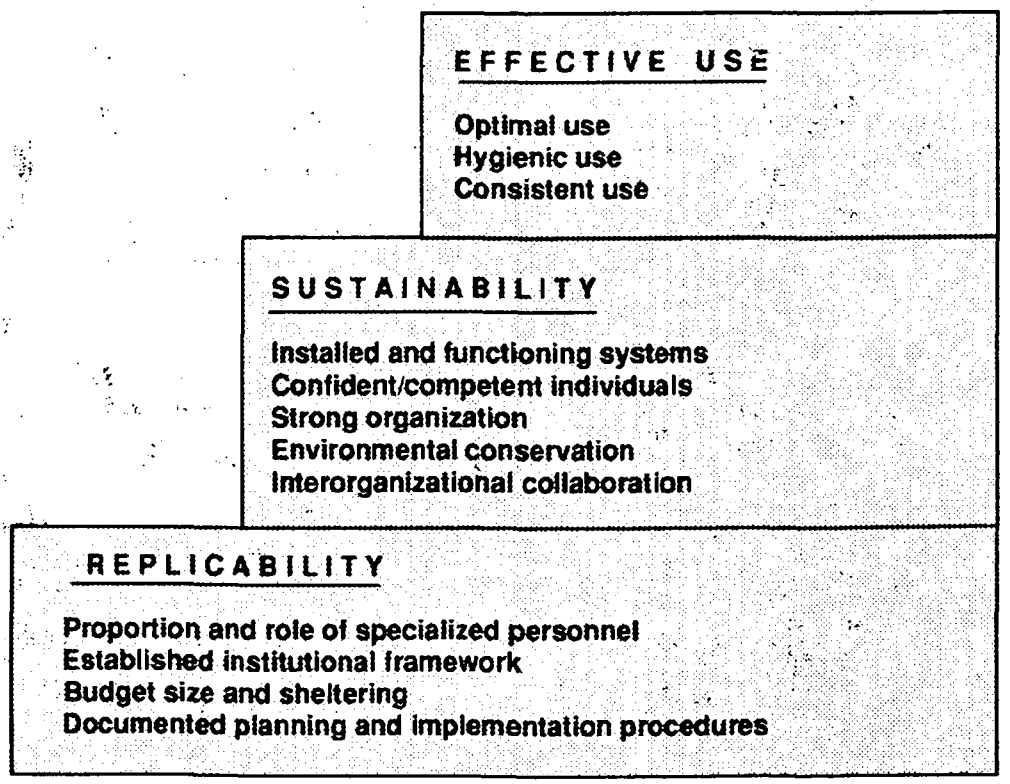
GOALS AND INDICATORS



PROWWESS / UNDP
Involving Women in Water and Sanitation
LESSONS - STRATEGIES - TOOLS

PROWWESS/UNDP TOOLS

PROWWESS places particular emphasis on producing working tools which facilitate women's involvement in community management of water supply and sanitation services.

Faced with the challenge of implementing large-scale activities with a community management approach, we find a strong need for a clearer framework for analysis. Therefore, one group of tools we are developing focus on establishing clear goals, as well as collecting data related to those goals, for use in planning, monitoring and evaluation.

How and why do we measure success?

There are three major reasons for focusing on this question:

- with agreement on what we are trying to achieve, plans and policies can be more forceful and accountability more compelling.

- with precise data on some of these newly emphasized concepts, project leaders can manage responsibly the process of change taking place -flexibility can be made less threatening, community management and women's participation less mystical and projects more responsive to community talents and needs.

- the process of data collection and use can in itself be a useful tool to develop community/women's involvement, if it is done in a participatory manner.

How does this fit?

This document is part of a context.

- Out of a dozen or so **country research activities** 1983-1988 several concepts and simple ways of measuring progress began to emerge.

- The **PEGESUS analytical framework** was developed in early 1988, to distill these principles and serve as a guide for future analysis.

- **Data collection tools** developed 1988-1989 take the PEGESUS framework a step further, developing a list of precise indicators for the concepts described in PEGESUS, as well as tools for data collection at field level.

Reference to these documents is given in the inside of the back page.

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GOALS AND INDICATORS FOR INTEGRATED WATER SUPPLY AND SANITATION PROJECTS IN PARTNERSHIP WITH PEOPLE

by

Deepa Narayan-Parker

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

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This paper remains the responsibility of PROWWESS/UNDP and does not constitute a formal position of UNDP or any of the above mentioned persons.

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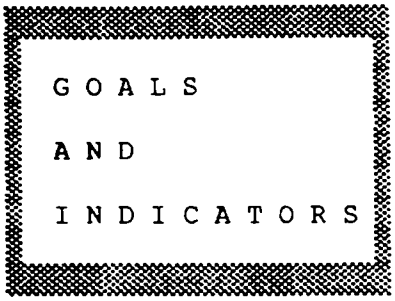

E F F E C T I V E U S E

Optimal use
- .Number and characteristics of users
- .Quantity of water used, all purposes
- .Time taken to use facilities
- .Water resource management

Hygienic use
- .Water quality from source to mouth
- .Sources of en route contamination
- .Practices to improve water quality
- .Site and home hygiene
- .Personal hygiene

Consistent use
- .Pattern of daily use
- .Pattern of seasonal use

S U S T A I N A B I L I T Y

Installed and functioning systems
- .Community decisions in installation
- .Water quality/quantity at source
- .Operation and maintenance
- .Cost recovery

Confident/competent individuals(community/agency)
- .Decision, execution and management abilities
- .Knowledge and skills
- .Confidence/self-concept

Strong organization
- .Autonomy
- .Supportive leadership
- .Systems for learning and problem-solving

Environmental conservation of water sources and watersheds

Interorganizational collaboration in planning and activities

R E P L I C A B I L I T Y

	Stages:
Proportion and role of specialized personnel	
.High input of specialized personnel	Pilot
.Mostly regular staff, decline in specialists	Demonstration
.Existing staff, further decline in specialists	Replication
Established institutional framework	
.Semi-autonomous organization	Pilot
.Less bypassing/more sharing with other agencies	Demonstration
.No by-passing/close inter-agency collaboration	Replication
Budget size and sheltering	
.Generous and sheltered	Pilot
.Medium size and partially sheltered	Demonstration
.Average size and regular budget item	Replication
Documented planning and implementation procedures	
.General guidelines and strategies	Pilot
.Standardized procedures emerging	Demonstration
.Documented simplified procedures	Replication

EXECUTIVE SUMMARY

Acceptance of the community management approach implies that managers do not start with detailed blueprint plans, but with broad guidelines which become more detailed step-by-step once implementation begins. This is essential if managers are to truly involve communities in planning, implementation and evaluation of projects.

*However, to evolve plans effectively and efficiently, managers of interactive community-managed projects make use of constant two-way flow of information and monitoring of progress towards the attainment of goals. This paper is based on the **PEGESUS** framework which identifies the overriding goal as achieving effective and sustainable utilization of water and sanitation facilities that are implemented in ways that are replicable.*

The paper identifies working goals and indicators that play central roles in planning, monitoring and evaluation of community-managed water and sanitation programmes. These indicators become the focus of data collection efforts and should involve community people, especially women.

The three main indicators are:

- ***effective utilization***
- ***sustainability***
- ***replicability***.

Using these indicators, it is possible to analyze, in specific project settings, how the water supply, sanitation, health, community participation, economic, environmental, and related situations are being affected by programme activities. These analyses should be conducted by project personnel with central roles for the coummunity people, expecially women, most affected by changes in the WSS situation.

A. INTRODUCTION

All managers need information to achieve their goals effectively and efficiently. Managers of water supply and sanitation projects/programmes are no different.

The acceptance of the principles of the International Drinking Water Supply and Sanitation Decade (IDWSSD) has meant profound changes in:

(1) Strategies;
(2) Processes;
(3) Management environment of projects;
(4) Working goals.

All these changes have direct implications for the types of information needed for design, planning, monitoring and evaluation of projects and programme activities for rural and low income peri-urban areas.

1. IDWSSD strategies. The Decade goal is to provide clean water and improved environmental sanitation for all by 1990. Although much progress has been made, it is now clear that decade strategies have to be pursued beyond 1990 to reach the goal of "health for all" by the year 2000.

   In order to maximize coverage and health impact and ensure that resources are utilized effectively and efficiently, Decade strategies include use of low-cost technologies, cost recovery, complementarity of water and sanitation, health/hygiene education and inter-agency collaboration.

   Decade principles increasingly emphasize a partnership approach between communities, governments, the private sector and other support agencies including NGOs and donor agencies. The key concept that has emerged is **'community management'*** of water and sanitation services with central management roles for women.

   With experience, the emphasis has increasingly shifted from community assistance in government initiatives to government assistance in community initiatives.

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* A term suggested by the Joint UNDP/IBRD Programme for the Decade.

2. Processes. It is now recognized that there is no development without human development, increasing the capabilities of people. The role of government agencies in such an approach is to create an enabling environment in which individuals (men, women and children) can maximize their potential, be creative, take initiative and assume responsibility for their own development. This can be achieved through participatory processes which involve people in decision-making.

When goal-setting and evaluations are conducted with people, the sub-goals, components and spin-off benefits of a project that are most valued by people become apparent and should become the focal point for mobilization of efforts. For example, people may be interested in a drinking water project only if the water can be used for vegetable production or for cattle.

If projects are to truly strive for local management, then participatory techniques must extend to data collection. Working in partnership with local people in the entire information generation process, results in transforming information into knowledge; it can also mark the beginning of commitment to thoughtful action.

3. Management environment. The structure and function of most water and sanitation utilities developed at a time when most water and sanitation projects were seen as straightforward "design and build" undertakings. Engineers worked in environments that were highly predictable and controllable. They depended on blueprint plans, and on centralized, hierarchical structures. They were evaluated based on adherence to construction schedules and physical targets achieved.

The conventional blueprint method remains appropriate and effective in many circumstances, but does not fit approaches which are centered on working in partnership with scattered communities. Partnership implies equal status, mutual respect, two-way information exchange, negotiation, shared decision-making.

Working in close cooperation with thousands of communities means that government agencies have to build flexibility into their organization. They have to be able to adapt and change to fit local culture, indigenous knowledge systems, organizations and local needs.

Since no two communities are alike, joint decision-making with communities, implies working in environments that cannot be standardized and are relatively unpredictable and uncontrollable. Obviously, no manager in a government agency can exist only to respond to community initiatives and tolerate total unpredictability.

Hence, the role of managers in community-based projects is to manage unpredictability. This means reducing the unknown and the unpredictable to manageable proportions without imposing inappropriate structures prematurely. This can be done by designing a learning environment. The

primary role of managers thus shifts from executors of blueprint plans to institutionalizing problem-solving capacity within agencies. This ensures that programmes can change, adapt and evolve with changing circumstances.

Experience from around the world across sectors (irrigation, health, agriculture, to name a few) shows that managing a 'learning environment' is heavily dependent on two-way information flow - systematic collection, analyses and use of relevant data to guide decision-making. Effective managers not only create an environment in which information flows quickly within an agency, but also from agencies to communities and communities to agencies.

In fact, projects that do not come into being with a 'blueprint' are in danger of going off-track without a high degree of self-awareness and self-adjustment. This can be guided by constant monitoring of efforts, processes and benefits throughout the project cycle.

Hence, to function effectively and efficiently, managers of community-based projects need different types of contextual information than managers of conventional water and sewerage projects. Timely and relevant flow of information will help managers tolerate higher levels of ambiguity and resist the temptation to impose too much structure on plans prematurely.

4. Working goals. All water and sanitation projects collect some information. What type of information is collected, when and how, varies. Information that remains unused because of its content, source or timing, is a waste of valuable resources.

In order to ensure that information is timely, and directly relevant to operational decisions, data collection efforts should focus directly on project working goals. Working backwards from these goals will help limit and focus data collection efforts. Hence, it is important to define project working goals or indicators of success.

Although the goal of all water and sanitation projects is to improve health, the goal of improved health is too distant to guide managers in day-to-day operational decisions. Since improvement in health is influenced by so many factors in addition to water and sanitation, using health impact as the primary goal and indicator of success in the short term is risky. Although measuring health impact has till recently been expensive, recent field-experiences with the "case-control" methodology suggest that monitoring health impact is becoming more affordable.

While every agency is likely to have its own unique objectives, what is needed is an overriding goal that is narrow enough to be observable and measurable and yet broad enough to integrate all project components and propel inter-agency cooperation. The PEGESUS framework developed at PROWWESS identifies one overriding goal as achieving "effective and sustainable utilization" of water and sanitation facilities through strategies that are replicable, summarized in Annex 1.

The overriding goal, as stated above, actually covers three indicators:

- **Effective utilization of systems;**
- **Sustainability;**
- **Replicability.**

In most cultural contexts in developing countries, these goals cannot be achieved without women's involvement in both planning and management. Hence focus on these goals subsumes focus on women in central rather than marginal ways.

Communities and project managers should collect data that help them to plan, monitor and evaluate the achievement of the above goals and focus on 'situation analyses' which stops a step before more sophisticated impact analyses.

The relationships between installation of systems, indicators of success, impact analyses and information collection as used in this document, are schematically presented in Figures 1 and 2.

FIGURE 1

An overview of relationships

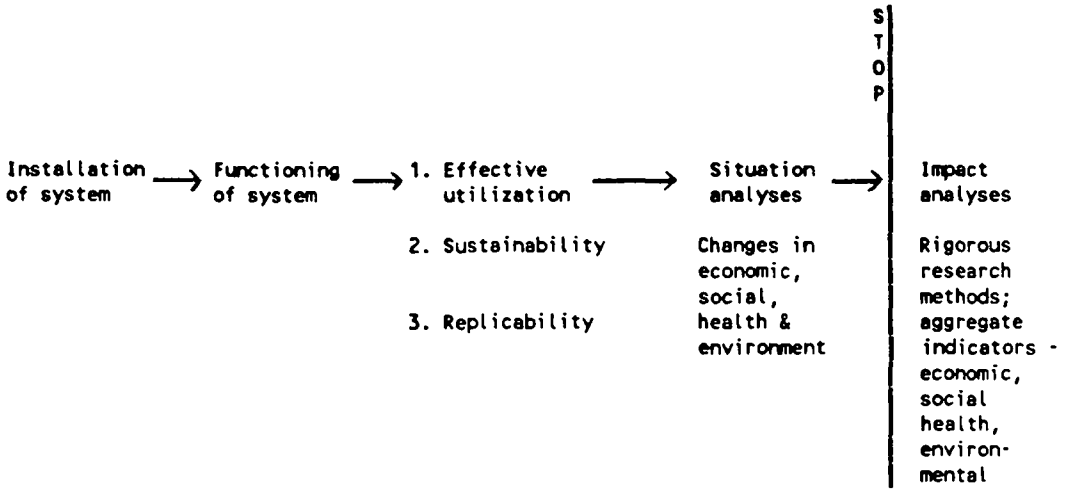
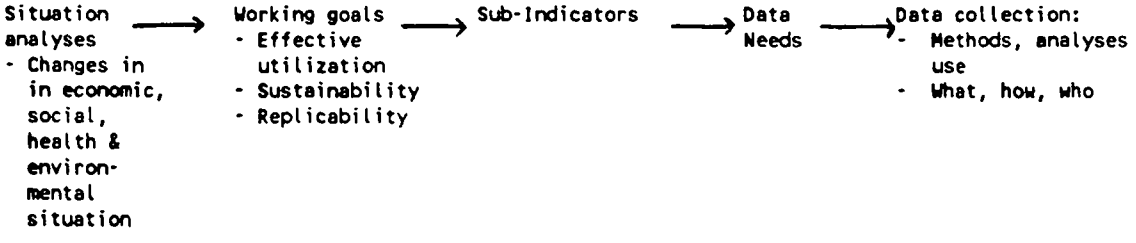


FIGURE 2

Working backwards to focus on information needs



B. DEFINITION OF WORKING GOALS

I. EFFECTIVE UTILIZATION.

Effective utilization is optimal, hygienic and consistent use of facilities to maximize benefits and minimize negative consequences over an extended period of time. It consists of:

E1. Optimal use

E2. Hygienic use

E3. Consistent use.

Optimal use (E1).

This refers to use of facilities to maximize economic benefits without short or long-term detrimental effects on the environment.

Thus, if a water point is designed for 200 people but is used by 15, the system is not being optimally used. If water from a point source is restricted to domestic use and mostly flows back into the ground without being harnessed for other productive purposes (agriculture, fish ponds, watering animals), then the source is not being utilized to the maximum possible. Toilets constructed for family use, used only by men and not women or children, are not being optimally utilized.

At the individual level, if women save no time either because of distance, low water pressure or crowding, then new water sources are unlikely to maximize economic benefits.

On the other hand, optimal utilization of water should be managed without long term detrimental impact on the environment. For example, opening of new permanent water points in semi-arid zones may result in concentration of nomadic population, over-grazing by cattle and eventual drops in groundwater table.

Improperly designed toilets can pollute ground water especially when water tables are high and soil structures porous.

Hence, there are four primary indicators of optimal/economic use (sub-indicator b is more applicable to water than sanitation systems):

(a) Total number of users and their characteristics;
(b) Quantity of water used for all purposes (household and production);
(c) Time taken to use facilities;
(d) Water resource management.

Hygienic use (E2).

For water systems, hygienic use is the maintenance or improvement of quality of drinking water after it has been withdrawn from the source.

Quality of water at source is important and is included under sustainability. Even though water may be pure at the source, it can become contaminated in the process of withdrawing, carrying, transferring and storing before it is used for drinking. Whether the water becomes contaminated during its journey to the mouth depends not only on the water handling and storage practices but is also influenced by the sanitary conditions at home and at the facility and by personal hygiene.

For example, if water containers are left uncovered and there are vectors, animals or dirty hands that can contaminate the water, then the issue of whether the water containers are covered or not is crucial.

Water can be of poor quality at source (bacteriological pollution, poor taste, smell or a poor chemical quality) but can be improved through chemical treatment and simple practices in homes such as sedimentation, filtration and boiling.

Toilets that are not hygienically used result in improper disposal of faeces, attract flies and become health hazards rather than health facilitators.

Hence, there are five main categories of sub-indicators which are further elaborated in the annex:

(a) Water quality from source to mouth;
(b) Sources of enroute contamination;
(c) Practices to improve water quality;
(d) Site and home hygiene;
(e) Personal hygiene.

Consistent use (E3).

This is use of facilities throughout daily and seasonal cycles, over the life of a facility, even when less than optimally convenient.

Examples include walking past unprotected traditional sources during the rainy season to fetch water from protected sources. For toilets it includes use of outdoor private or public toilets at night, during attacks of diarrhoea and during the rains.

The concept of consistent use also forces consideration of seasonal migration patterns of households or members of households so prevalent in certain parts of the world. For example, both in rural Botswana and in many parts of Indonesia, family members move between the village, the lands (agricultural area) and the cattleposts every year.

Thus, there are two main indicators:

(a) Pattern of daily use;
(b) Pattern of seasonal use.

The indicators of effective use are summarized in box 1.

Box 1. Indicators of Effective Utilization

E1. Optimal Use

a. Total number of users and their characteristics
b. Quantity of water used for all purposes
c. Time taken to use facilities
d. Water resource management

E2. Hygienic Use

a. Water quality from source to mouth
b. Sources of enroute contamination
c. Practices to improve water quality
d. Site and home hygiene
e. Personal hygiene including handling of child faeces

E3. Consistent Use.

a. Pattern of daily use
b. Pattern of seasonal use

II. SUSTAINABILITY.

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

No project/programme, especially those heavily dependent on interactions with communities and other agencies, remains static. No project can foresee the peculiarities of each specific community context and plan for adaptation to all future changes, minor and major. Hence, the key to achieving sustainability is planning for change or evolving with changing circumstances - changes in finance, natural resources, changes in policy, interests, demand and capabilities.

Thus, sustainability can be achieved by building problem-solving capacities in communities and in partnership agencies to resolve problems as they arise, and to build in the capacity to evolve with changing environments. Participatory approaches in which people are centrally involved in decision-making become crucial in achieving sustainability.

Sustainability cannot be achieved without building the capacity and confidence of people in communities and agencies, in management, knowledge generation and technical skills. This process is facilitated by making design of a 'learning environment' a central management task. A learning environment is characterized by facilitative leadership, shared vision, systems for two-way knowledge generation, resource generation and conflict resolution. Water is a finite, mobile resource which must be managed wisely.

Water supply and sanitation projects are not confined to one sector in real life and must become embedded in and inter-related to other systems. For example, establishing linkages to micro-enterprise development can help to sustain cost recovery, and teamwork between multiple agencies/ministries is needed to integrate sanitation and health education.

The definition of sustainability as problem-solving capacity has important implications for measuring sustainability, and involves more than measuring sustained functioning of facilities. Since sustainability is a dynamic concept, it should include dynamic measures which indicate whether sustainability is likely to be maintained in a changing environment (e.g. increased confidence, competence, pride; future orientation of groups, ability to self-diagnose; capacity to generate knowledge and resources; systems for conflict resolution; ability to take new initiatives).

The dynamic measures should be in addition to the static measures of whether sustainability has been achieved at a particular point in time (e.g., are the pumps functioning, has the community contributed labour, cash?).

The importance of the dynamic measures will vary depending on the type of programme being considered. For example, the need for strong community organizations and extensive presence of confident, skilled people at the community level may not be as central in privatized household latrine programmes as for communal water systems.

Hence, there are five main indicators of sustainability, some of which have to be considered both at the community and agency level:

S1. **Installed and functioning systems;**
S2. **Confident/competent individuals (community and agency);**
S3. **Strong organizations (community and agency);**
S4. **Environmental conservation;**
S5. **Inter-organizational collaboration.**

These are elaborated in box 2.

Box 2. Indicators of Sustainability

S1. **Installed and Functioning Systems**
- a. Community decisions in installation
- b. Water quality, quantity at source
- c. Operation and maintenance
- d. Cost recovery

S2. **Confident/Competent Individuals (Community and Agency)**
- a. Management abilities, decision-making and execution
- b. Knowledge and skills
- c. Confidence/self-concept

S3. **Strong Organization (Community and Agency)**
- a. Autonomy
- b. Supportive leadership
- c. Systems for learning and problem-solving

S4. **Environmental Conservation**
- a. water sources protection
- b. watershed conservation

S5. **Interorganizational Collaboration**
- a. planning
- b. activities.

III. REPLICABILITY

Replicability is the ability to duplicate the processes and benefits of a set of development activities in new locations after their effectiveness has been demonstrated in limited geographic areas. Whether small-scale activities are replicable is a key test of their value and utility in wider development efforts.

Replicability of projects is more likely when projects are based on processes that make optimal use of local resources. Thus, projects should be based upon use of local people, local skills, indigenous knowledge systems and build upon existing procedures, organizations and institutions.

Such projects are easier to replicate than projects heavily dependent on special conditions, including external resources and personnel. Replicability of small pilot efforts cannot be assumed until proven in larger demonstration projects. Special inputs are always needed to develop effective strategies in the early stages, but as projects move from pilot to demonstration to national phases, these special inputs should decline.

Since the types of inputs vary with the growth of a programme, it is critical to identify the stage of growth of a programme before rating its replicability. There are three broad stages: pilot, demonstration and replication (at the district, regional or national level). The major characteristics of each have been well-defined by A. Rondinelli, 1983; Table 1).

Table 1. DEFINING EVOLUTIONARY STAGES OF PROJECTS AND PROGRAMMES

Category	Pilot	Demonstration	Replication
Purpose:	To test acceptability and feasibility of existing knowledge in specific contexts	To demonstrate that new technologies, methods and programmes are better than presently used ones	To expand productivity and administrative capacity to disseminate and deliver
Major uncertainties about:	- methods of analysis or implementation appropriate technology - adaptability - transferability - acceptability - dissemination or delivery systems	- replicability - acceptability - dissemination - or delivery systems on a large scale	- dissemination or delivery systems

The underlying process in achieving replicability is similar to that of sustainability, i.e. participatory interactive processes rooted in local culture and institutions with emphasis on human capacity and institutional development.

However, **after** strategies have been proven to be effective and affordable, it is a different matter to duplicate programmes on a large-scale. Success at this level depends primarily on increasing efficiency of effort and on administrative capacity to disseminate and deliver programmes.

Hence, there are five indicators of replicability, some of which have been adapted from those suggested by Rondinelli:

R1. **Proportion and role of specialized personnel;**
R2. **Established institutional framework;**
R3. **Budget size and sheltering;**
R4. **Documented administrative/implementation procedures;**
R5. **Other special/unique conditions.**

Pilot projects are usually marked by high concentration of specialized, highly qualified staff, national and international. This is often necessary in order to cope with the new workload and to experiment and develop workable tools and strategies. By the stage of demonstration projects, however, there must be a decline in concentration of specialists and increasing use of regular staff as well as community people who have been trained in the new approaches and methods.

In replication phases, trained national staff should be available and used to implement programmes on a large scale.

Presence of specialized staff and the need to explore a variety of options in terms of technology, organization and training in pilot projects has implications for autonomy of institutions and budgets. Pilot projects are often low in efficiency and need freedom to change, explore and develop sound strategies. Hence, they are usually marked by generous budgets and by-passing of local institutions, institutional hierarchies and administrative systems. However, the rationale for generous, 'protected' budgets in pilot projects is to allow emergence of technology and management systems that are affordable and workable in the long run.

Hence, by the stage of demonstration projects, where preferred methods are being refined and tested for replicability and acceptability, budgets are less generous and sheltered than in pilot projects. At the same time there is greater absorption of projects within existing institutions and decreased by-passing of existing administrative systems.

By the end of demonstration projects, efficiency of outputs should increase and clear guidelines should emerge for administration of programmes within existing institutions including mechanisms for inter-ministerial and inter-agency co-operation. Hence, replication programmes should be covered by regular budgets, use standard financial procedures and be implemented by existing institutions.

Since the purpose of pilot projects is to establish the feasibility of certain solutions in specific contexts, much learning takes place about effectiveness of strategies during the process of implementation. Hence, there is no detailed guide to action, but by the end of the pilot project, experience has been gained about what strategies work in a particular context. This results in more detailed guides being made available to demonstration projects.

By the end of a demonstration project, standardized patterns of interaction emerge, including monitoring and evaluation systems which are of special importance in participatory projects. These procedures have to be documented, made accessible and understandable to national staff that will be responsible for replication of the programme. Thus replication projects must have simple guides, manuals for different programme components and staff at different levels.

These indicators are briefly summarized in box 3.

Box 3. **Indicators of Replicability**

		Stages
R1	**Proportion and role of specialized personnel**	
	a. High input of specialized personnel	Pilot
	b. Mostly regular staff, decline in specialists	Demonstration
	c. Existing staff, further decline in specialists	Replication
R2	**Established Institutional Framework**	
	a. Semi-autonomous organization	Pilot
	b. Decreased by-passing of existing organization and collaboration with other agencies	Demonstration
	c. No by-passing of existing organization and increased inter-agency collaboration	Replication
R3	**Budget size and sheltering**	
	a. Generous and sheltered	Pilot
	b. Medium and partially sheltered	Demonstration
	c. Average and regular budget item	Replication
R4	**Simple documented administrative/implementation procedures**	
	a. General guidelines for activities and strategies, emphasis on interactive planning and implementation	Pilot
	b. Emergence of standardized procedures for interactive project/programme management including monitoring/evaluation criteria and procedures	Demonstration
	c. Documented simplified procedures	Replication
R5	**Other special/unique conditions**	

C. SITUATIONAL ANALYSES

Properly conducted, impact analyses are scientifically rigorous,methodologically complex and require major inputs - time, cost and specialized personnel. Hence they should only be conducted when it is clear that the intermediate stages/conditions prior to discerning impact have already been met and when there is already some evidence of change.

Impact studies are usually conducted towards the end of development projects, are often summative and attempt to establish causality or at least associations between inputs and benefits that imply causality. Such studies have extremely important roles to play, but are usually beyond the scope of most projects.

In most project contexts, however, it is possible and useful to carry out situational analyses. Situational analyses as used in this document implies monitoring changes set in motion by the process of implementing water and sanitation projects.

Unlike an impact study, situational analysis does not attempt to measure with precision the degree of change that can be attributed to different factors. It focuses on the changes brought about by attempts to achieve the working goals and by the processes used in attaining effective use, sustainability and replicability.

It is best conducted by project staff and community people most affected by change. Thus, causality is not imputed by statistical manipulations but is based on people's self-evaluations and statements that can be quantified if desired. There are no external 'control groups' but by observing the variations within the project context, statements are made about factors related to change.

Since water and sanitation projects, especially participatory projects, bring about changes that go beyond changes in health and the water and sanitation situation, situational analyses are more holistic and include study of social, economic and environmental issues. Often these social and economic changes are perceived to be more important by people than changes in health.

Some of these changes (for example, increased confidence), which can be considered spin-off effects are also essential parts of the overall goal of sustainability. This is because human capacity building is both the process through which community-managed projects are implemented and also the end point, an integral part of the concept of sustainability.

Although, social, economic and environmental factors affect health directly or indirectly, for the sake of analyses they can be considered as

distinct categories. Thus the factors that can be considered in a situational analyses are summarized in Box 4.

Box 4. SITUATIONAL ANALYSES

1. Social changes at the individual/household/group/agency level

- autonomy
- self-concept, self-confidence
- creativity
- leadership
- respect, status, social networks
- group strength, identity, resources
- leisure
- conflict
- roles, responsibilities, activities
- control and access to resources and benefits

2. Economic change at the individual/household/group/agency level

- time allocation (time savings)
- cash production and substitution
- improved quality of assets (vegetables, animals, crops, other production)
- increased quantity of assets
- distribution and expenditure of assets
- increased participation in other non-production activities (human capital formation); education, literacy, preventive health, rest and leisure.

3. Changes in health situation

- decrease in attendance at clinics
- increase in involvement at preventive health care facilities
- decrease in diarrhoea, skin diseases, guinea worm, etc.
- improved nutritious foods
- environmental sanitation.

4. Changes in environment

- management of natural resources; depletion, conservation

ANNEXES

PEGESUS

Partnership to Evolve and Grow Effective and Sustainable 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. Programs 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 Sustainable Utilization - This is the primary goal and 'yardstick' against which the adequacy of decisions, even at the early planning stages, is gauged. Sustainable utilization subsumes sustained functioning. The reverse, however is not true. Focus on utilization forces planners to focus on users, people rather than on technology, per se. Effective utilization integrates the need for hygiene education and other support systems to ensure optimal health, social, economic, and environmental impact.

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

INDICATORS OF HYGIENIC USE

(a) **Maintaining water quality from source to mouth (faecal coliform smell, taste, turbidity and chemical quality).**

i. drawing
ii. carrying
iii. storage
iv. drinking

(b) **Sources of enroute contamination**

i. Condition of containers/ladels
ii. Presence of covers/degree of exposure
iii. Place of storage - including height of storage
iv. Contact with hands/objects

(c) **Practices to improve water quality**

i. Sedimentation/filtration
ii. Boiling
iii. Chemical treatment
iv. Other

(d) **Site and home hygiene**

i. Human waste disposal
ii. Household (solid/liquid) waste disposal
iii. Presence of animals
iv. Vector and rodents

(e) **Personal hygiene practices**

i. Body cleansing
ii. Hand cleansing
iii. Handling of child faeces

Selected References

Minimum Evaluation Procedures for Water Supply and Sanitation Projects: WHO, Document No. ETS/83.1 CDD/OPAR/83.1, Geneva, 1983.

Rondinelli, D. A. Development Projects as Policy Experiments: An Adaptive Approach to Development Administration, Metheun, London, 1983.

LESSONS, STRATEGIES, TOOLS
PROWWESS/UNDP Publication Series

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) pp.191. A literature review and annotated bibliography.

2. PROWWESS/UNDP: Women, Water and Sanitation - or Counting Tomatoes Instead of Pumps, by Siri Melchior, May 1989, (English/French). Update on overall issues and lessons learned to date. (Also available in a reference collection on compact disk, Library-To-Go, by Decade Media with support from INSTRAW).

Case Studies, Country Reports, Field Research

3. 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, et.al., 1987, (English/French) pp.27. An example of techniques to evaluate the process of participation.

4. PROWWESS/UNDP: India - Twenty Lessons Learned from Social Feasibility Studies, by Lucy Goodhart, 1988, (English) pp.20. Based on four social feasibility studies of rural sanitation in India.

5. PROWWESS/UNDP and the World Bank: Kenya - People, Pumps and Agencies, by Deepa Narayan-Parker and Mary McNeill, 1989, (English) pp.36. A case study of the South Coast Hand-Pump project with particular emphasis on Kenya Water for Health Organization (KWAHO), describing partnership between a Government, an NGO and donors.

6. PROWWESS/UNDP: Dhaka - Volunteers Against Diarrhoea, by Elsie Shallon, 1988, (English) pp.25. A description of a programme working with women volunteers in an urban slum area to improve health education and action.

7. PROWWESS/UNDP: Indonesia - Evaluation Revisited, by Deepa Narayan-Parker, planned for mid 1989, (English/French). A case study of PKK/Ministry of Health Activities in West Timor. Particularly rich in data on such aspects as change in women's lives, water use, economic effects, etc. Slide show on Indonesia experience will be available at cost.

8. World Bank and PROWWESS/UNDP: From Pilot to National Programme - Rural Sanitation in Lesotho, by P. Evans, D. Narayan-Parker, R. Pollard, M. McNeill, and R. Boydell, planned for mid 1989.

Field tools, Training Aids

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

10. PROWWESS/UNDP: Video on Regional Training Workshop in Tanzania, 1988, (English); March 1989 (French). Describes the process of a workshop for personnel from national institutions in anglophone African countries, methods used, results.

11. PROWWESS/UNDP: Goals and Indicators for Integrated Water Supply and Sanitation Projects, by Deepa Narayan-Parker, 1989, (English/French) pp.16. Emphasis on design of indicators for planning and evaluation.

12. PROWWESS/UNDP: Knowledge Generation and Use in Partnership with People, by Deepa Narayan-Parker, planned for Fall, 1989. A tool for planners in field projects. Emphasis on use of participatory data collection techniques for planning and evaluation of community managed projects.

13. PROWWESS/UNDP: Community Participation - A Challenge for Trainers - by Lyra Srinivasan, planned for Fall 1989, (English/French). A tool for trainers in field projects. Particular emphasis on SARAR methodologies, experiences in application in PROWWESS/UNDP activities.

14. PROWWESS/Africa: Report of a Regional Participatory Training-of-Trainers Workshop held in Tanzania, September 1988, published Spring 1989 (English). Description of training workshop, methodologies and analysis of results.

Guides, Strategies

15. World Bank and PROWWESS/UNDP: Involving Women in Sanitation Projects, by Heli Perrett, 1985 (English). A guide for project planning and design.

16. PROWWESS/UNDP: PEGESUS, by Deepa Narayan-Parker, 1989, (English). Analytical framework for designing and assessing projects and programmes, concentrating on goals and management tasks.

17. PROWWESS/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

18. UNDP Technical Advisory Division in collaboration with PROWWESS/UNDP: Programme Advisory Note, planned for 1989, (English).

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

PROWWESS/UNDP

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

The PROWWESS 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 700 communities in Africa, the Arab States, Asia and Latin America shows that:

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

Based in the United Nations Development Programme (UNDP), Division for Global and Interregional Projects (DGIP), PROWWESS 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.

PROWWESS/UNDP Technical Series

PROWWESS/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 PROWWESS/UNDP technical series called "Involving Women in Water and Sanitation: LESSONS - STRATEGIES - TOOLS". It includes:
>
> - case studies, project reports and country profiles giving lessons from specific experience;
> - guidelines, for project analysis, development and evaluation, and other strategies of action; and
> - data collection and research instruments, training methodologies, materials production and other tools for field work.

(see overleaf for listing)