indicators.....service project
--Six "yes" indicators, if evenly distributed between
motivation and capacity.....service project
--Six "yes" indicators, unevenly distributed between
motivation and capacity.....change project
.....excellent chance of success
--Five "yes" indicators.....change project
If proper participation mode is followed.....good chance of success
--Four "yes" indicators.....change project
If correct participation mode is followed and institution building
is addressed.....fair chance of success
--Three "yes" indicators.....change project
.....poor chance of success
--Two "yes" indicators.....redesign project
--One "yes" indicator.....redesign project

Certain answer clusters will undoubtedly appear again and again and therefore deserve some specific comment. In Africa and in countries where the majority of rural water supply projects revolve around communities that at present use hand-dug wells or surface water, the project often proposes a change to drilled small-bore pump wells. The Change Analysis checklist would probably show that motivation indicators 1 (management of existing technology) and 2 (control of information) would be given a "yes" answer, while indicators 3 (incremental change) and 4 (congruency) would be given a "no" answer. The capacity indicators would probably register "yes" for 5 (national infrastructure) and 6 (regional infrastructure) and "no" for 7 (maintenance infrastructure) and 8 (maintenance service). The final measurement, five "yes" indicators, is a common type of "change" project that presents problems because it is often designed with only minimal community participation techniques.