

205.1

88 PE



KENYA

People, Pumps

PROWESS / UNDP

and Agencies

LIBRARY
INTERNATIONAL REFERENCE CENTRE
FOR COMMUNITY WATER SUPPLY AND
SANITATION (IRC)

A CASE STUDY



INVOLVING WOMEN IN WATER AND SANITATION:
LESSONS, STRATEGIES, TOOLS
A PROWESS/UNDP Technical Series

505.1-4926-2

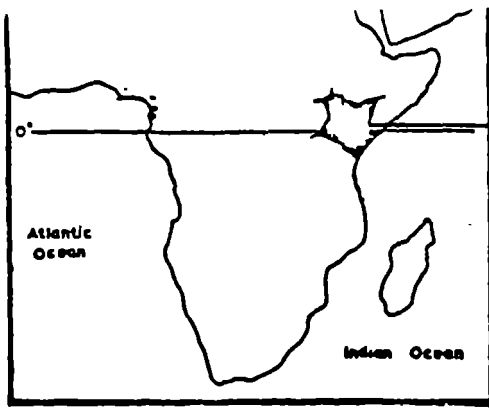
This report has not received formal clearance of the Government of Kenya and should therefore be considered provisional. The front page illustration is reproduced courtesy of J. Waterkeyn/KWAHO.

PEOPLE, PUMPS AND AGENCIES
The South Coast Handpump Project

by
Deepa Narayan-Parker

PROWESS/UNDP
September 1988

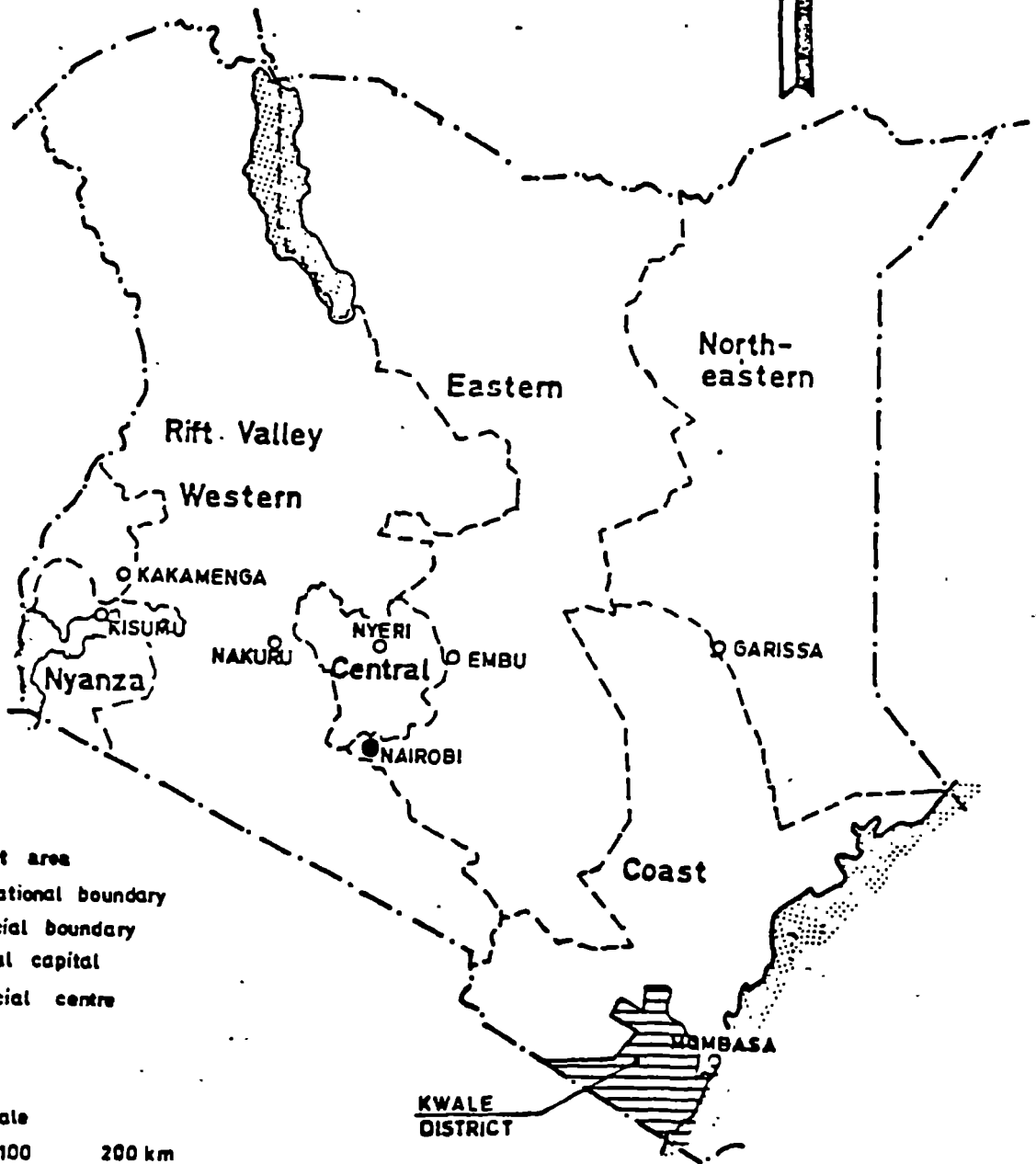
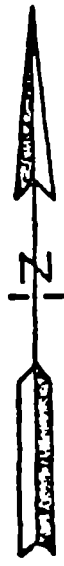
LIBRARY, INTERNATIONAL REFERENCE
CENTRE FOR COMMUNITY WATER SUPPLY
AND SANITATION (ICWSS)
P.O. Box 4300, 2509 AD The Hague
Tel. (070) 814911 ext. 141/142
RN: JSN 4926-2
LO. 205.1 88PE








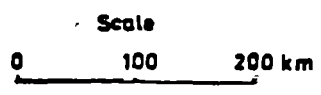
KENYA

Atlantic Ocean

Indian Ocean



-  Project area
-  International boundary
-  Provincial boundary
-  National capital
-  Provincial centre



KWALE DISTRICT

MOMBASA

Coast

Central

Rift Valley

Western

Eastern

North-eastern

Nyanza

KAKAMENGA

KISUMU

NAKURU

NYERI

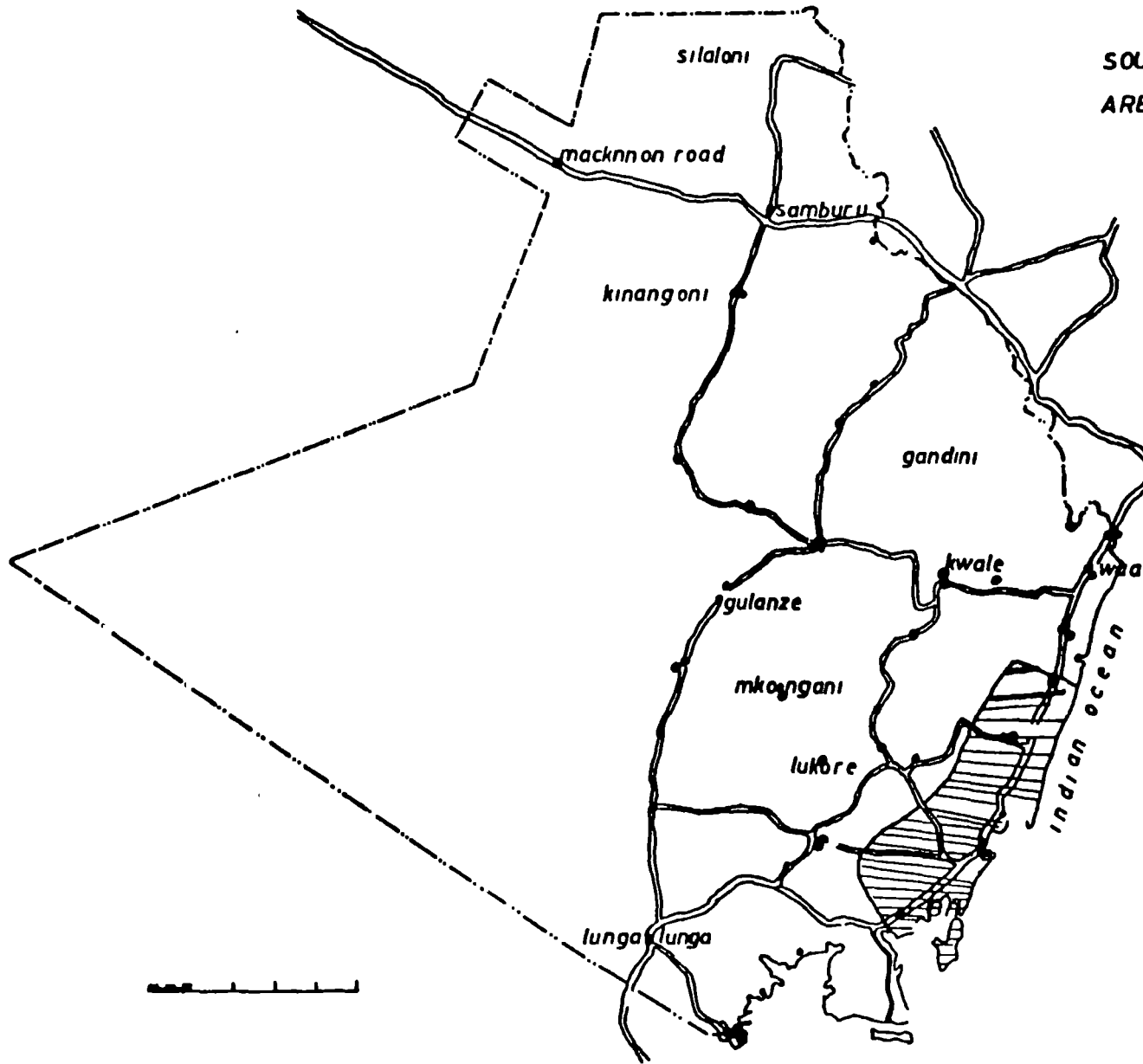
EMBU

GARISSA

NAIROBI

KWALE DISTRICT

SOUTH COAST HAND PUMPS PROJECT
AREA



 SOUTH COAST HANDPUMP
PROJECT AREA

TABLE OF CONTENTS

	Page
Foreword	ii
Executive Summary	iii
A. INTRODUCTION	1
B. EVOLUTION OF THE PROJECT	3
1. The Context	3
2. Small Beginnings	4
3. The Turning Point	4
4. Painful Transition towards Expansion	5
5. Achievements and Impact	7
C. COMPONENTS OF A COMMUNITY MANAGEMENT STRATEGY	9
1. VLOM Technology	9
2. Community Organization	10
i Stages	10
ii Focus on Women	12
iii NGO Involvement	13
iv Cost of social inputs	14
3. Operation and Maintenance	15
4. Service level and Affordability	17
5. Cost Recovery and Financial Management	18
6. Complementarity of Water and Sanitation	19
7. Monitoring, Research and Evaluation	20
8. Developing Human Resources	21
D. INTEGRATION OF PROJECT COMPONENTS	23
1. Synchronizing Technical and Social Inputs	24
2. Institutionalization	24
E. LESSONS LEARNED	25
1. Project Design	25
2. Project Components	26
Annexes	
1. PEGESUS	29
2. Organizational structures and chart	30
3. References	32

Foreword

This case study describes a joint enterprise, and is in itself in many ways a joint enterprise.

Thus, I would particularly like to thank those people in the Government of Kenya, KWAHO and the villagers themselves who took the time to share their experiences, insights and opinions. They include: Ministry of Water Development (L.K. Biwott and his staff) and KWAHO (Margaret Mwangola and her staff: K. Munguti, R. Mulama, S. Mwendari, G. Mazuri, C. Kasena, M. Maalim, M. Mukuzi and extension workers U. Omar, E. Katilau, M. Rashid, M. Dama and B. Hamisi).

SIDA staff (Bo Bergman and Roger Anderson), World Bank staff in Kenya and at Headquarters (John Skoda, Anne Malm, Arun Banerjee, David Grey), and UNDP staff in Nairobi similarly were partners both in the development of the project activities and in contributing their thoughts for this study. Others, e.g. at WHO and COWATER (Gunnar Schultzberg, Mike McGarry) have also given advice on preparation of case studies, we thank them and hope they find this exercise worthwhile. We have also taken up John Kalbermatten's suggestion to use the term "Community Management."

UNIFEM has been our main partner in funding, backstopping of KWAHO as well as in preparation of the case study - a relationship of trust which we particularly appreciate.

Finally, this study was not only written by Deepa Narayan-Parker, she also has spent considerable effort in developing the framework for analysis: PEGESUS. Our thanks go to her for her intent search for lessons which are truly new and useful.

How do we see this case study? For PROWESS, it is the first in a series, which we hope will provide lessons learned rather than guidelines. It is necessarily selective, the list of references gives sources of additional information.

Separately, we are preparing guidelines on the basis of our experience in assisting around 600 communities - guidelines for training in participatory techniques, for data collection (and identifying indicators) for developing projects/work plans, etc.

This being a first attempt, we would be particularly grateful for comments.

Siri Melchior
Programme Manager
PROWESS/UNDP

EXECUTIVE SUMMARY

The principles of the International Drinking Water Supply and Sanitation Decade (IDWSSD) have been widely accepted. They include use of low cost technologies, community, especially women's involvement, cost recovery, health/hygiene education and inter-agency collaboration.

However, to date only a few large scale government programmes have been able to operationalize the IDWSSD principles.

Part of the problem in achieving "success" is reaching agreement on what is success. For this reason, based on Decade experiences, a planning and evaluation framework, PEGESUS (Partnership to Evolve and Grow Effective and Sustained Utilization of Systems, Annex 1) has been developed. This defines three overriding criteria of success. They are:

1. Effective and sustained utilization of systems - This refers to use of facilities in ways that maximizes benefits and minimizes negative consequences. It implies use of facilities even when less than optimally convenient (some indicators: increased volume of water used, maintaining water quality from source to mouth, hygienic use of toilets, use of protected water sources even when traditional sources are closer). Without effective, continuous use of facilities, economic, social and health impact cannot be attained.

2. Sustainability refers to ability to maintain efforts and derived benefits, both at the community and agency level, without detrimental effects on the environment, even after 'special' technical, financial and managerial assistance has been phased out.

Since every situation is unique and changes inevitable with time, sustainability can be achieved by developing the problem solving capacity of agencies and communities (some indicators: user created committees, evidence of conflict resolution, resource generation, functioning facilities, shared goals and identity, increased self confidence and autonomy in agency staff and community women and men).

3. Replicability - Projects that depend on local resources, including national staff are easier to replicate than projects heavily dependent on expatriate staff in superordinate capacities. Replicability of small pilot efforts cannot be assumed until proven in larger demonstration projects.

These criteria are applied to analyse the experiences of the widely acclaimed Kwale Water and Sanitation Project in the coastal region of Kenya which evolved and grew out of the small pilot South Coast Handpump Project.

Context

The South Coast Handpump Project started in 1983 in two locations in Kwale District covering an area of 300 sq. kms. It aimed to reach 25,000 people along the coastal belt. It grew out of the Government of Kenya's (GOK) willingness to experiment with low cost technologies including handpumps and desire to tap below the ground reservoirs of clean water. The project aimed to develop a VLOM (Village Level Operation and Management of Maintenance) handpump by installing and testing 12 different kinds of handpumps. The work was executed by the Ministry of Water Development (MOWD) with management support from the World Bank. It was financed by GOK and Swedish International Development Authority (SIDA) through UNDP/OPS.

Within the first year, it was recognized that to develop pump maintenance systems in partnership with local communities, especially their women, would require specialized technical expertise of a different type than was available within the MOWD.

This led to inclusion of KWAHO (Kenya Water and Health Organization) a young Kenyan NGO, within the project. UNIFEM funds allowed KWAHO to post two sociologists to the project who trained 5 local women as extension workers. The KWAHO staff led the community organization work and trained 29 local women as pump caretakers. PROWESS funds provided KWAHO with management support and training in participatory methodologies.

Convinced that a winning combination of 'hardware' and 'software' was finally in place, as early as 1984, the MOWD and SIDA planned an expansion to cover the rest of the district. The expansion was not always smooth. It started prematurely, before a standardized pump had developed and before patterns for community organization had been established. By 1987, however, 46,750 people had been served, over an area of 8,250 sq. kms. A standardized pump, the AFRIDEV had been accepted and local manufacturers had started production.

Project Achievements

In areas where pumps are conveniently located, village women report saving time and utilizing water from pumps. Even though the pumps are relatively new, an internal evaluation in early 1988 indicated that all pumps were functioning and were being looked after by user-created water committees. All the committees (125) include women, have selected women as treasurers, and all collect cash. A majority, 70%, have already opened bank accounts. This money has been used to buy spare parts and correct pump breakdowns.

Moslem women, whose abilities had been doubted at the beginning of the project, have not only become effective extension workers but also play prominent roles in village level activities. Reports indicate that some women have increased informal production activities and plough some of their cash back into pump maintenance.

Despite inconclusive causality, health statistics for Kwale District based on out-patient visits, show a dramatic decline in diarrhoea and skin diseases.

The project is managed by competent Kenyan staff some of whom were locally recruited. They are assisted by two SIDA advisers.

Although long term sustainability and replicability cannot yet be assumed, the project meets the three criteria to a greater extent than is found in many projects.

It is because of its achievements and continued struggle with some identified, yet unresolved problems, that Kwale offers valuable lessons for those involved in integrated community based water and sanitation projects/programmes.

Lessons Learned

Project Design

Kwale succeeded because it was able to develop mutually supportive relationships between community groups, government ministries, an NGO and several external donors who were willing to make long term commitments, take risks and work together. This working together was made possible by a shared vision and growing conviction of the centrality of women and communities in achieving success. Despite different disciplinary and political philosophies the partnership held because of one shared overriding goal, achieving sustained functioning of community owned water systems.

Project experience however indicates, that the overriding goal of sustained functioning is insufficient to propel integration of water, sanitation and health education. The overriding goal of "effective and sustained utilization," which is difficult to achieve without complementarity, might be more likely to motivate personnel to undertake the difficult task of collaboration.

The Kwale experience highlights the total inappropriateness of the 'blueprint' approach, a framework which assumes that all is known and predictable before a project begins. The blueprint paradigm cannot be applied to projects which aim to plan, implement and evaluate together with local communities. Instead, what is needed for low cost community based water supply and sanitation programmes is an alternative framework that:

- gives people and community management involvement a central place;
- identifies overriding shared goals acceptable to technical and social personnel;
- integrates one overriding goal with supportive management and organizational tasks and functions;
- defines the primary management task, as designing a 'learning environment';
- makes two-way information flow a central management task; and
- facilitates inter-agency collaboration.

Components of a Community Management Strategy

As long as project staff, both technical and social, conceptualize their work as monopolies over different, non-overlapping project components, integration of hardware and software will be difficult to achieve. Project components need to be conceptualized so as to have implications for all project staff while at the same time contributing towards community management and effective utilization of facilities. The Kwale experience suggests 8 project components all of which have implications for managers, technical and social project staff. They are:

1. VLOM technology - Without the right technology, there is no point in getting started. The closer the technology is to attaining the concept of VLOM, the easier it is to achieve community management.
2. Community organization - This requires specialized expertise and training in participatory methods. Applied social/cultural research prior to implementation results in developing strategies more effectively and efficiently. NGOs with close working relationships with Government agencies can be effective in stimulating community organization.

The timing of activities and siting decisions requires close team work between technical and social staff.

The importance of women goes beyond the question, "How many women should be trained as pump caretakers?" The key issue is women's involvement in decision-making and management in ways which enhance human capacity and hence sustainability, and also generate ownership of projects. Women have the ultimate weapon. They determine whether a facility is used or not.

In Kwale, the community organization costs ranged from 15 - 20% of total project costs.

3. Operation and maintenance (O & M)

Training of even non-literate, older village women and men in O & M of pumps is possible. Training is more effective if it is practical, decentralized, on-site and stresses accountability of trainees to their communities. For every 100 AFRIDEV handpumps installed, community-based maintenance saves the MOWD Ksh 1.15 million in recurrent costs over the 10-year life span of pumps.

4. Service level and affordability

The issue of service level which determines convenience and hence utilization of facilities, should not be decided by project managers in isolation but needs to be discussed with communities, especially the women. The importance of the overriding goal of effective utilization rather than "functioning" as the yardstick to guide decision-making becomes clear when considering the issue of "concentration vs dispersal" of limited resources over large geographic areas.

5. Cost recovery and financial management

This is a motivational issue in addition to being an economic issue. While economists can work out cost-benefit equations, cost recovery will only work if it is translated into terms that makes sense to average villagers. The skills of extension workers are crucial in making cost recovery a reality.

In order to increase the probability of cost recovery, sustainability and at the same time reach the poorest, projects need to examine the supportive role of microenterprise development together with planning of water projects.

6. Complementarity of water and sanitation

Complementarity is more likely if personnel share goals that can only be achieved by working together. This is more probable if "effective utilization" rather than "sustained functioning" is the indicator of success.

7. Monitoring, research and evaluation

Community partnership projects cannot survive with "blueprints". However when projects do not have blueprints, simple research, monitoring and evaluation procedures become essential to ensure that projects evolve effectively and efficiently. WHO's Minimum Evaluation Procedures have been found to be useful for technical factors. Project personnel need training in participatory research methodologies and guidance on indicators of participation and effective utilization.

8. Developing human resources

Motivation is the key to developing human resources. Management strategies that treat personnel with respect, offer on-the-job participatory training combined with increasing responsibility result in highly motivated, creative staff that identify strongly with the project vision. To be replicable, projects must utilize national staff and use expatriate experts sparingly in supportive and not superordinate capacities.

.

.

A. INTRODUCTION

One revolution is over. The revolution in thinking that marked the beginning of the International Drinking Water Supply and Sanitation Decade (IDWSSD) has become part of the standard approach in low-cost water supply and sanitation (WSS) programmes. These include emphasis on low-cost technologies, community participation, especially women's involvement, cost recovery, and health/hygiene education in the provision of WSS services to the underserved.

The second revolution, putting revolutionary thinking into practice has proved to be more difficult. Even today, only a few national government programmes have been able to develop mutually supportive relationships between engineers and sociologists, drillers and health educators, communities and government bureaucracies in pursuit of Decade goals.

This is the story of one programme in the coastal province of Kenya widely acclaimed to be a success. It began as the small South Coast Handpump testing project in 1983. Over a period of time the project changed, evolved and grew into the district-wide Kwale Water Supply and Sanitation Project covering an area 27 times the scope of the original project.

Today, the Kwale programme attracts hundreds of visitors wanting to learn from its successes. This perception of Kwale as a success raises many important questions that are the focus of this case study:

What is "success" in the context of low-cost water supply and sanitation programmes?

What successes has Kwale achieved?

Why and how was success achieved in Kwale?

Can the success be sustained and replicated?

What are the lessons to be learned from the Kwale experience?

Success, of course, has many definitions ranging from positive health impact to increase in women's involvement.

Attaining improved health is the goal of all WSS programmes. However, using health impact as the primary measure of success in short term projects is problematic for two reasons. Firstly the relationship between improved health and WSS programmes is tortuous - WSS programmes may not result in improved health, and improved health may occur without WSS programmes. Secondly, measuring health impact routinely (case control methodology) remains relatively expensive and methodologically complex.

Haunted by the scenario of broken down facilities there has been increasing emphasis in recent years on achieving sustained functioning of systems as the criterion of success. This is vitally important, but it is not enough. What is needed is a more central focus on effective utilization.

If functioning systems are not effectively utilized by all potential users, there can be no positive impact. Effective utilization is use of facilities in ways that maximizes benefits and minimizes negative consequences (increased volume of water used for household purposes; maintaining water quality from source to mouth; proper drainage near water sources to prevent mosquito breeding).

In order to move closer to attaining positive impact of WSSs, not only do facilities have to be effectively utilized, they have to be utilized on a sustained basis throughout the year, even when less than optimally convenient (walking further to improved sources when rain ponds or open wells fill up after the rains; utilizing outdoor private or public toilets at night, during rain or attacks of diarrhoea). Without sustained, effective utilization of systems, the impact on health, social and economic welfare will not be achieved.

This standard is valid in many different settings and for many individual projects each with their unique objectives. It is important to integrate this standard with the issues of sustainability and replicability.

Sustainability refers to ability to maintain efforts, and derived benefits, both at the community and agency level, even after 'special' technical, financial and managerial assistance has been phased out. Efforts and benefits should be managed without detrimental effects on the environment.

Replicability. Projects that depend on local resources, and local personnel, are easier to replicate than projects heavily dependent on external resources and personnel. There are many small pilot projects which are small, experimental in nature and often involve high costs per unit. Such projects may not work in scaled up efforts. Hence replicability of small scale pilot projects cannot be assumed till proven in larger demonstration projects and programmes.

Distilling from PROWESS experiences three broad criteria of success are used in this document which parallel the three issues of utilization, sustainability and replicability.

1. Water and sanitation systems must be utilized in sustained, effective ways.

(some indicators - time savings, increased quantity of water used throughout the year in home, agriculture and informal production activities, improved quality of drinking water in homes, sustained use of toilets, increased environmental cleanliness, improved water, waste water and waste handling practices, other spin-off developments (such as improved health, increased income, improved diets, increased school attendance).

2. A dynamic problem-solving capacity must be institutionalized in the villages and the project agencies to resolve problems as they arise and to build in the capacity to adapt to changing environments.

(some indicators-user created committees at community and agency level; evidence, at the agency and community level of resource generation, problem solving, conflict resolution, two directional information flow; functioning facilities; shared goals and identity, increased sense of efficacy, autonomy and self confidence among agency staff and community people).

3. A project/programme must be implemented by national staff and must be beyond the phase of an experimental pilot project. It should make maximal use of local resources.

These success criteria have been derived from the planning and evaluation framework called PEGESUS which stands for Partnership to Evolve and Grow towards Effective and Sustained Utilization of Systems (Annexe 1)

B. EVOLUTION OF THE PROJECT

1. The Context

In Kenya, economic and population pressures coupled with the fact that 90% of the rural people (85% of total population of 19 million) did not have access to safe water in 1980, led to government interest in low-cost technologies including handpumps.

Given this interest, the paramount problem became lack of a suitable handpump for Kenyan conditions. This led to the formulation of the South Coast Handpump Testing project as part of the global UNDP/World Bank Handpump Testing Programme. The project was executed by the Ministry of Water Development (MOWD) with management support from the Regional Project Office (RPO) of the World Bank in Nairobi. The project was jointly financed by Government of Kenya (GOK) and Swedish International Development Authority (SIDA) through UNDP/Office for Project Execution.

At the beginning of the Decade there was no handpump in Kenya that was sturdy and did not break down frequently; that could be easily repaired by village people using simple tools; that was inexpensive and was being manufactured in country. The concept of VLOM (Village Level Operation and Management of Maintenance) did not exist, nor did a VLOM handpump. The South Coast project aimed to develop a VLOM handpump for Kenya. Two locations, Diani and Masambweni, along 300 square kilometres of the coastal belt in Kwale district, were selected for the testing programme.

Positive as well as negative factors had impact on the project from the beginning. The coastal belt had a clean, shallow aquifer, ten to twenty meters below the ground surface. There was a long tradition of using hand-dug shallow wells. The need was recognized as a result of severe water-related health problems including diarrhoea and a cholera outbreak in 1979. The timing of the project was right. The Government's current strategies were also appropriate. The 'district focus' policy emphasized "full participation of the local community in the planning and implementation of development activities". This provided the project with a legal administrative framework to implement community participation.

The concept of community participation is not new in Kenya. The Harambee (self-help) movement that has existed since independence has greatly contributed to development activities and has become the cornerstone of the Primary Health Care strategies in Kenya.

However there were some misgivings as well, even predictions of failure. Two previous handpump projects in the area had failed. Both had completely covered people's wells and installed handpumps that could not be repaired when they broke down. People eventually had to dig new wells.

Naturally people were not enthusiastic about the arrival of yet another well meaning well-covering project. In addition, the population in the coastal belt was primarily Moslem which to many signified a potential disadvantage in stimulating women's participation.

2. Small beginnings

Since the handpump project focused primarily on technology installation and development, not surprisingly the preparatory work and the first year of the project was led by three MOWD technicians who concentrated on addressing essential technical issues. The water levels of the underground water aquifer were monitored and the aquifer mapped. Water quality was tested for bacteriological and chemical adequacy. Seasonal fluctuations in water levels were noted. The presence of existing boreholes and wells was marked.

This early technical work laid the groundwork for the later high success rate in finding water. The project systematically improved drilling techniques, introduced coarse sand gravel packs to prevent sand caving into boreholes, improved well design and worked with manufacturers experimenting with different designs and materials for handpump components. Preoccupation with technology was not inappropriate. But when technicians preoccupied with technology simultaneously began "bestowing" community participation on people, then the combination became ominous. In one month, well-drilling technicians created 30 water committees. As became obvious later, the committees were not based on an understanding of local social organization, were controlled by land owners and were not clear about their roles and responsibilities vis-a-vis the project.

The problem was that, as in many project documents, the desire for community participation was expressed in only the most vague and general terms. There was no specific plan on how the community would be involved in all stages of the project planning, implementation, operation and maintenance. There was no budget, no qualified staff, no operational objectives and no time allocated for community participation.

3. The turning point

As early as July 1983, the problem of 'community participation' had surfaced. Strong project leadership characterized by an openness to learning and self-diagnosis, fortunately resulted in acknowledgement of the problem and the first self-correction. This set the tone for years to come.

The project management commissioned the Africa Medical Research Foundation (AMREF) to investigate the situation and make recommendations for achieving an operational partnership with communities.

Despite the fact that the AMREF study was extremely critical of the project, its findings were taken seriously. The study called for the project to bring in a new partner skilled in community organization for self-help water systems.

The project's search for such a partner led to Kenya Water and Health Organization (KWAHO), a young Kenyan NGO established in 1983. KWAHO assists communities in developing self-help water systems by focusing on women. The search for funding for this new community work led to United Nations Development Fund for Women (UNIFEM) and the UNDP PROWESS programme.

Pilot South Coast Project 1983 - 1985
Area - 300 square kilometers
Population served - 21,000
Technical staff - 17
Social staff - 7
Village pump caretakers trained - 29
<u>New installations</u>
Hand-dug wells with handpumps - 10
Boreholes with handpumps - 89

UNIFEM funds enabled KWAHO to post two sociologists as community liaison officers in the project area. PROWESS assistance, technical and financial, concentrated on support for management and training: management-studies and training in participatory approaches.

The community liaison team (one man, one woman) hired and trained five local village women as extension workers. Together, the seven team members trained other village women in community organization, and development, maintenance and use of simple water supply systems. The UNIFEM project document "Training of Women in the Development, Maintenance and Use of Simple Water Supply Systems" was structured in such a way, that it allowed KWAHO to be truly responsive to community needs and also adjust its work to the pace and temperament of its technical partners who were testing 12 different types of pumps.

The main collaborators were in place. There were three more distant partners that were crucial for the continued existence of a financially fragile KWAHO. They were UNICEF, Private Agencies Collaborating Together (PACT), an American NGO, and WaterAid, London, a British NGO.

Each agency involved in the project, irrespective of the size or duration of its contribution played critical roles without which the project would have gone into early seizures. Every agency involved was characterized by strong leadership willing to take risks, make long-term commitment and practice partnership.

4. Painful transition towards expansion

The work of the KWAHO team motivated village women and men to organize themselves into water committees, raise money for maintenance of pumps and become trained in pump repairs. It proved that community involvement was not only possible but also worthwhile.

Convinced, the MOWD and SIDA began planning an expansion of the South Coast project to the rest of the district as early as 1984. The problem was that the expansion began prematurely. A standardized pump had not yet been developed. It was too early for clear guidelines to emerge for integrating technology with community involvement. The first two years of transition were painful. There were too many changes, too many learning tasks that had to be addressed simultaneously.

The Ministry of Health (MOH) and Ministry of Culture and Social Services (MOCSS) were to play more central roles in health and in community organization activities respectively. KWAHO's role was redefined to focus on training, evaluation and materials development. Besides continuing the development of a handpump, rainwater tanks, spring captures and dams had to be built.

Gradually the staff expanded to include more than 90 people scattered over 8,000 square kilometres. This needed more formalized management and financial strategies. Additionally, relationships had to be worked out with a SIDA adviser posted to the project while construction of the project camp was unusually delayed.

The project emerged out of the two years of transition (1985-1986) with an even deeper understanding of the centrality of community involvement in the success of their endeavours. By 1987, a handpump suitable for village level operation and maintenance had been developed, the AFRIDEV. It was only then that local people could be trained in pump maintenance and repairs and pumps could be handed over to local communities.

<u>Kwale Expanded Programme 1985-1987</u>	
Area -	8,250 square kilometers
Population served -	46,750
Technical staff -	74
Social staff -	16
Health staff -	5
Village pump caretakers trained	-109
<u>New installations</u>	
Boreholes with handpumps -	146
Spring captures -	23
Rainwater tanks -	17
Dams -	1
Demonstration latrines -	96

Currently, tasks are being increasingly routinized and institutionalized. Simultaneously, strategies are being developed and will be further refined for the adaptation of community involvement strategies to different technologies (rainwater tanks, spring captures and dams) and to different ecological and cultural zones.

5. Achievements and impact

"The experiences in Kwale should be transferred to other parts of Kenya and outside. It needs to be recorded and spread especially how the project integrated community involvement."

Wamatu Njoroge, Deputy Permanent Secretary, MOWD.

Besides building water systems and demonstration latrines, the project meets the three success criteria outlined on page 2 to a greater extent than is commonly found in projects. In the process of doing so, the project has had profound impact at the village, government, NGO and donor levels.

1. Effective and sustained utilization. At the village level, the economic and social impact of effective and sustained utilization is easy to discern. In areas where pumps have been installed and are being utilized, women consistently express relief and gratitude at not having to walk long distances to fetch water of questionable quality to the home.

Encouraged and supported by the approach of KWAHO extension workers, women have utilized increased availability of time and water for horticulture. Water groups have increasingly branched off into a variety of production activities including poultry keeping, processing of bixa (red oxide) and production of khanga (cloth). This has in turn increased cash contributions towards pump maintenance and the probability of its long-term survival.

Despite problems in achieving complementarity of water and sanitation; uneven hygiene education related to water handling and use of water facilities, a dramatic decline in morbidity has been reported.

Health statistics for Kwale district, based on outpatient clinic visits, show a clear and consistent decline in diarrhoeal diseases "from 34,042 outpatient visits in 1984 to 19,420 in 1986." "The cause of the decline in diarrhoeal diseases is not known" (p.12, Annual Report Health Information System District Report, 1986).

Despite inconclusive causality, the trend is clear. Statistics from Muhaka Health Center in the project area indicate a 50% decline in diarrhoea and 71% decline in skin diseases between 1985 and 1987.

2. Dynamic problem-solving capacity (sustainability) At the village level this has been instituted through the 125 user-created and user-supported water committees. These committees have become increasingly autonomous in functioning. They have elected leaders, collected local materials for construction, helped in pump installation, collect money for pump maintenance and have undertaken pump repairs.

- 135 village water committees
- all collect cash
- all have women treasurers
- families pay Ksh 1-10 per month
- totals range from Ksh 200 -13,000
- 70% have opened bank accounts
- all pumps are functioning
- committees have repaired pumps

Both men and women have gained confidence in themselves and in each other. This is evidenced by increased respect for women and their acceptance in public decision making. Young, female, extension workers are accepted and listened to with respect even by older men and women in a predominantly moslem society. The importance of women as pump caretakers and on decision making committees is appreciated and supported by communities.

Groups have evolved their own rules and regulations to guide problem solving and conflict resolution. Decisions made by committees have been followed up by action. This includes locking up of pumps, allowing members to pay in kind, dropping ineffective committee members, denying access to non paying members and penalizing households that do not carry out mutually agreed upon duties such as cleaning pump surroundings on an assigned day.

As groups have gained confidence and a sense of efficacy they have increasingly used extension workers as resources. This has included asking for additional information, training or guidance in solving particularly persistent problems. The interface between the water committees and project staff is the source of two way information flow between project staff and people in communities.

At the agency level working groups within each section meet regularly to monitor, evaluate and adjust strategies to ensure effectiveness. The highest committees, the project steering committee which include MOWD, KWAHO and donor representatives from Nairobi and the project management committee now include the KWAHO senior staff member. These committees also meet regularly and function to support project staff in problem solving. In order to ensure long term sustainability, the project needs to move closer to and work within the regular MOWD mechanisms.

3. National staff and expanded programmes (replicability) The project is managed by competent Kenyan staff, and includes local people recruited from the Kwale region. Two SIDA personnel work in advisory capacities (the organizational structure is in Annexe I) while one Peace Corp volunteer assists as a technician specialist in rainwater tanks. The project has expanded beyond the first experimental stages to cover an entire district. However, the 'special conditions' created by the project, means that replicability cannot be assumed as yet at the national level.

Other impact

KWAHO's crucial role in operationalizing the community involvement approach and ability to work with government technicians, has increased government and donor support for its involvement in water programmes. The Ministry of Water Development strongly supports KWAHO and has nominated KWAHO as the principle NGO with which it works. William Draper III, Administrator, UNDP, and Barber Conable, Chief, IBRD, have both personally visited the Kwale project. Subsequently they have both emphasized the importance of communities and NGOs in water supply programmes of their own agencies.

In 1986, SIDA recognized KWAHO's involvement in the Kwale project as the single most positive development of the project that year. SIDA has applied the Kwale experiences to guiding its policy in other provinces in Kenya. KWAHO's services are now in demand by 15 donors. In 1987, KWAHO also won an international UNIFEM award in recognition of its work in Kwale.

Government and donor experience in working with a small national NGO, has led to greater understanding of the problems of NGOs and a commitment to policy change in support of NGOs.

UNDP has taken the unusual step in pledging support for the institution building of KWAHO, a step which is expected to be a precedent for other NGOs. PROWESS and UNIFEM have developed an innovative proposal for provision of 'core funds' on a declining basis over a three year period. The proposal includes training in financial management and assistance in crystalizing policies to ensure that KWAHO consolidates as an institution.

Valuable lessons can be learned by examining why and how the Kwale project achieved a fit between the many components essential in a viable project in ways that are sustainable and replicable.

C. COMPONENTS OF A COMMUNITY MANAGEMENT STRATEGY

The process of achieving success (sustained functioning and effective utilization) is like completing a jigsaw puzzle. None of the pieces are sufficient in themselves yet all contribute towards the whole. All the pieces must fit.

Low-cost water supply and sanitation programmes have several important components. A component fits and contributes towards the whole to the extent it is people-centred and helps people use new facilities effectively. This is best achieved when there is community involvement, acceptance, ownership and responsibility. It is important to examine to what degree the components reflect and support community management and contribute towards sustained effective use.

1. VLOM technology

Through installing, monitoring and changing 12 different handpumps, the South Coast Handpump project through collaboration with the UNDP/World Bank Global handpump testing programme resulted in the development of a standardized pump for Kenya, the **AFRIDEV**. Changed design, especially of downhole components, and increased use of abrasion- and corrosion-resistant materials have made the AFRIDEV sturdy; this also makes it easy to dismantle using a spanner and a fishing hook. The pump is appropriate for depths up to 45 metres. Local manufacture and strict quality control ensures availability

of spare parts. A direct action pump for less than 15 metres is being developed.

Without the development of the AFRIDEV pump, it would have been impossible to train a wide cross-section of ordinary villagers, including non-literate older men and women in pump repairs. VLOM principles are also being applied to evolving the technology and management systems for rainwater tanks and spring captures.

2. Community organization

The pattern for community organization evolved over four years and will be further refined as experience accumulates. Communities are involved in planning, implementation, maintenance and monitoring activities. Communities are much less involved in evaluation activities.

(i) Stages

Five stages have emerged which are summarized in Figure 1, in the Annexe.

Stage 1 is a fact finding mission. During this stage extension workers meet with local leaders, officials, and community members. Information is collected on water sources, community preferences, population density and settlement patterns. Community interest is gauged, project and community roles and responsibilities vis-a vis labor, cash, ownership are clarified.

If communities are interested, discussion moves on to more specific details including siting. Siting work includes a visit by the technical staff. Once a community agrees on a site, land ownership issues are clarified. If the site is on private land, the land owners' permission is sought. Simultaneously, if no water committees exist in the area, the function and nature of water committees is clarified. Community members select 5 women and 4 men to be committee members. A chairperson, secretary and treasurer are also selected. Men usually get elected as chairmen and women as treasurers.

In Kenya, all self-help groups have to register with the MOCSS as a self-help group. Extension workers facilitate the process. The need to collect money for pump maintenance and the function of banks is explained. After registration, committees start collecting agreed upon amounts from all households that plan to use the pumps. Stage 1 is usually the longest. Depending on community interest, it may involve several visits from extension workers.

Stage 2 centres on selection of 5 people per water committee as pump caretakers. It is usually at this stage that bank accounts are opened by the committees. Communities collect local materials and assist project drilling teams and construct the apron.

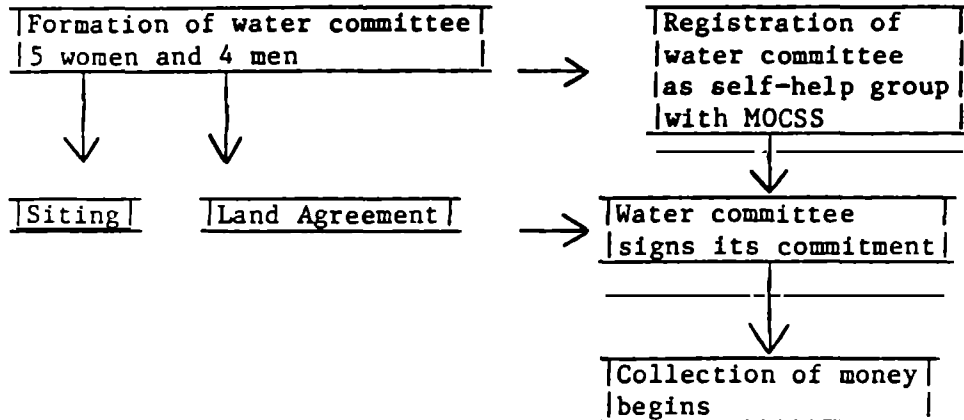
The focus in stage 3 is on training of pump caretakers and installation of handpumps.

Stage 4 begins after training is complete and committees are functioning effectively and collecting money. The project then formally hands over

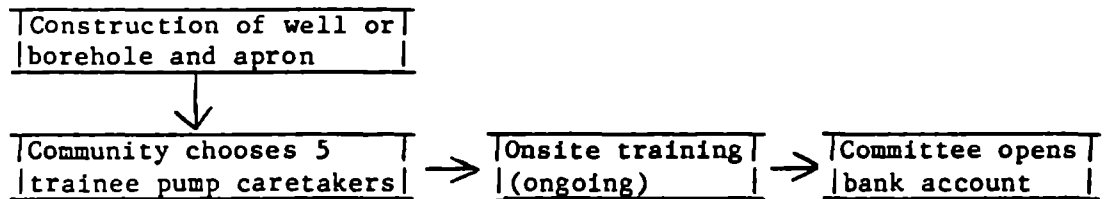
Figure 1

COMMUNITY ORGANIZATION PROCESS FOR
BOREHOLES WITH AFRIDEV HANDPUMPS

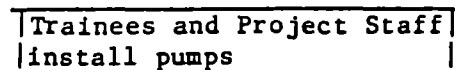
Stage 1 Meetings with leaders and village members, information about the project, discuss roles and responsibilities of the project and the community.



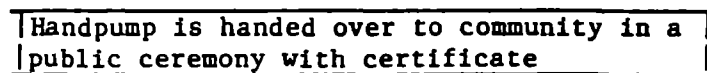
Stage 2



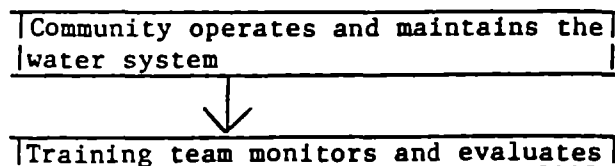
Stage 3



Stage 4



Stage 5



ownership and hence responsibility of pumps to water committees. This includes giving the committee a certificate of ownership of pumps.

Stage 5 involves community operation and maintenance of completed systems. This is monitored and evaluated by the KWAHO training team.

The KWAHO training team estimates that an extension worker can visit between 15-20 water points once a week in concentrated areas and about 12 in more scattered settlement areas. The ratio falls drastically in the hinterland when extension workers sometimes walk 30 kilometres from one water point to the next.

How much time is needed for community organization? It depends on the number of extension workers available, perceived need for water and degree of unity in a community, settlement patterns and many other factors. In Kwale, on the average it takes 3-6 months prior to construction. If technical inputs get delayed, community momentum quickly dissipates. Active follow up is needed for six months after installation. Intermittant follow up is still needed, probably for another year.

(ii) Focus on women

"When you asked the staff why the project has been a success nobody mentioned women, partially because the project is run by men. But also because strong support from men has led to project success. Despite the early focus on 'women only' as trainees, men also developed. Today both women and men have gained."

Margaret Mwangola, Director,

In Kenya, women are the primary managers of water. Hence women are usually more knowledgeable and concerned about maintaining water systems than men. Being the primary water collectors, their preferences also determines use and quality of water in the home. Unfortunately, without a 'special focus' on women, the more prominent public roles of men results in overlooking the importance of women in management of WSS programmes at all levels.

It was for this reason that in the beginning, in 1984, the KWAHO extension staff focused exclusively on 24 village women for training in community mobilization, health education and maintenance of pumps. Today both men and women are being trained in pump repair and maintenance. Once the importance of women became accepted, the policy gradually moved to inclusion of men.

"The extension worker told us to select one woman for training on pump repairs and maintenance. We refused. Why women only? They'll get married and leave and if our pump breaks down, who will repair it? We insisted that three people be trained, two men and one woman. The young man found a job and moved away, the young lady got married and left and now there is only me."

Rashid Hamisii Abdullah
male, pump caretaker, 59 years.

Women serve on committees, and always get selected as the treasurers. Both sexes trust a woman more than a man with money. The project no longer focuses exclusively on women, but uses methods to ensure that women will be included.

"When the training teams went out, men came pleading to them saying they wanted to be included. It would be dangerous for us now if men were left out again. If we want to include women we have to make sure that trainee selection takes place at the lowest level. If trainees were selected at the chief's barazas (council) only men would end up being selected."

K.K. Munguti, Senior Programme Officer, KWAHO

(iii) NGO involvement

The entire community organization effort was made possible by the integration of a grassroots NGO in a government programme.

Small NGOs and large bureaucracies, national and international, represent two extreme ends of a continuum in terms of management systems, power, control over resources, influence over policies and flexibility in responding to local needs. The strengths of each complement the other. The problem is working out mutually supportive relationships.

Relationship with government

KWAHO was founded as an independent NGO with full government approval in 1983. The MOWD provided KWAHO with strong support from its inception and has been responsible for its growth from a "one woman band" consisting of its dynamic director, Margaret Mwangola, to an organization employing 80 staff all over the country. The Ministry has utilized KWAHO as a partner specialized in the socio-cultural aspects that pervade the management of low-cost water and sanitation systems. MOWD supports KWAHO through provision of office space, transport, materials and a technical officer.

In the districts, KWAHO would have been ineffective without the acceptance and goodwill of the different levels of provincial administration. This acceptance extends to inclusion of KWAHO staff in the District Development Committee (DDC) meetings headed by the District Commissioner.

"We have worked closely with KWAHO, an NGO, now we hope we will be able to involve other NGOs as well."

P.N. Mbugua, District Commissioner, Kwale

Relationship with Donors

The strength of an NGO is its flexibility, its ability to respond effectively and quickly to the dynamics of a local situation. Small, action-oriented NGOs are notoriously poor at meeting paperwork requirements, filing reports, submitting detailed plans, budgets, accounts, etc. How did donors and KWAHO manage to work together? Trust, flexibility and simple administrative procedures have played important roles in the KWAHO/donor relationship.

"Donor representatives and I have sometimes fought like wives of one husband. I was lucky with the donors in this project. From the beginning our relationship was a partnership based on mutual need and respect. Without David Grey's (World Bank) moral support, guidance and encouragement I would never have survived the early days. With UNIFEM and PROWESS there has been deep mutual respect from the beginning and this extended to giving me flexible funds. They never did anything without consulting me. I had many problems but I did not have to hide my weaknesses and pretend to be strong. Slowly I grew to trust them. They responded and helped KWAHO become stronger."

Margaret Mwangola, Director, KWAHO

"For UNDP to work with an NGO is not easy. If you burden a small NGO with bureaucracy, it prevents them from doing things they are competent to do. The most crucial step in developing a productive relationship with an NGO is selecting the right NGO. Once objectives, goals and expected achievements are agreed upon and it is clear that the NGO has strong leadership, then donors have to let go. NGOs have to be given freedom to develop and implement without being hampered by extensive reporting requirements, inflexible itemized budgets and narrowly slotted time frameworks. We had to change to respond to KWAHO's needs."

Sally Timpson, Director, NGO Division, UNDP.

(iv) Cost of social inputs

"The technical work remains the same but the social organizational work keeps increasing. When drilling is completed drillers don't have to go back but the social staff have to always follow up."

Bo Bergman, SIDA Adviser

When the project started in June 1983, no one was specifically responsible for social mobilization. By mid-1984, KWAHO staff numbered 7 and by 1987 the KWAHO staff numbered 16 in addition to two government Assistant Community Development Officers (ACDO) who worked part-time on the project. Despite this increase, volume of community liaison work outstripped the capacity of available staff in 1987. Recognizing the central importance of community liaison, the management team temporarily assigned evaluation and training staff to community organization work. Consequently evaluation activities have come to a halt while the situation of unavailable MOCSS staff remains unresolved.

According to the South Coast project the average cost of a completed borehole was US\$2,169, of which 70% were labour costs, including 19% for community liaison and training activities. The average cost of a borehole with a handpump was US\$3,250.

It is difficult to get more current cost estimates. The project estimated that the cost of social activation was 15% of total expenditure in 1987. Given the fact that community liaison work is lagging, it is probable that social mobilization costs will eventually reach 20%.

3. Operation and Maintenance (O&M)

"Trainees could tell from signs and symptoms which parts of the pump had worn out."

Rose Mulama, Training officer

Training for O&M is of central importance in the concept of handing over pumps to communities for care and repair. The training pattern evolved slowly as it was contingent on the selection of a standardized pump. The present goal is to turn over pumps to communities within six months of installation.

Training of handpump caretakers as it is practiced today is almost completely different from its beginnings. In the early days, choice of trainees was heavily influenced by extension workers; one literate woman was selected for one or more pumps; the training was off site, centralized and involved note taking. It did not stress accountability and involvement of community members in assessing the progress of trainees.

Constant dialogue with the communities and learning based on experience has reversed most early decisions. It was found that training one person per pump left users too dependent on one person who might move away, die or lose interest. The criterion of literacy was dropped because it eliminated the elderly, the more stable and respected mature population. Gender was dropped because men too showed keen interest in learning the trade. Off site training was dropped because it isolated trainees from on-site realities, proved to be expensive and prevented other pump users from becoming involved in the training process. Lectures and note taking in training were dropped as they were found to be ineffective.

To avoid selecting or being perceived as selecting trainees, extension workers now discuss criteria to be considered in selection of caretakers and then physically leave the village. Only by insisting that caretaker selection take place in their absence, have extension workers prevented people from blaming them later for poor performance and choice of trainees. Currently the project trains five people including at least two women on site from each handpump committee. If possible the training is conducted during the actual installation of the pump.

There have been two constants in the training approach. Firstly, women village extension workers continue to be the trainers. Secondly, trainees are not paid for training nor are they paid for repairs later undertaken. The voluntary nature of the work is emphasized, although the final decision is once again left to communities. So far no water committees have paid their caretakers for pump repairs.

Training activities are preceded by two meetings. One is an awareness meeting about the need and purpose of training. The second is a discussion of merits of community selected trainees. The project has developed teaching notes, an O&M guide with illustrations of pump parts and a maintenance card.

To ensure that trainees remember what they learn through hands-on activities with a pump, the training is usually conducted in five sessions with reviews at the end and before each new session. Names have been created in the local dialect for pump parts to aid memory. Reviewing is made more effective and fun by dividing trainees into two teams which quiz/test each other. The community conducts an assessment of the trainees after the second training session. This has proved essential in solving instructional and motivational problems and also in establishing accountability of handpump caretakers to the community.

Like other project components, training too evolved through critical turning points. In 1987, when it was realized that the goal of handing over pumps had not been reached, the project created a 'handing over committee' to prepare for the handing over of 27 pumps and systematize support strategies at the same time.

The handing over committee developed a package of materials including a handing over certificate with a project logo. The committee also recommended the inclusion of health/hygiene education in O&M training, continuation of the voluntary role of caretakers and the preparation of a formal land agreement certificate through the land registrar's office. The first 27 handpumps were ceremonially handed over to communities by the Minister of Water Development in October 1987.

The concept of 'scheduled maintenance' has been introduced and is being practiced by communities. A set of spare parts for the first annual replacement is given to encourage performance of preventive maintenance. Each water committee also receives a spanner and a fishing hook for pump dismantling.

An internal operation and maintenance study examined the potential of bicycle mechanics for pump maintenance training and the private sector for distribution of spare parts. The study concluded that low volume of repairs made both ideas unfeasible at present. The project takes responsibility for major repairs and also stocks spare parts for now.

Although the pumps are still relatively new, a study of 43 pumps handed over in 1987 revealed that all the pumps and its committees were functioning well in February 1988. Committees had undertaken minor repairs while the Staamili water committee in the village of Mwamua had even corrected a major breakdown of the rising main.

The community-based maintenance system results in substantial long-term savings for the MOWD's recurrent costs. The South Coast project estimated central maintenance costs to be Ksh 1112 per handpump; by contrast, village-level maintenance was calculated at only Ksh 608 (including the shadow cost of labor which is currently volunteer). For every 100 Afridev handpumps installed, community-based maintenance saves the MOWD Ksh 1.15 million in recurrent costs over the 10-year span of the pump.

4. Service level and affordability

"The technology chosen should give the community the highest service level that it is willing to pay for, will benefit from and has the institutional capacity to sustain."

Saul Arlosoroff, et al, World Bank

Service level defines not only the amount of water available per capita but also the convenience of obtaining it. Service level is the distance water must be hauled, queuing plus filling time as well as the ease of drawing water.

In the Kwale project, each handpump is expected to serve 200 people. Based on desire for wide coverage and the effect of groundwater extraction on the aquifer, the minimum recommended distance between boreholes is 1 kilometer. The problem is that the distance women are willing to walk is subjective and it determines whether or not women use and support a particular handpump. This subjective definition of convenience which determines use is not always easy to take into account.

Although precise statistics are lacking, internal evaluations indicate that while all handpumps are utilized, some are overutilized (over 200 people) while others are underutilized (48 people). Long queues and waiting time at overcrowded pumps has resulted in dissatisfaction and termination of thriving contributions by a few committees.

In areas where other unprotected sources are available, most women continue to use these sources rather than paying for and walking further to more distant handpumps. Women in still other areas buy water from vendors rather than go to water kiosks or handpumps.

The subjectivity of definition of convenience is dramatized by comparing communities in the coastal belt with communities in the hinterland. In the coastal range, in some areas, women are not willing to walk more than 100 meters to water sources. In the hinterland, families may walk more than 6 kilometers to find water.

Two important phenomena related to affordability have also become clear in the project area. Firstly, some water committees have been 'too successful' and have generated surpluses for maintenance funds. One committee has accumulated over Ksh 13,000! After a while such groups lose their momentum and no longer perceive a driving force for their existence. This has raised the issue of "after water what"?

Secondly, many users and groups, too poor to "afford" water have yet been willing to pay for water by raising cash through individual or group production efforts.

In order to understand the extent of the above phenomena, KWAHO with assistance from UNIFEM and PROWESS is undertaking an in-depth study. The study will address three issues, 1) economic impact of water on women 2) "after water what" and 3) role of planned microenterprise development in supporting low-cost water systems.

5. Cost recovery and financial management

There is no economic sense in recovering costs if the costs of 'recovering costs' are greater than the costs recovered.

(1) Handpumps

The principle of cost recovery has been variously applied. For handpumps, full maintenance costs are being raised by communities through the water committees and directly deposited in banks. Extension workers teach financial management skills and assist in opening of bank accounts. Extension workers only suggest the size of monthly cash contributions. The final decision is made by the groups and hence group contributions vary. Money collected per household per month ranges from Ksh 1-10. Some groups allow members to contribute in kind. The majority of the groups have raised over Ksh 1000. The minimum recommended is Ksh 200.

Project experience indicates that success achieved in cost recovery is influenced by several factors. Contributions for maintenance are poorest when:

- alternative traditional sources of water are close by
- water produced is of poor quality and quantity
- a pump breaks down before it is officially handed over to the community
- installation precedes community preparedness
- communities are marked by divisive politics and varied social groupings
- pumps are installed at institutions
- there is little contact with extension workers.

While economists can work out cost-benefit equations, cost recovery will only work if it is translated into terms that make sense to an ordinary villager. Convincing people to be future-oriented, to prevent or prepare for tomorrow's problem today is not easy. Extension workers achieve this by: 1. encouraging consideration of options but not imposing decisions; 2. relating arguments to people's immediate experiences; and 3. encouraging people to take advantage of temporary external resources.

The following extracts from a community meeting conducted by Uba Omar, an extension worker, on 24/3/88, underscore the importance of the skills of extension workers in making cost recovery a reality.

About contributions

"...The breakdown may not be serious. A pump is like a person. A person may get sick, he gets a headache -- it only costs 1 sh. But he may get very sick then it costs much more. It is the same with a pump -- usually it will be small sicknesses but sometimes it will be big, then it costs more."

About money misuse

"...There are always arguments about money collected -- always accusations. Some people say, she bought a dress with the money!! If you have a weak leader you will be affected. We need strong leaders. But don't always wait for the leader to do everything. The leader is like the father in a household. He gives direction but do you wait for the father to feed you? You should be aware that if you put money in a bank no one else can go to the bank and withdraw it. Everyone should always know how much money is in the bank, everyone should agree before money is withdrawn for any purpose."

(ii) Other technologies

The system of cash contributions for maintenance is working less well for springs. People say: "What can go wrong with a spring capture? If it develops a crack all we need is a little money for cement." It is difficult for project staff to disagree!

The principle of partial capital cost recovery is being successfully applied to building rain water tanks at schools in the hinterland. To avoid complicated financial procedures, and to keep administrative costs low the project has chosen to work through two private masons. Communities collect Ksh 4,000 and pay the mason/contractor directly in two installments for labour. As with pumps communities collect local materials and assist with construction as needed, the project provides all other materials. The demand for rain water tanks is greater than can be met by two masons.

For dams, communities are expected to contribute 40% of total costs. For the Bomani dam in the hinterland the community contributed Ksh 43,000, local materials and labour for weeks on end. The dam provides water supply for 5,000 people and 150,000 livestock from 8 villages.

6. Complementarity of Water and Sanitation

"We have many successes but not in hygiene education, we have ignored sanitation needs. Washing slabs are used to wash bottoms of babies and bathing areas are being used for defecation."

Salome Mwendari, Evaluation officer

Health education related to pumps has been limited to general health and hygiene education messages. Recently two posters have been developed for health education related to water handling and cleanliness around handpumps and proper utilization of V.I.P. latrines. No water quality testing has been done in recent years.

The Kwale project includes building of demonstration latrines at schools and encouraging building of private latrines through provision of slabs and ventpipes. While these activities are important in themselves, a recent evaluation revealed that the school latrines were utilized only by staff, the argument being that there were too many children and too few latrines.

Although some private latrines have been built, in a recent study in Diani location a majority of the borehole committees did not know that the project was also providing assistance with building of latrines. Complementarity of water and sanitation remains elusive.

The fact that complementarity of water and sanitation has not been achieved and that hygiene education is unimaginative is common. The important question is 'why', especially in a project where time and again staff have proved their creativity and ingenuity.

One can assume that staff target their activities to primary stated goals, which, in this case, was to achieve sustained functioning and hand-over pumps to organized community groups. The project was able to achieve sustained functioning without integrating hygiene education. Unless hygiene education becomes an integral part of targeted overriding goals, such as effective and sustained utilization, it is likely to be overlooked.

7. Monitoring, research and evaluation

To be successful, projects that do not follow 'blueprints' but develop programmes that adapt to situation specific social, environmental and technological realities need to invest substantially in monitoring, research and evaluation.

Both the South Coast and the Kwale project have reflected the philosophy of every staff member being an evaluator. Internal monitoring and evaluation activities of technology and community organization approaches have played important roles in achieving success. Kwale project staff have increasingly used WHO's Minimum Evaluation Procedure (MEP) focusing on functioning and utilization indicators to monitor progress. Success indicators of 'participation' and measures of 'effective utilization' are still needed.

It is important to note that monitoring and self evaluation were prominently built into the objectives or in the overall management strategies in all three different project documents. In the South Coast project, although applied only to technology, the primary purpose of the project was monitoring of handpumps; the UNIFEM project document specifies monitoring and self evaluation as objective number 4, while an 'evaluative attitude' pervades throughout the management strategies specified in the Kwale project document.

Despite useful monitoring activities, the project has not yet summarized the rich data available in project files. The entire project would gain from simple consolidation of findings from internal monitoring and evaluation activities. This would result in perceiving trends more quickly and clearly and also clarify the implications of different strategies or decisions for achieving institutionalization.

8. Developing Human Resources

"I can't sit in Nairobi and claim all the glory. I give my staff a free hand to develop their own management systems and I don't interfere. However, they are accountable to me and the project. It works."

Margaret Mwangola, Director, KWAHO

"Field staff do their tedious and often difficult work conscientiously as long as they feel that their work is being appreciated."

L.K. Biwott, Project Manager, MOWD

Four strategies have resulted in development of human resources at the agency and village level in ways that are sustainable and replicable. They are:

- utilization of national staff, including hiring of local people
- avoiding the 'training curse'
- minimal use of external trainers and training
- management philosophy that stimulates initiative, growth and commitment.

The project is managed by Kenyans and pressure to utilize external staff (usually expatriate) has been resisted to avoid creating dependence detrimental to the growth of national staff.

If project personnel become so busy attending training sessions that implementation becomes secondary and if training becomes an end in itself, training becomes a curse. In Kwale, nobody is paid to attend training, rather training is considered a privileged opportunity.

Success in training is measured by gauging the impact of training on performance and adjusting future training methods to increase effectiveness. Training within the project both at the agency and village level has consisted of on-the-job practical training supported by assessment, follow up and increasing responsibility based on performance. This approach has resulted in village women becoming extension workers and then trainers and casual labourers becoming integral parts of autonomous pump installation crews.

Margaret Mukuzi, the 21 year old assistant training officer, is a typical example of personnel growth within the project. Margaret was born in the project area, has secondary school education and was hired by the project in March 1987. She had no previous training experience besides having taught in a school for two months. Today Margaret's ability to supervise independently has doubled the outreach of the six-person training team.

Two PROWESS-supported workshops were conducted at critical points in the life of the project. The first workshop in 1984 brought together 36 participants for a week. It included Ministry personnel and KWAHO staff, senior administration and junior extension staff. This bringing together of administrators with field staff combined with a visit to the villages resulted in much needed management support for the requirements of the participatory approach to village liaison work.

In 1985, PROWESS conducted a training of trainers (tot) workshop on participatory methods for 12 participants from KWAHO, MOCSS and MOH. The workshop was led by two PROWESS consultants. The two-week workshop was residential and was conducted in a simple rural training center in the project area. Participants were not "taught". Rather an environment was created in which they learned experientially. Participants were engaged in a preplanning session which determined the content and pace of the workshop. This ensured that the workshop was based on local realities.

The process of developing some of the visual training materials was facilitated by the presence of an artist who worked with participants in bringing alive their ideas. These were then field tested on real people in villages.

Project staff considered this workshop as the turning point in their conviction of the merits of the participatory approach versus the didactic approach. One workshop is never sufficient. Further training support in community organization and health education was provided by PROWESS through AMREF. KWAHO staff have expressed a need for one further workshop on materials development to consolidate on earlier learning.

Now the trained KWAHO staff not only lead their own TOT workshops for other KWAHO projects but are in increasing demand by other agencies in the region.

A variety of staff incentives and bonuses have been instituted, including some provision for housing, group savings and loans, and bonuses linked to performance. The latter creates intriguing challenges for management used to dealing with technicians.

"Our work in community mobilization is not measurable. A driller may get a bonus for each meter drilled, a spring inspector may get a bonus for each spring completed. How is our work measured?"

M. Maalim, Asst. Evaluation Officer

When all is said and done, the key to high morale and team work is the supportive management philosophy. At an afternoon staff discussion of why the Kwale project had been successful, every KWAHO staff member singled out the management strategies of Mr. Biwott and his senior staff. Their sentiments:

"Why do we walk miles in the hot sun or leave home early in the morning and come home after dark? Because we know that management cares, we know we are trusted, our opinions are respected and if we need assistance we know we will get it, sooner or later."

D. INTEGRATION OF PROJECT COMPONENTS

Without one overriding goal that is narrow enough to be observable and measurable yet broad enough to embrace all project components, achieving integration will be difficult.

When projects have many components, technical and social, there is a proliferation of objectives, goals and sub-goals. In large programmes with complex hierarchical organizational structures, the innumerable sub-goals can work in contradiction with one another unless there is an overriding goal which is clearly articulated and shared.

The most important factor influencing the ease with which project components are integrated is the project design manifested in the project document. The project documents that have one clearly stated overall goal which is reflected in every project component are much more likely to succeed than project documents which do not.

Integration is sometimes possible, despite poor project documents, because of the skills, personalities and philosophies of individuals involved.

In the South Coast project, integration of social and technical project components was achieved because of the individuals involved and not because of the project document. In fact the situation could have been very difficult. There were two different agencies with two different project documents.

In the Kwale project integration has been achieved because of the innovative nature of the project document and a clear statement of one overriding goal--"creation of sustainable, self-reliant, community-owned water and sanitation systems".

The project was kept on track during periods of self-doubt through strong management support, for the achievement of one goal, sustained functioning. Also contributing were constant monitoring and evaluation including joint GOK/SIDA reviews.

"The project management's fear of not making the expected progress must not lead to construction by hiring of casual labourers for tasks when the project assumes community labour. The objectives that communities should be assisted in their own efforts to improve water supply and sanitation must be used as the guideline for project management rather than planned production targets."

Kenya Sweden Joint Review, Report, 1986

The Kwale project document also details the project philosophy which supports the learning process approach, which allows project staff to stop, re-evaluate; slow down if community commitment is questionable even if it means drills sit idle; the project has allowed staff at all levels to experiment, grow and experience responsibility. The project philosophy emphasizes flexibility, innovation, regular reviews, centrality of people and non-interference by external advisers.

The project document builds in flexibility; expects unpredictability and change; it supports change and adaptation to 'fit' local conditions.

1. **Synchronizing Technical and Social Components**

Achieving optimal synchronization of technical and social outputs is difficult. The pace of technical and social inputs has not always been synchronized or effective. Sometimes the technical work is too slow, sometimes the community mobilization is too slow.

For the Bomani dam in the hinterland, it took the KWAHO organizer several months to develop trust and convince people to commit themselves (including Ksh 43,000) and gather materials for rehabilitation of the dam. But the technical teams and heavy earth-moving equipment arrived two months later. By that time people had dispersed, lost interest and faith. The community organizer had to start all over again, trying to convince people that she was not a 'messenger of lies.'

More careful planning of needed technical equipment and the inclusion of senior social staff on management committees has since facilitated synchronization of technical and social inputs.

2. **Institutionalization**

The temptation to build structures irrespective of community commitment is sometimes difficult to resist. The situation will change only as field experience proves and conviction further deepens that without community involvement sustainability of systems cannot be achieved.

Despite the project document, many times in 1985 to 1987 boreholes were drilled and spring captures built with no prior community commitment to maintain and utilize these systems. The situation was caused partially by concentration of KWAHO staff in the South Coast area, unavailability of MOCSS extension staff and delays in hiring needed KWAHO staff.

All construction was brought to a halt in mid 1987. An interministerial 'siting committee' consisting of project staff was created to study the problems and make recommendations to management. The siting committee includes technical, social and health staff and does its work during one week in every month. The procedure that has evolved is as follows: 1) Based on broad project plans, the management committee works out a three month movement plan for drilling rigs. 2) Management committee notifies siting committee of the plan and forwards all requests for boreholes from communities to the siting committee. 3) The siting committee works out a plan to visit communities and based on severity of need, social and technical criteria, discusses possible sites with communities. 4) The final siting decisions are communicated to management.

Currently, the project does not require communities to submit application forms to receive boreholes. Since success depends on community interest and commitment, the project is gradually moving towards more careful assessment of community interest in the initial selection of communities. A more elaborate system of application forms and some monetary commitment by communities prior to drilling is being considered. This will not only streamline the entire community management process but also increase efficiency of efforts.

In the long run, integration of social and technical inputs can only be sustained if staff share common goals, the achievement of goals is clearly contingent on people's involvement, and community involvement becomes a concern of everyone rather than only the community mobilizers. At the same time, every staff member must do what they are best at doing.

However, the workstyles of technicians and community organizers are so inherently different that mutual irritation is sometimes difficult to avoid. The technicians wish the community organizers would speed up while the community organizers wish the technicians would slow down! The common ground established and the inherent tensions are well conveyed in the project hydrologist's statement,

"we must hurry the people slowly."

E. LESSONS LEARNED

Kwale was successful because it was allowed to be successful, it was allowed to change, to evolve and grow over an extended period of time. Even though sustainability and replicability cannot yet be assumed, the Kwale experience highlights processes and factors that are important in creating programmes that are sustainable and replicable. These include overall project design issues and specific project component issues.

A. Project Design

Kwale succeeded because it achieved a partnership between agencies and because the programme was allowed to evolve and grow. Partnership was possible because of a shared conviction of the centrality of community involvement in project success. This was assisted by a focus on one shared overriding goal, achieving 'sustained functioning of community owned water systems'. The project design played an important role in attaining partnership and in evolution and growth of the programme.

1. Partnership Kwale was able to achieve partnership between government and an NGO, between a number of donor agencies and most importantly between the government and local communities. This partnership was based on mutual respect, shared decision making, two-way information exchange, negotiations and defined responsibilities. No partner dictated to others, what needed to be done.

2. Evolution and growth Evolution and growth was evidenced not only within the overall programme but within each project component. A handpump testing project became an integrated WSS project. A training of women in handpump maintenance became training of 'whoever was most available and committed' to repair handpumps. This included men.

Within the programme need for change was not viewed as a sign of failure. Change is inevitable in programmes whose success depends on achieving a 'fit' between different components and a 'fit' to people's needs. Change was based on learning from experience. Evolving effective strategies takes time. This time period can be decreased by conducting applied social and technical research prior to implementation. Constant monitoring of defined indicators is important. Once effective strategies have emerged, they must be increasingly routinized and institutionalized. Only then should programmes attempt to expand.

3. Role of project design In the early stages the project evolved and grew primarily because of the personalities of the individuals involved. In the later stages, the project continued to evolve primarily because of the direction provided by the project document. Personalities became secondary.

Sustainability and replicability cannot be achieved if the success of a project is completely dependent on individuals involved. Personalities cannot be replicated. Project documents, a manifestation of project design, can be replicated.

The Kwale experience highlights the total inappropriateness of the 'blueprint' approach, a framework which assumes that all is known and predictable before a project begins. The blueprint approach cannot be applied to projects which aim to plan, implement and evaluate together with local communities. Instead, what is needed for low cost community based integrated water supply and sanitation programmes is an alternative framework that:

- gives people and community management a central place;
- identifies an overriding shared goal, "effective and sustained utilization," acceptable to technical and social personnel;
- integrates one overriding goal with supportive management and organizational tasks and functions;
- defines the manager's role as designer of a 'learning environment;'
- makes two-way information flow a central management task; and
- facilitates inter-agency cooperation.

B. Project components

Evidence from Kwale indicates that acceptance of the centrality of community management has implications for every project component. It is not the mere addition of one new project component, 'community participation'.

1. Technology Without the right technology, there is no point in getting started. The closer the technology is to attaining the concept of VLOM, the easier it is to integrate with community management. The more obvious the perceived advantages of a technology in convenience, reliability or quality, the easier it is to stimulate community interest.

2. Community organization Community organization strategies can be made more effective if they are formulated based on applied research/case study prior to implementation. Strategies should be finely tuned through participatory research throughout the project cycle.

Mutually beneficial relationships can be worked out between local NGO's and government agencies, and between technical and social staff. This can be facilitated by 'flexible funds' and by presence of personnel from both agencies on decision making bodies from the start.

Women's involvement is central and without a determined effort from the beginning to ensure that women are included in management of WSS programmes at all levels, they will be bypassed. Inclusion of women does not mean exclusion of men. Research in the project design phases and participatory research during implementation is needed to 1) identify the characteristics (gender, age, power, wealth, residential stability) of those who have a stake in improving, maintaining and utilizing water and 2) to identify culturally appropriate methodologies to facilitate involvement of all interest groups including leaders.

Community-based maintenance results in substantial savings in recurrent costs to government. It also results in time savings for women, increased informal production activities and increased belief-in-self among village men and women. Stimulating involvement is cost incurring. Costs of social inputs probably range from 15-20% of total project costs.

3. Operation and maintenance

Village women and men can be motivated to look after and repair their own handpumps. Training in O&M of pumps is more likely to succeed if it is practical, decentralized, conducted on site and stresses accountability of trainees to their communities. More than one person per pump needs to be trained.

4. Service level and affordability

Desire to maximize geographic coverage with limited resources will negatively influence service level, convenience and hence utilization. More central focus on the goal of effective utilization rather than functioning will assist in guiding compromise decisions.

5. Cost recovery and financial management

This is a motivational issue in addition to being an economic issue. Willingness to pay is difficult to gauge from secondary economic data. The success of cost recovery at the village level depends on perceived value of water. The skills of extension workers are very important in achieving success in cost recovery. The issue of "after water what" and the role of microenterprise development in sustaining cost recovery needs to be further explored.

6. Complementarity of water and sanitation

Achieving complementarity will be facilitated by focus on 'effective utilization' as an indicator of success rather than sustained functioning. Experience indicates that when hygiene education is limited to 'messages' it is not very effective.

7. Monitoring, research and evaluation

If projects do not come into being with 'blueprints', simple monitoring procedures and indicators for evaluation become very important. These must be clearly related to achieving stated objectives. Monitoring and evaluation activities have implications for staff time and hence need to be clearly defined as an important part of staff responsibilities. WHO's Minimum Evaluation Procedures (MEP) have been found to be useful for technical factors. There is a need for simple 'participation' indicators and indicators to gauge 'effective utilization' of water and sanitation systems.

8. Developing human resources

The project shows the importance of supportive management strategies for stimulating growth, creativity and initiative in project staff. To be replicable, projects must utilize national staff and use expatriate experts, sparingly in supportive capacities, not in superordinate capacities.

Formal education may be overrated in considering qualifications for jobs. Experience indicates that on the job training of carefully selected local people results in low/no staff turn-over, high morale and effective performance in jobs.

Training workshops in participatory approaches to community involvement are essential for all project personnel (senior and junior, technical and non technical) to establish common ground and support for the requirements of the participatory approach. Further training in participatory methodologies for extension staff is essential to ensure that the participatory methods become habitual.

Conclusion

In Kwale, the work continues. The value of Kwale is in the process of its struggles and achievements. No other project will find exactly the same solutions as were found in Kwale. Every project is different. But every project must evolve as Kwale did to "fit" its particular cultural, ecological, financial and institutional environment.

Annex 1

PEGESUS

Partnership to Evolve and Grow Effective and Sustained Utilization of Systems

Partnership - between local communities and agencies (Government, NGO, donor, and private sector). It implies equal status, mutual respect, two-way information exchange, negotiation, shared decision-making and defined responsibilities.

Evolve - No two partners or contexts are the same. Programmes evolve through experience rooted in the context. Errors and changes can be high in the early stages as learning begins. Investment in research and monitoring shortens the period of learning. Managers are not executors of blueprint plans, but rather designers of a learning environment so as to institutionalize problem solving capacities for continued adaptation and evolution of programmes.

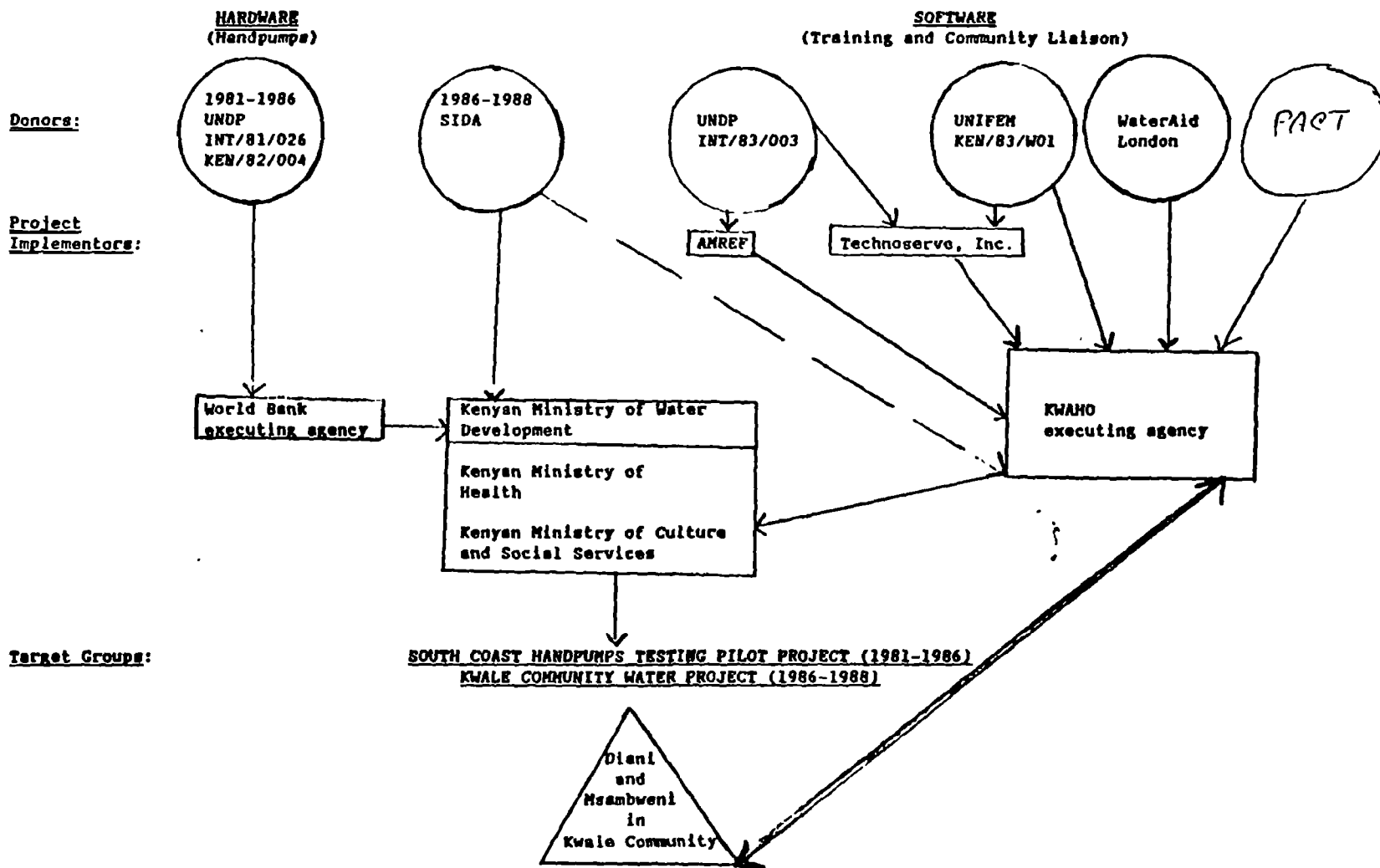
Grow - Learning systems and systems of management must become effective and institutionalized both within local communities and agencies. Once organizations have learned to be effective, they must increase efficiency and eventually expand in order to reach the millions underserved.

Effective and Sustained Utilization - This is the primary goal and 'yardstick' against which the adequacy of decisions, even at the early planning stages, is gauged. Sustained utilization subsumes sustained functioning. The reverse, however, is not true. Sustained utilization implies motivation for long-term use, even when less than optimally convenient. Focus on utilization forces planners to focus on users, people, rather than technology, per se. Effective utilization integrates the need for hygiene education and other support systems to ensure optimal health, social and economic impact.

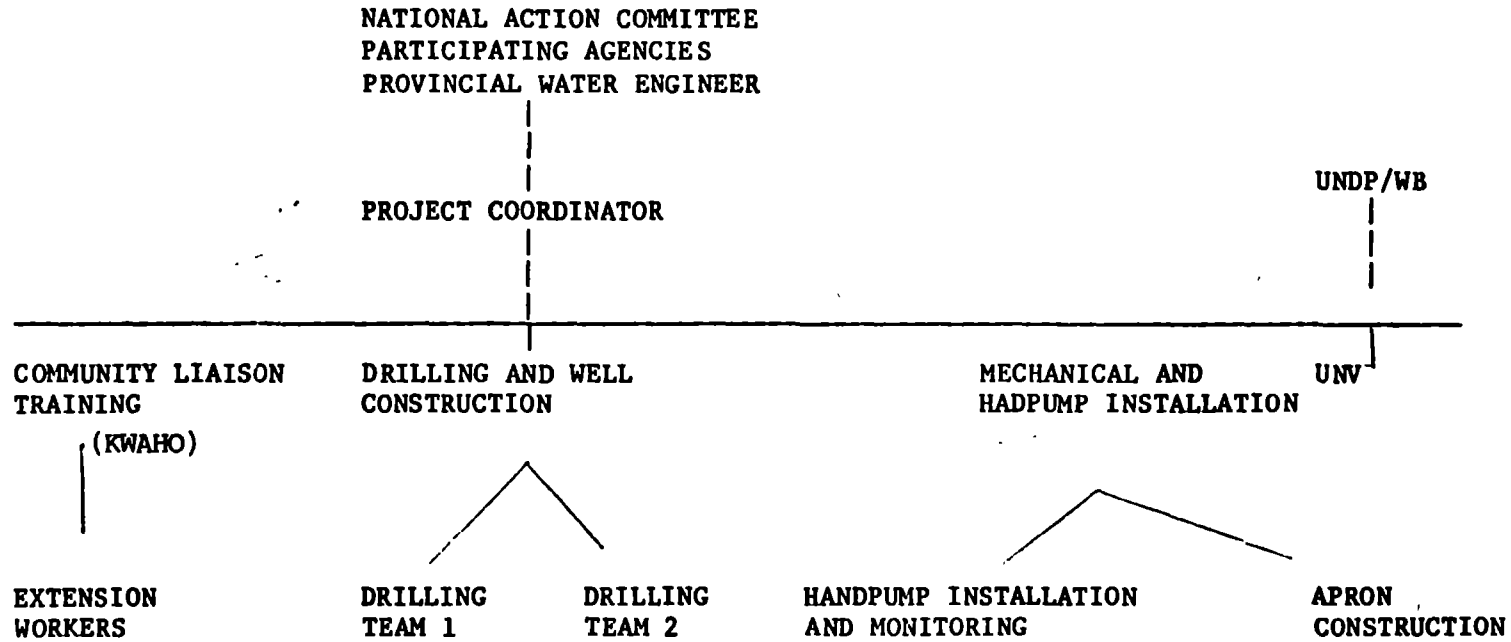
Systems - Refers to technology and management needed to select, install, operate, use and maintain the technologies.

PEGESUS can be used in a variety of ways to ensure consistency from the phase of project identification and formulation to evaluation of programmes. A detailed description of PEGESUS can be found in a companion paper available from PROWESS.

Organizational Chart of Kwale Water Project



ORGANIZATIONAL CHART
SOUTH COAST HANDPUMPS PROJECTS TEAM



SELECTED REFERENCES

Arlosoroff, S., et al, Community Water Supply the Handpump Option. World Bank Washington D.C. 1987.

Institutional Development of the Kenya Water for Health Organization (KWAHO) Project Document. UNDP, 1986, 1987.

Kwale, District Water and Sanitation Project Plan. March 1987.

Kwale, District Community Water Supply and Sanitation Project Project Plan. Government of Kenya and Swedish International Development Authority. Norconsult, June 1985.

McCommon, Carolyn. Women and Rural Water Supplies. DRAFT. World Bank, Washington D.C., 1988.

Oendo, Ayuka, Sociocultural Study for the establishment of a community-based handpump maintenance scheme. AMREF, September 1983.

Participatory Training-of-Trainees Workshop. Alternative Strategies for Involving Rural Women in the Water Decade Kenya. UNDP/PROWESS, 1986.

Quarterly Reports of KEN/83/WOI. Training Women in the Development, Use and Maintenance of Simple Water Systems, 1984 to 1987.

Report of the Evaluation Officer, Kwale Water Supply and Sanitation Project, September-October 1987, December 1987, February 1988.

South Coast Handpumps Project Final Report DRAFT. 1987

Srinivasan, L. Report of Mission to Kenya, 11-17 November 1987, UNDP PROWESS, New York. 1988

Training of Women in the Development, Maintenance and Use of Simple Water Supply Systems. Project Document, Voluntary Fund for the United Nations Decade for Women. Project Document, June 1984.

UNDP, Division of NGOs. Case history of UNDP collaboration with The Kenya Water for Health Organization. New York. 1987.

PROWWESS/UNDP Technical Series
INVOLVING WOMEN IN WATER AND SANITATION
LESSONS, STRATEGIES, TOOLS
KEY ITEMS, 1985 - 1988

General

1. International Reference Centre in collaboration with PROWWESS/UNDP: Participation in Water Supply and Sanitation - Roles and Realities - by Christine van Wijk-Sijbesma, 1985, (English/French). A literature review and annotated bibliography.
2. PROWWESS/UNDP: Tapping a New Reservoir for Water, by Sarah Timpson, 1986, (English/French). Overall issues and lessons learned to date in PROWWESS/UNDP field activities.
3. PROWWESS/UNDP: "Women, Water and Sanitation", by Siri Melchior, planned for end 1988, (English/French). Update on overall issues and lessons learned to date.

Case Studies, Country Reports, Field Research

4. PROWWESS/UNDP: Report of the Process Evaluation Mission of a CARE-assisted project of water systems in Rwanda, by Jean Beaudoin of Coopérative d'Animation et de Collaboration, 1987, (English/French). An example of techniques to evaluate the process of participation.
5. PROWWESS/UNDP: Process Review reports on the Buba-Tombali Water Project, Guinea Bissau and the Bicchiwada Block Water Project Rajasthan, India, by Mette Jorstad, 1986, (English).
6. PROWWESS/UNDP: Social feasibility Study on the Role of Women in Rural Sanitation, by Veena Sundararaman of SNTD Women's University, 1987, (English). Overview of Methods used, results, constraints in a field study in four villages of Maharashtra State, India.
7. PROWWESS/UNDP: India - Twenty Lessons Learned from Social Feasibility Studies - 1988, (English). Based on four social feasibility studies of rural sanitation in India.
8. PROWWESS/UNDP: Kenya - People, Pumps and Agencies - by Deepa Narayan-Parker, 1988, (English). A case study of the South Coast Hand-Pump project with particular emphasis on Kenya Water and Health Organization (KWAHO), describing partnership between a Government, an NGO and donors.
9. PROWWESS/UNDP: Dhaka - Volunteers Against Diarrhoea - 1987, (English). A description of a programme working with women volunteers in an urban slum area to improve health education and action.
10. PROWWESS/UNDP: Case Study on Indonesia, by Deepa Narayan-Parker, planned for early 1989, (English/French). An analysis 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.

Field Tools, Training Aids

11. PROWWESS/UNDP: A Participatory Training Overview, by Lyra Srinivasan and Sarah Timpson, 1986, (English/French). Some lessons learned from past training activities.

12. PROWESS/UNDP: Reports of Five Participatory Training-of-Trainers Workshops in Kenya, 1986; Lesotho, 1986; Indonesia, 1987; Zambia, 1987 and Nepal, 1987; (English). Examples of individual training activities, description of participatory methodologies used and taught, analysis of results.
13. PROWESS/UNDP: Field Training Manual, Lesotho, by Willie Sampson, 1987, (English). An example of field training manual for a sanitation project in Lesotho using participatory techniques.
14. PROWESS/UNDP: Video on National Training Workshop in Zimbabwe, 1987, (English). Describes the process of a workshop for personnel of several ministries, methods used, results.
15. PROWESS/UNDP: Video on Regional Training Workshop in Tanzania, planned for late 1988, (English). Describes the process of a workshop for personnel from national institutions in anglophone African countries, methods used, results.
16. PROWESS/UNDP: Knowledge Generation and Use in Partnership with People, by Deepa Narayan-Parker, planned for early 1989, (English/French). A tool for planners in field projects. Emphasis on designing indicators and use of participatory data collection techniques for planning and evaluation.
17. PROWESS/UNDP: Community Participation - A Challenge for Trainers - by Lyra Srinivasan, planned for early 1989, (English/French). A tool for trainers in field projects. Particular emphasis on SARAR methodologies, experiences in application in PROWESS/UNDP activities.

Guides, Strategies

18. World Bank and PROWESS/UNDP: Involving Women in Sanitation Projects, by Heli E. Perrett, 1985, (English). A guide for project planning and design.
19. 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.
20. PROWESS/UNDP: PEGESUS, by Deepa Narayan-Parker, 1988, (English). Analytical framework for designing and assessing projects and programmes, concentrating on goals and management tasks.
21. 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.
22. UNDP Technical Advisory Division in collaboration with PROWESS/UNDP: Programme Advisory Note, planned for early 1989, (English).

Numerous additional reports on country-specific activities are available for limited distribution.

For further information, contact:

UNDP/PROWESS Programme Manager
 304 East 45th Street, Room FF-12-108
 New York, NY 10017
 Tel: (212) 906-5862 - Fax: (212) 286-9329

PROWESS/UNDP

PROWESS stands for "Promotion of the Role of Women in Water and Environmental Sanitation Services". It focusses 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 about 600 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 hygiene practices and other socio-economic gains.

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 development, evaluation, field worker training and other strategies of action; and
- data collection instruments, research methodologies other tools for field work.

(see overleaf for listing)