

25 Steps to safe water and sanitation

EXPERIENCE AND LEARNING IN INTERNATIONAL COOPERATION



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25 Steps to safe water and sanitation

This Helvetas publication no. 1 describes the successful "community-oriented stepwise approach," developed in Nepal in an integrated project which includes the construction of drinking water and sanitation facilities as well as the introduction of better hygienic practices. Our stepwise approach makes community management a priority and combines it with the promotion of gender awareness through actual practice within this process. This is one example of dozens of water and sanitation projects successfully promoted by Helvetas in more than 20 countries of Asia, Africa and Latin America.

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Helvetas, the Swiss Association for International Cooperation works towards the elimination of the causes of marginalization and promotes solidarity with the poor in the south and east. Its mission is to actively contribute to the improvement of the living conditions of economically and socially disadvantaged people in Asia, Africa and Latin America. Currently Helvetas runs programmes of cooperation in 20 countries. We concentrate on three working areas, i.e. infrastructure in rural areas, sustainable use of natural resources, and education and culture. Helvetas was founded in 1955 as the first private Swiss development organisation. Much of what was pioneering in our work has become common practice within the Swiss Development Cooperation agencies, a trend which continues today.

Through its publications, Helvetas hopes to contribute to the process of learning through sharing in international cooperation. For more details or comments, please contact our head office:

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Community-oriented stepwise approach

A Step-by-step approach in drinking water and sanitation projects

25 steps to safe water and sanitation is an account of the experiences gained and lessons learned by Helvetas and local communities in Nepal in the execution of the Self-Reliant Drinking Water Support Programme (SRWSP) over the 7 years it has been in operation (since 1993/94). The most notable change SRWSP introduced is the importance given to the process of social change combined with the delivery of safe drinking water and sanitation. In addition, gender equality, participatory decision making at the local level, and user-friendly technology have all a prominent place in the programme.

The key factor in the success of the project is the community-oriented step-by-step approach of SRWSP. Through this guided stepwise approach to the preparation, construction, and maintenance of the drinking water and sanitation facilities, people in a community are forced to think in ways which encourage critical awareness. This facilitates a process of change. While initially the change may be somewhat superficial, the seeds for a deeper and lasting process of empowerment are implanted.

The community-oriented stepwise process

The SRWSP step-by-step model combines seven advantages:

- It consists of a series of activities and benchmarks that safeguard the integrity of the project process and increase community ownership.
- It requires a series of activities and/or criteria to be fulfilled by the community. Operations are undertaken in sequence: as one is completed, attention moves to the next.
- It is a tool for participatory planning and monitoring.
- The process looks in a holistic way at technical and social aspects of drinking water and sanitation.
- Involvement of women and marginalised groups is encouraged.
- Operation and maintenance are an integral part of the whole project.
- The step-by-step model ensures predictability – for the community as well as for the project.

Experience is needed to follow this step-by-step model:

- Facilitation of the process is important and critical to success.

This model, however, is not a “black box” solution for everything:

- Source conflicts are impossible to completely resolve by the approach alone.

The external evaluation of 1997 (see references) states that SRWSP is a pioneering and highly innovative programme, albeit with a relatively small coverage, well worth advocating to a larger group of interested people. However, Helvetas does not want to take sole credit. Several key features of the present SRWSP approach are also being used by other organisations: what makes SRWSP different, however, is the way in which it combines many ‘best practices’ from such existing programmes. For this reason Helvetas has decided to publish this account of one of our successful projects: To share the lessons learned and to promote the step-by-step approach in rural drinking water and sanitation projects.

25 steps to safe water and sanitation takes the reader, in non-technical language, through the various stages of the programme, with explanations and examples where necessary. In addition, issues raised, problems faced and answers found by the communities and programme staff working together are reviewed. The brochure also provides an outlook to the future development of the approach: the major change planned is the move towards Integrated Water Resources Management, including drinking water and sanitation facilities.

List of Abbreviations

CWSSP	Community Water Supply and Sanitation Programme
DWSO	District Drinking Water Supply Office
DWSS	Department for Water Supply and Sewerage
EE	External Evaluation
HDP	High Density Polyethylene
HMG/N	His Majesty's Government of Nepal
HSE	Health and Sanitation Education
INGO	International Non-Governmental Organisation
IWRM	Integrated Water Resources Management
MHPP	Ministry of Housing and Physical Planning
MLD	Ministry of Local Development
NEWAH	Nepal Water for Health
NGO	Non-Governmental Organisation
NRCS	Nepal Red Cross Society
O&M	Operation and Maintenance
PRA	Participatory Rural Appraisal
PSA	Participatory Self-Assessment
SDS	Social Development Section
SRWSP	Self-Reliant Drinking Water Support Programme
UNDP	United Nation Development Programme
UNICEF	United Nation Children Fund
VMW	Village Maintenance Worker
WARM	Water Resources Management Programme
WHO	World Health Organisation
WSMC	Water and Sanitation Management Committee
WSMCT	Water and Sanitation Management Committee Training
WTC	Women Tapstand Caretakers

Table of contents

Summary	3
List of abbreviations	4
Table of contents	5
Introduction	6

PART I BACKGROUND

1. Helvetas' involvement in drinking water & sanitation in Nepal 1976 – 2000	8
2. The three phases of the SRWSP Approach	9

PART II SALIENT FEATURES

3. The Community Oriented Stepwise Process: Action and reflection	13
4. Health and Sanitation Education: New concepts and approaches	21
5. Technology: Understood and owned by the community	25
6. Women and men: Efforts towards a gender-balanced approach	27
7. Partnership: A search for different modalities	30
8. The Organisation: The backbone of the programme	33

PART III NEW DIRECTIONS

9. Integrated Water Resources Management: A logic step forward	36
References	40

Introduction

Traditionally, rural communities in the hills of Nepal (Helvetas' focus area) have depended on unprotected springs, ponds, canals, streams and rivers for their drinking water supply. The water often had to be fetched from long distances. In 1971 His Majesty's Government of Nepal (HMG/N) embarked on an ambitious programme to develop piped water supply schemes in hill-area villages where the need for water for domestic purposes was most acute. In support of the International Drinking Water and Sanitation Decade (1981-1990), the government considerably increased activities in the water and sanitation sector. Despite these efforts, government figures show that, at the beginning of the 21st century, Nepal will be able to supply piped drinking water to only about 60% of the hill areas, and sanitation facilities will be available for less than 25% of the population.

Nepal's water and sanitation sector involves many agencies. Besides the Government there are several external bilateral and multi-lateral donor agencies. International Non-Governmental Organisations (INGO) support the sector directly with technical and financial assistance, or indirectly through integrated programmes. Two major national and various local NGOs are involved in the implementation of water supply and sanitation programmes. The private sector, e.g. engineering consultants and manufacturing companies, is also actively engaged in providing services for the sector.

Existing national guidelines lay out modes of implementation regarding sanitation, technical aspects and working with local NGOs. This has facilitated the integration of sanitation, involvement of women, peoples' participation, and the collection of maintenance funds into all drinking water programmes. Moreover, HMG/N has introduced the National Water Resources Act 1992 along with the Drinking Water Regulations 2055, which provide a legal framework for appropriate utilisation, protection, management and development of all the water in Nepal. It turns ownership of any water source over to the State and, among competing user interests, assigns the highest priority to drinking water.

During its two and a half decades of involvement in the drinking water and sanitation sector in Nepal, Helvetas has helped the Nepalese Government set up 335 large drinking water projects under the Community Water Supply and Sanitation Programme (CWSSP) and almost 100 small to medium size drinking water schemes under the Self-Reliant Drinking Water Support Programme (SRWSP). As a result of this support, a total of 35000 villagers living in the mid hills of the Western Development Region

are at present beneficiaries of piped drinking water systems. Given the expected growth in population, the design of the drinking water systems allows for a potential capacity of up to 57000 users.

This paper is a description of the SRWSP concept and approach. It is divided into three parts. Chapters 1 and 2 (Part I) set the background on which SRWSP has been developed and briefly describe the SRWSP approach. - Part II looks at each of the salient features of SRWSP. Chapter 3 gives a detailed account of the community-oriented stepwise process, the backbone of the programme, while chapters 4 to 8 cover the issues of Health and Sanitation, Technology, Gender, Partnership and the Organisation. Each chapter closes with a reflection on the key issues and lessons learned, followed by a statement taken from the External Evaluation report 1997. - Part III takes a look into the future. Drawing conclusions from lessons learned, it describes how Helvetas/Nepal moves towards Integrated Water Resources Management (IWRM) at the local level. Some initial experiences gained in two pilot activities are shared.

Throughout the paper the term "Community" is used. The people in the community (sometimes called villagers), represented by a Water and Sanitation Management Committee (WSMC), are all those living within the area covered by the drinking water supply scheme. An average of around 50 households make up such a community, whose housing may be scattered or clustered, depending on the situation. Although the term suggests unity, a community can be very diverse. Each community consists of men and women of different ethnic and caste groups. Most of these people are involved in agricultural work, sometimes supplemented by labour abroad. The economic situation varies from well-off to very poor. Low-caste people are mostly in the lower economic and social strata. Women, in general, are subordinate to men, though in some ethnic/caste groups women enjoy a higher status than in others. When reading the paper this diversification of 'the community' should be understood.

*Safe water is still not guaranteed for many people in Nepal
(Original Drawing from the project)*



Helvetas' involvement in drinking water and sanitation in Nepal 1976 - 2000

Helvetas' involvement (with the financial support of the Swiss Agency for Development and Cooperation, SDC) started in 1976 when it agreed to provide technical assistance to the CWSS Programme in the Western Development Region of Nepal that was financed by the Swiss Government. CWSSP took up many new aspects in the drinking water sector of that time. It started in the early 1980s with the inclusion of operation and maintenance. Various training programmes were developed to build up a cadre of skilled technicians and overseers/engineers. At village level, special training programmes were conducted to develop the managerial skills of the user groups and technical skills of maintenance workers. The importance of sanitation as a factor in improving public health was also recognised. Beginning in the mid-1980s, a full-fledged sanitation and health education package was developed, combined with a special programme aimed at women's involvement. By 1994, about 340 drinking water and sanitation projects in 16 districts of the Western Development Region of Nepal had been completed.

In 1987 HMG/N reorganised its ministries. This resulted in the transfer of CWSSP from the Ministry for Local Development (MLD) to the purely technical Ministry of Housing and Physical Planning (MHPP). The CWSSP evaluation report of 1989 states that: "The CWSS Programme at present is in a critical phase where it is difficult to foresee in which direction it could develop. Much depends on the efforts of HMG (...) to harmonise the CWSSP and the DWSS (Department of Water Supply and Sewerage) implementation approaches and to what extent the policy on people participation is put into practice."

At this point, Helvetas decided to develop the new SRWSP concept on its own. This was done for several reasons: A major political transformation in Nepal in 1990, which allowed civil society to become active in development activities, opened new opportunities. Also, concepts of 'participatory' and 'community-led development' needed a fresh interpretation, reflecting the changing global thinking on development in the early nineties. Additionally, while developing the SRWSP step-by-step approach, efforts were made to design the projects on a smaller scale than in CWSSP (thereby enhancing people's sense of ownership), to involve women more adequately, to integrate sanitation and health education better and to further increase concentration on the poor segments of the community. The change from CWSSP to SRWSP was not just a change to another approach. It was seen as a new vision in which the construction of drinking water and sanitary facilities was combined with the empowerment of an increasingly aware community moving towards greater self-reliance and development.

The three phases of the SRWSP approach

Taking into consideration a set of principles such as empowerment, justice and equity, gender equality, and rolling planning, the objectives for SRWSP are formulated and divided into five main categories:

- Community management and empowerment (with special emphasis on women).
- Improved sanitation and health.
- Provision of safe drinking water.
- Sustainability (through well-functioning operation & maintenance (O&M) systems).
- Partnership and capacity development in partners.

To achieve these objectives, a strong community-oriented process approach is chosen. *The community is guided through a stepwise process that encourages its members to become self-reliant in solving drinking water and sanitation problems.* Health and sanitation education and all technical tasks are fully integrated in the process. No specific targets are set, the programme activities are planned flexibly. A process of rolling planning is adopted, based on experiences gained and lessons learned. No particular target groups are defined, but women and marginalised groups within the given community receive special emphasis. At several points along this process, the active participation of these groups is a pre-condition for further progress.

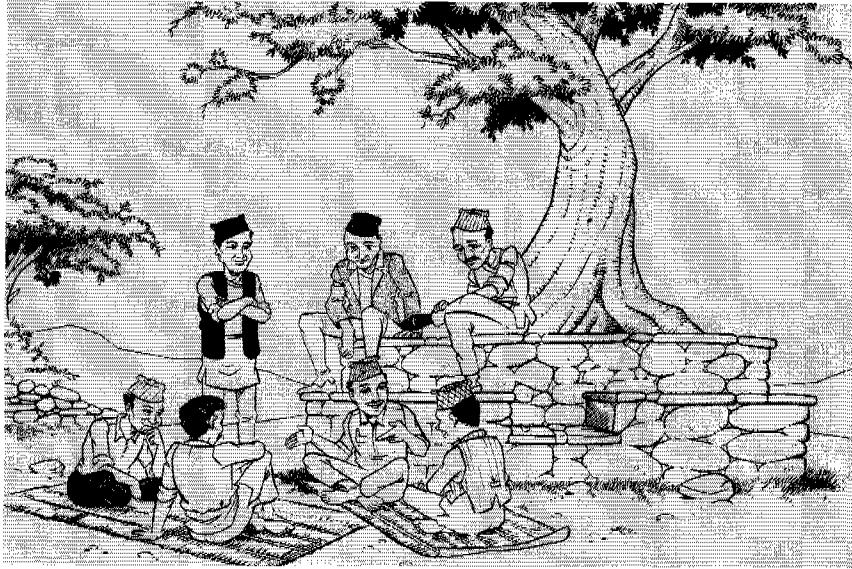
The stepwise process is a series of activities and benchmarks that safeguard the integrity of the project process and increase community ownership. A number of specific activities and/or criteria must each be fulfilled by the community. A new operation is started only once all previous required activities have been completed. For a project to reach completion, it needs to successfully run through three phases: Preparation, Construction, and Operation & Maintenance. The duration of each step and each phase depends entirely on the commitment, ability and willingness of the community (a detailed description of the 25 steps can be found in chapter 3).

1. Preparation phase

During the preparation phase, preceding the construction of a drinking water scheme, numerous activities take place which lead to improved community management and better sanitation practices among the people. Those activities include assessment and analysis of the community in the field of drinking water and environmental sanitation, community mobilisation to form a Water and Sanitation Management Committee

The community is guided through a stepwise process that encourages its members to become self-reliant in solving drinking-water and sanitation problems.

The stepwise process is a series of activities and benchmarks that safeguard the integrity of the project process and increase community ownership.



(WSMC), Health and Sanitation Education (HSE), training of WSMC members, fund raising for operation and maintenance, and participatory monitoring. Only after completion of these activities is a detailed technical survey and planning for the drinking water system initiated. At the end of the preparation phase, when the design and material estimates are ready, the community plans for collection of locally available material, transportation of additional construction material to the village and all construction. This is the start of the construction phase. The duration of the preparation phase varies but usually is one to two years.

Activities to be completed and criteria to be fulfilled by the community during the preparation phase are:

- The villagers inform the local authorities of the application forwarded to Helvetas.
- A Water and Sanitation Management Committee is formed, representing all groups in the community and reflecting in its actions their tasks and responsibilities.
- The whole community actively participates in the fulfillment of all the steps and is involved in the planning and decision-making processes.
- An O&M fund is collected and deposited at a local bank.
- Willingness to change sanitary habits is demonstrated by the construction and use of a locally appropriate latrine.
- A written agreement is signed on the use of the proposed water source and on the place of the proposed location of structures, including tapstands and tanks.
- Technical and feasibility studies are conducted.
- The community agrees to mobilise its own resources, including human resources, and to assume full responsibility for operation and maintenance.

The construction phase is the shortest of the three. An average gravity flow system, consisting of a 5 km main pipeline length, a storage and distribution tank, some other structures and a total of seven tapstands serving about 50 households can be completed within three months.

2. Construction phase

The construction phase is the shortest of the three. An average gravity flow system, consisting of a 5 km main pipeline length, a storage and distribution tank, some other structures and a total of seven tapstands serving about 50 households can be completed within three months. SRWSP provides skilled and technically qualified staff to guide and support the community, but it is the people themselves who must build their own drinking water scheme. During this phase a Village Maintenance Worker

(VMW), appointed by the community, is trained on the job and during an intensive two-week training programme. After completion of the construction work and the subsequent final commissioning, the operation and maintenance phase begins.

3. Operation and maintenance phase

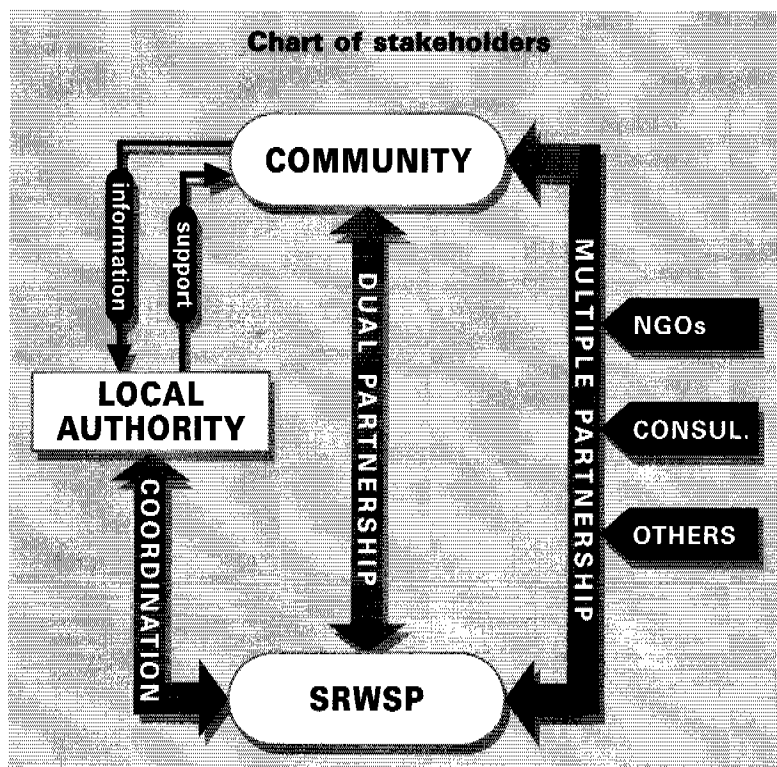
The operation and maintenance phase is open-ended for the community, while for SRWSP it is limited to two years. The objectives of the O&M phase are:

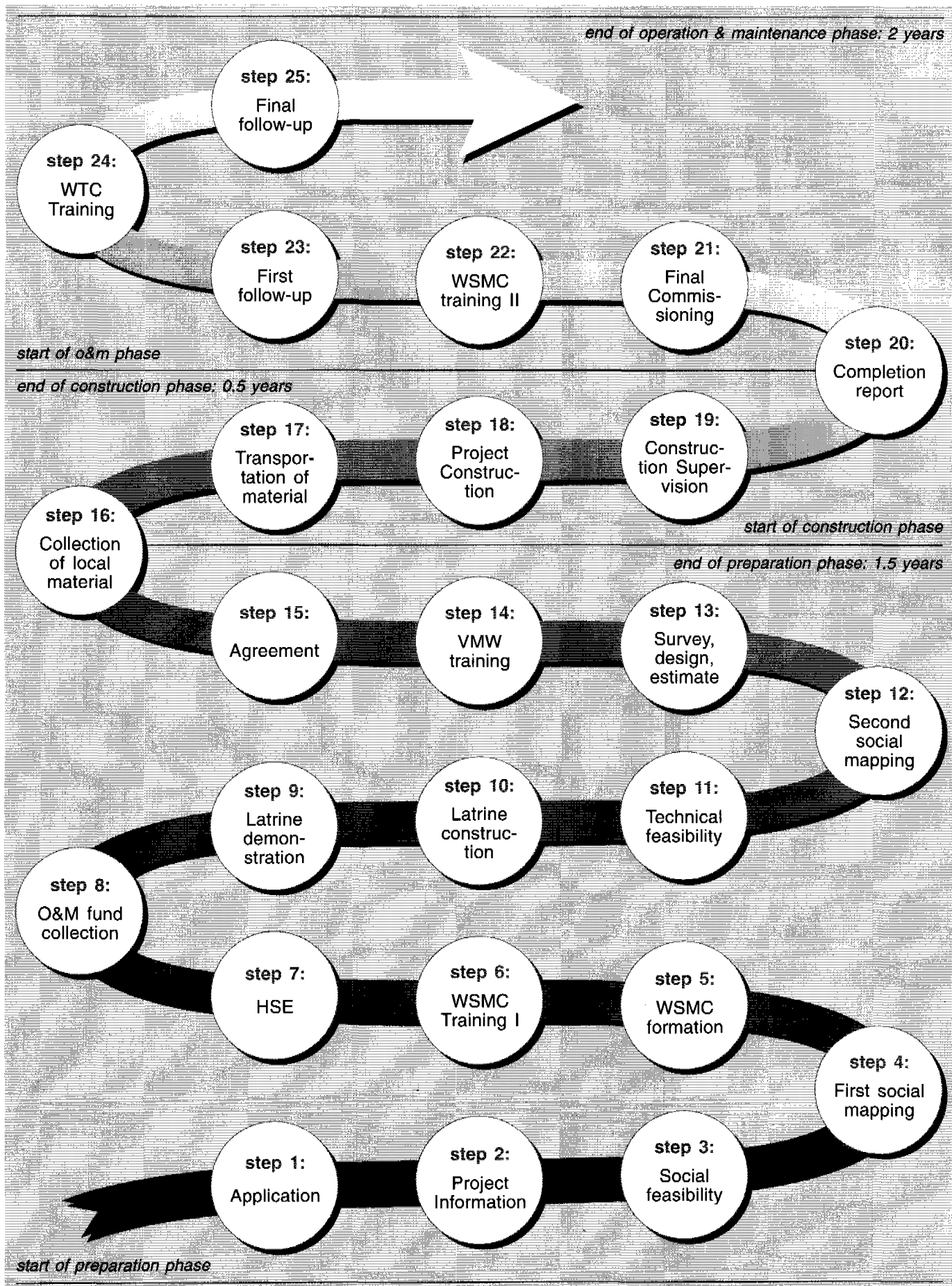
- to enhance sustainability of the sanitation and drinking water facilities by providing support to the WSMC, VMW and Woman Tapstand Caretakers (WTC),
- to allow time to detect any technical shortcomings and need for improvement and modification,
- to monitor the programme's effect and overall impact.

In order to achieve these objectives, the project area is visited at least five times, training is made available to build local capacity, and follow-up is provided. During the O&M phase the community can turn to the District Drinking Water Office (DWSO) for technical support, while their own funds will be adequate to cover costs for repair work. The complete project duration, from its beginning to the start of the O&M phase, takes about two years. The stepwise process is illustrated in a poster and small booklet serving as guideline for the community (see the poster showing the process and its steps, enclosed with this brochure).

Partnership

Partnership is a key feature in the implementation of the whole programme. SRWSP has a very broad scope of partners but essentially works within two types of partnership: dual and multiple. A *dual partnership* entails cooperation between SRWSP and the community represented by a Water and Sanitation Management Committee (WSMC). In the *multiple partnership* approach, SRWSP cooperates with various organisations, such as NGOs, technical consultants, local authorities, and governmental drinking water agencies, and reaches the community in this way. Cooperation with the NGO sector takes place mainly in the areas making up the programme's social component, while consultants are given the responsibilities in the technical field. Local authorities and governmental agencies are partners for coordination and cooperation. Others are involved for specific tasks such as training.





The Community-Oriented Stepwise Process: Action and Reflection

a) Forwarding and Screening of Applications

After forwarding an application to SRWSP (step 1), either directly or through an intermediate organisation, the community is asked to fill out a Project Information Form (step 2). This requires the villagers to come together and provide basic information regarding their drinking water and sanitation situation. The community is then visited for a Social Feasibility Study (step 3). Depending on the outcome, a decision is made to proceed.

b) Community Assessment and Analysis

The next activity is to help the community assess and analyse the village's drinking water and sanitation problems (step 4). *The people draw a map of the village and its surroundings indicating the location of houses, main paths, streams, rest places, temples, water sources, existing drinking water structures, and other important information like latrines, protected forest area and agricultural land.* Sometimes these maps are drawn in a mixed male/female group, but frequently men and women prefer to make their own maps and later compare them. This exercise helps the villagers look at their community holistically. Later the information contained in the map is used for participatory monitoring during a second mapping exercise.

The information on the map is physically verified during a village environmental walk. Representatives of the men's and women's groups and key members of the community, accompanied by the facilitator, check the information and at the same time assess the environment in and around the community. Existing water sources, as well as the proposed source for the new drinking water system are visited, as are alternative sources. Special attention is given to the sanitary situation in and around the houses, and defecation and hand washing practices.

At the same time other issues of importance may be assessed as well. These may include the villagers' economic condition, labour division between men and women, accurate population figures, and migration patterns. This information can be used at a later stage when it comes to contributions of cash or planning for labour contributions. The community is assisted with the analysis of the information they have gathered and with drawing up a plan for future activities. The process poster helps to make for realistic planning.

c) Formation and Training of the Water and Sanitation Management Committee

The culture of forming committees is well established in Nepal, but the majority of these committees do not last very long if they function at all. SRWSP sees a WSMC as an institution which, having the responsibility



First social mapping

The people draw a map of the village and its surroundings indicating the location of houses, main paths, streams, rest places, temples, water sources, existing drinking water structures, and other important information like latrines, protected forest area and agricultural land.



Formation of user groups

for all the management tasks relating to the preparation, construction, operation and maintenance, delegates these tasks among its members. They include providing motivation and leadership to the community on an ongoing basis. The formation of a committee should, therefore, be thought through carefully and the final selection of its members should be approved by the majority of the villagers. This process is facilitated in step 5. Pictures of various animals are shown, like a monkey, a bee, a tiger, and their respective characteristics are discussed. A linkage with people's personalities helps the community understand what types of people are needed in the committee. The community proposes candidates and final selections are made. Issues such as the number of female members and representatives of minority groups, and who should hold which post are also decided by the community. Here the facilitation process and the understanding of the principle of gender equality and justice are more important than the actual numbers voted in. **About a third of WSMC are women, holding posts of a/o general member, treasurer, chairperson.**

Some time after the formation of the committee, members receive a Water and Sanitation Management Committee Training (WSMCT) in the village (step 6). Its objective is to develop the management capacity of the WSMC members for the preparatory activities and the construction of their drinking water scheme. Issues covered include participation, resource mobilisation, management skills (regarding transportation, storing of materials, selection of local material, etc.), selection of Village Maintenance Worker and Women Tapstand Caretakers, and operation and maintenance fund collection.

d) Health and Sanitation Education

After completion of step 6, the community is visited regularly, preferably once a month. Health and Sanitation Education (HSE) activities are initiated (step 7) during these visits. These activities can vary from community to community, depending on the local situation, but they usually include:

- Explanation of transmission routes of diseases.
- Hand washing practices.
- Storing of water.
- Use of waste pit.
- Cleaning up of local water points.
- Awareness of defecation practices and motivation for latrine use.

The tools used for these activities include: posters, songs, puppet shows, drama, flash-cards, comics, and practical classes. Some communities require special activities like a cleaning-up campaign, school education programme or an observation visit to a nearby community.



Hygiene motivation programme

All HSE activities tend to reinforce the interest in building latrines. Explanations are given to the community about the different technical options and the costs involved. These options depend on the availability of local materials. In answer to people's interest, one latrine is built as a demonstration (step 9). Various aspects such as the most suitable location for the latrine, how to measure the size of the pit and how to make a squatting slab are explained with the use of a small booklet and comic card.

Next, people are encouraged to start building their own latrines, at their own pace (step 10). Only after the substructure is finished are various options for the superstructures shown. For this, special drawings have been developed which show the different options varying in cost and durability. SRWSP gives substructure and superstructure equal priority.

Throughout the process of constructing latrines in the community, which can take from a few months to more than 6 months, the HSE and latrine construction motivation activities continue. One of the most important motivational tools during this process is the participatory latrine construction monitoring chart. During this exercise the people themselves monitor the progress made and plan further activities and improvements. Once the latrine is completed, its proper use and maintenance are explained and a maintenance flash-card is provided.

e) Gender Training

In a selected number of communities gender awareness training sessions are conducted. This is a new activity and thus not yet included in the poster. The aim is to encourage gender equality throughout the course of the programme activities, as well as to implant the seeds for longer term change. The two-day training session is conducted in the community itself and an equal number of men and women participate. The concept of gender in general with direct reference to the community environment is analysed, as are gender roles in the drinking water and sanitation field.

f) Operation and Maintenance Fund Collection

The community is encouraged to think about the timing for the completion of the new drinking water and sanitation facilities. Motivation for the collection of an O&M Fund (step 8) is started. It is important for the community to realise that the collection of a fund is for their own future benefit. Therefore, no rigid criteria are set to determine the percentage, relative to total cost, of the O&M fund. The decision on how to collect and the size of the target fund is up to the community. However, the programme motivates the people to collect an amount which corresponds to their ability to pay and takes into account the size of the scheme, and which at the same time is sensitive to the economic situation of individuals. This maintains equity. The fund raising scheme is seen as a continuous process, not a one-time activity. It starts early in the overall process and ideally continues during the operation and maintenance phase. *On average the O&M fund is equal to 3% of the total construction cost, which is comparable to other counterpart organisations active in Nepal.*

Health and Sanitation Education is always integrated:

- Explanation of transmission routes of diseases.
- Hand-washing practices.
- Storing of water.
- Use of waste pit.
- Cleaning up of local water points.
- Awareness of defecation practices and motivation for latrine use.



Women's operation and maintenance training

On average the O&M fund is equal to 3% of the total construction cost, which is comparable to other counterpart organisations active in Nepal.



Technical feasibility study

The community decides on the number and location of the tapstands. This participatory decision is the basis for the final survey of the drinking-water system (step 13). Potential conflicting interests among the villagers have to be resolved and agreement on the use of public or private land is reached.



Village maintenance worker training

g) Preparatory Technical Works

All technical work is integrated into the process. The programme offers support to the community in all technical aspects related to the implementation of a drinking water scheme. During the environmental walk, a preliminary measurement of the proposed sources is taken. It is explained how to do simple measurements with a container and a watch or by simple counting. Villagers are requested to do this frequently so that the flow of water over a longer period can be calculated. During the Technical Feasibility phase (step 11) official measurements are taken with the help of a technician. This takes place during the driest season. The technical possibilities and limitations are explained to the villagers. This knowledge will help in the final decision on the number of tapstands.

During a second mapping exercise (step 12) the changes observed in the community since the first such exercise (step 4) are monitored. Even more importantly, however, *the community decides on the number and location of the tapstands. This participatory decision is the basis for the final survey of the drinking water system (step 13).* Potential conflicting interests among the villagers must be resolved and agreement on the use of public or private land is reached. For technical reasons, some changes may have to be made in the proposed tapstand locations. These are discussed at this time. Once all this information is collected, final designs and estimates of material needed and their cost are prepared by SRWSP technical staff or consulting firms appointed by SRWSP. After the design and estimates are ready an agreement is made with the WSMC (step 15). As part of this agreement, a plan for pre-construction activities and for the construction time is formulated by the community. This marks the end of the preparation phase.

h) Village Maintenance Worker Training

A Village Maintenance Worker plays a significant role in maintaining the drinking water system. To be able to take care of the system, he should have technical knowledge about, and skills relating to the operation and maintenance of such a system. Two weeks of 'on the job' training is provided for VMWs who have been selected in the various project communities (step 14). For some communities the training takes place at the end of the preparation phase, for others early during the construction phase. Ideally, the VMW should practice and enhance his newly acquired skills during the construction of the system in his own community. Issues like lay-out of a drinking water system, function and use of different tools and fittings, types of pipes and techniques to join pipes, masonry and plaster work for the structures, routine maintenance of the various structures, and environmental sanitation are covered in this training. Men are selected to become VMWs, but in the spirit of equality women receive a separate technical training on maintenance of tapstands and structures that are within the village vicinity. The VMW undergoes refresher training during the O&M-phase.

i) Activities during the Construction Phase

A pre-condition for starting the construction work is that locally available construction material has been collected and the main trenches have been dug (step 16), after which the non-local material is transported to the community (step 17). These operations are managed by the WSMC. Only when all the construction material is in place can the actual construction work begin with the support and guidance of technical professionals (step 18). To monitor the construction standards the work is supervised regularly (step 19). Upon completion, the WSMC informs SRWSP (step 20), after which the final commissioning of the construction takes place (step 21). With this, the construction phase comes to an end and the O&M phase begins. *The average construction cost is SFr. 35 (US \$ 23) per capita. The community contributes about half in form of labour and local material. The remaining cost, for material and technical service, is paid for by SRWSP.*



Collection of local material

j) Follow-up during the O&M Phase

It has been found that during the operation and maintenance phase all in the community can use a motivational booster for the management of the new facilities. To provide this needed push, a series of activities and visits to the community have been developed, all containing a strong motivational component.

Soon after completion, additional management training is offered to the WSMC members (step 22). The objective of this training is to strengthen managerial skills to guarantee smooth operation of the system. Issues like fundraising and use of the funds, community meetings & recording of the decisions made, maintenance of the drinking water system, source protection, and waste-water management are covered in this training. Cleanliness of the tapstand and its surroundings, maintenance, use and repair of the toilets are also important aspects. The different roles and responsibilities of the WSMC, VMW and WTC are once more discussed and reinforced.

The first monitoring and follow-up visit occurs six months after completion of the construction work (step 23). A multi-disciplinary team visits the project area and, together with the WSMC, users and the VMW, monitors the functioning of the scheme along with the sanitary conditions in the village in general and toilet and tapstand cleanliness in particular. At the same time the activities of the WSMC and the maintenance work done by the VMW are looked at. Depending on the findings, suggestions for improvements are made and on-the-spot HSE sessions are organised, which are mostly on latrine maintenance and repair and waste-water management.

It has been found that during the operation and maintenance phase all in the community can use a motivational booster for the management of the new facilities.



Project construction

Women show a keen interest to learn how to use tools, work with cement, and understand the system 90% of women trained remain active as volunteers in the maintenance of their drinking-water system.

To ensure proper maintenance of the system, technical skills are transmitted during a four-day training course (step 24) for Women Tapstand Caretakers (WTC) each of whom represents a tapstand. Subjects covered are:

- Understanding the functioning of the various structures of a drinking water system.
- Use of different tools.
- HDP pipe joining.
- Changing of tap washers.
- Small masonry work.
- Cleaning of tanks and wash-outs.
- Cleaning of tapstands.

The ability to apply the new skills in practice are monitored six months later during a special visit to the community. This visit is combined with further motivational activities. *Women show a keen interest in learning how to use tools, work with cement, and understand the system. 90% of women trained remain active as volunteers in the maintenance of their drinking water system.* VMWs receive refresher training at the end of the O&M phase. Some issues which were covered in the first training phase are revisited, and the participants are also receiving a valuable motivational push by demonstrating the system's sustainability.

Two years after the start of the O&M phase a final follow-up and participatory monitoring takes place (step 25). WSMC members, the VMW, and the WTC, together with a programme team, monitor the functioning of the drinking water system and the sanitation facilities. At the same time, the functioning of the WSMC, the VMW and the WTCs is monitored. In a mass meeting the impact of the programme is analysed. Finally, feedback is provided to the WSMC on where improvements can still be made, and the community is encouraged to make suggestions on how to improve the programme as a whole. Final motivational activities are combined with the monitoring.

Key issues in the community-oriented stepwise process

In the course of the six years it has been practicing the stepwise process, SRWSP has had the opportunity to reflect on its effectiveness:

- It is a tool for participatory planning and monitoring.
 - The process looks in a holistic way at technical and social aspects of drinking water and sanitation.
 - Involvement of women and marginalised groups is encouraged.
 - Operation and maintenance is an integral part of the whole project.
 - Source conflicts cannot be fully resolved.
 - Facilitation of the process is important and critical to success.
-

■ **It is a tool for participatory planning and monitoring.**

From the very beginning, the entire process is made transparent. This way the community knows what can be expected and what level of input is required. The accompanying poster and booklet, with further explanation of each step, help the community to keep an overview of the process. Before planning the move to the next step, the progress is monitored by the community as well as by SRWSP. The participatory methods and tools used make involvement in the activities possible for the whole community; men and women, low and high caste, young and old, literate and illiterate are all able to participate actively. This involvement in planning and monitoring encourages ownership with respect to the programme.

■ **The process looks in a holistic way at technical and social aspects of drinking water and sanitation.**

All the preparatory technical work such as measurement of the source yield, technical feasibility and even the detailed survey and design work is entirely integrated into the process and combined with the social activities. The socially-oriented community facilitators have developed technical skills, and the technical personnel are, in large part, functioning as social mobilizers. A technical decision cannot be made without considering its social implication. Technical information is provided to the community to enable them to make the most appropriate decisions. The integration of several technical works in the preparation phase makes it possible to keep the duration of the construction phase to a minimum. The shorter the construction time, the more the community is motivated to do the hard work.

■ **Involvement of women and marginalised groups is encouraged.**

At several points within the process, special attention is paid to the active participation of women and marginalised groups in the community. The special gender training is one example, but the two mapping exercises, at the beginning of the process and just before the start of the construction phase, ensure that all households in a community are included and become involved in the activities.

■ **Operation and maintenance is an integral part of the whole project.**

Already during the preparation phase, the issue of operation, maintenance and sustainability of the drinking water scheme and sanitation facilities is raised. The entire approach is geared towards the establishment of a strong sense of ownership. The collection of an O&M fund starts early in the whole process, and these efforts do not stop with the completion of the construction work. During the first two years of the operation and maintenance phase, several activities are initiated in order to enhance the managerial and technical capacity of the key persons. In the meantime, contacts have been established with governmental agencies to provide technical support for major repair work if and when needed.

The average construction cost is SFr. 35 (US \$ 23) per capita. The community contributes about half in form of labour and local material. The remaining cost, for material and technical service, is paid for by SRWSP/Helvetas.

■ **Source conflicts cannot be fully resolved.**

Due to increased scarcity of available water sources, conflicts over the use of a particular source have become more common in Nepal. Early in the process the community is required to conclude an agreement on the use of the source either with the owner or the local authorities. This had been thought sufficient to avoid the need to confront this problem at a later stage. Unfortunately, it proved to be wishful thinking. Time and again, progress is delayed due to unexpected conflicts. Political motives are often behind it. The national regulations provide a legal framework but only when the conflict is brought to a higher level. Since the existence of a legal framework alone does not guarantee its proper application, generating goodwill and mediating between conflicting interests is essential for the sustainability of the projects. SRWSP has, on various occasions, successfully mediated in source conflicts.

“The community-based stepwise approach has enabled the user communities to participate meaningfully in planning and implementation of their drinking water projects.”

(External Evaluation 1997, page 9)

■ **Facilitation of the process is important and critical to success.**

For the process to succeed, it must be properly facilitated by people who are well trained in the use of participatory methods. At all stages, guidance from the facilitators will help the community to find their own way in the overall process. Sometimes a small push is needed here and there, but it must be applied with sensitivity and good judgment. Community facilitators may be tempted to make decisions for the community in order to speed up the process, but by doing so they would impede the development of a stronger sense of ownership. Intensive supervision and appreciative feedback will encourage the community facilitators to work in accordance with the stated principles and organisational structure.



Health and Sanitation Education: New concepts and approaches

In the early 1980's, under CWSSP, Helvetas developed an *Integrated Health and Sanitation Education Package* which included creating awareness of the transmission routes of waterborne diseases, motivation for private latrine construction, demonstration of and motivation for the use of smokeless stoves, and personal and environmental sanitation activities. These sanitation and health education activities were combined with the aim of involving women in the planning and implementation of drinking water facilities.

Selective and Intensive Approach

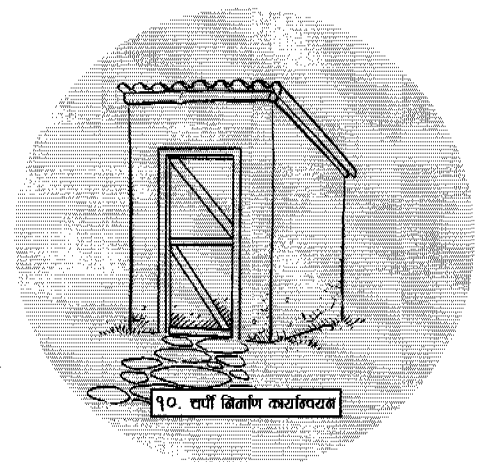
Because the CWSSP approach was very comprehensive, it could only be implemented with intensive input. Since so many subjects were covered in a relatively short time, the actual overall behavioural change was minimal. Realising that it is easier to change behaviour in only a few fields at a time, SRWSP developed a *Selective and Intensive Approach* for health and sanitation education. Emphasis was on hand washing practices and motivation for construction, use and maintenance of latrines. Other issues were only covered if there was a clear request or an observed need for it.

The Gender-Balanced Process Approach for Sanitary Change

The extensive Participatory Self Assessment (PSA) and External Evaluation (EE) held in 1997 found that a broader health package would enhance the awareness of latrine construction and use. Also, the growing awareness regarding gender roles, and the impact that drinking water and sanitation activities could have on the role and responsibility of men and women in the community, encouraged SRWSP to develop its present approach: The Gender-Balanced Process Approach for Sanitary Change. Now, a broader HSE package is offered to the community (as explained in chapter 3), but, more importantly, men are now also involved in the various activities.

The community facilitators of SRWSP and its partner NGOs conduct various HSE activities, but it is the WSMC, the VMW and the WTC who regularly follow up to ensure that the health and sanitation message is well understood and that improvements are made accordingly.

Direct pit latrines (where the pit is directly below the squatting place) and offset pit latrines (where the pit is indirectly connected to the slab through a closed drain) are most appropriate for the Nepalese rural environment. Cement slabs are only used in areas where no flat stones are available.



Toilet construction

80% of the households covered by a drinking water system have constructed a latrine. After a period of three to five years, 65% (2 in 3) of the constructed latrines are still in use and in acceptable condition.

All costs for a latrine are borne by the people, except for the very poor who may receive a subsidy for a cement slab. SRWSP has observed that in most cases subsidies are not needed to encourage people to build a latrine. 80% of the households covered by a drinking water system have constructed a latrine. After a period of three to five years, 65% (2 in 3) of the constructed latrines are still in use and in acceptable condition. Some people remain reluctant to build a latrine. On average, 20% never build one. When analysing this phenomenon, the following reasons seem most plausible:

- In heterogeneous communities, underprivileged groups tend to leave the initiative to build latrines to better-off and more innovative people. In homogeneous communities, even when made up by poor and underprivileged people, more openness to build latrines is found.
- SRWSP/Helvetas encourages people to change their sanitary habits and to build and use latrines, but it does not provide any material incentives to do so. Community people however are not always ready for an approach based mainly on facilitation. Past development practices have implanted a recipient mentality which dies hard.
- Very poor people must spend all their time and energy on fulfilling their most basic daily needs. Even with material support and subsidies it remains hard to motivate them to change their habits.
- Religious beliefs can keep elderly and/or high caste people from changing their habits and using a latrine.

Others (1 in 3) abandon the use of their latrine after more than one year of use. As a result of bad maintenance, the smell and number of flies increase and the squatting place becomes dirty. Using a dirty latrine is seen as a nuisance and open defecation is preferred. A lack of understanding of the importance of latrine use and maintenance, and/or the construction of the latrine under pressure rather than self-motivation may be underlying reasons for abandonment. Better sanitation practices such as the proper cleaning of hands and utensils, washing clothes and taking baths have increased in all project areas. Villagers say that they have improved their sanitary habits and that their village is cleaner now than before.

Three main lessons on health & sanitation education (HSE)

- HSE has the greatest impact when started from the very beginning and integrated in all activities throughout the whole project.
 - To reach the whole community, HSE activities should be gender sensitive.
 - Proper use of latrines has a high impact on the overall sanitary situation in the community.
-

■ **HSE has the greatest impact when started at the project's very beginning and integrated in all activities throughout the entire process.**

The reason for combining HSE with drinking water is well understood by programme planners. Communities, however, first demand better drinking water facilities. The reason why HSE activities are included must, therefore, be made very clear. In the beginning, villagers show a keen interest to take part in the various participatory activities. Newly gained insights activate people's eagerness to improve their living environment. SRWSP makes positive use of this momentum in motivating the people to construct and use latrines. Intensive supervision is provided during the time of latrine construction to guarantee high quality workmanship according to approved designs. Motivation for sanitation requires repeated efforts over an extended period of time, especially when the whole community is targeted. HSE should also be an integral component of other activities, including the more technical training programmes. To sustain the sanitation facilities, HSE should continue during the operation and maintenance phase.

The impact of such HSE activities is greatest when sanitary behaviour is practised by the whole community. In heterogeneous communities this is more difficult to achieve. Different ethnic and/or caste groups have their own cultural and religious beliefs and habits. Special, sometimes tailor-made awareness-raising activities are necessary to address these. Those of lower economic status who live on a survival strategy need to be given special consideration to motivate them to participate in the community efforts.

■ **To reach the whole community, HSE activities should be gender sensitive.**

Generally, sanitation activities are directed at women, assuming that they have the most influence when it comes to improving sanitary behaviour. This is, however, not necessarily true for all communities. Moreover, women and men may have different interests and needs when it comes to sanitary change. Analysing these first and then conducting the HSE activities accordingly will address both needs. (see also chapter 6)

■ **Proper use of latrines has a high impact on the overall sanitary situation in the community.**

HSE is more than just latrine construction. However, as this is the most tangible change, it is easy to monitor and report on. Other changes like hand washing practices are not to be underestimated. Nevertheless, latrine use is very important in changing the living environment of the community. People may also have their own reasons for latrine use which are not always related to improving the health situation. Reasons of convenience or safety can be decisive as well. Lack of technical knowledge keeps people from building a latrine. In some cases providing technical guidance is enough to motivate the

“Hygiene and sanitation is an important and integral part of SRWSP. It can be made stronger by making hygiene and sanitation messages relevant to local realities...”

(External Evaluation 1997, page 35)

people; in others, more motivational activities or even a small push are needed to make people take the first step. SRWSP has observed that in most cases, subsidy is not necessary to encourage people to build a latrine. Only the economically weak might need some support. The most positive observation is still that once people get used to using a good latrine they appreciate it and refrain from open defecation. After the first latrine pit is filled, some people are willing to invest more to build one that lasts longer.



Technology: Understood and Owned by the Community

Until the mid-1970's, when Helvetas started to work in the drinking water sector in Nepal, no technical guidelines had been developed for gravity-flow systems in rural communities. Neither were there technically trained people at hand who could construct a drinking water system according to a design. During the first ten years of Helvetas' support for CWSSP, standardised design criteria were developed and technical manpower trained. New technologies were tried out, introduced and refined.

In contrast, SRWSP could build on the proven technical knowledge of CWSSP, although the different nature of SRWSP made it necessary to make some adjustments. The community was going to own and manage a simple, well-tested system. For all technical activities men, and more importantly women were to be involved. Technical skills and knowledge would be transferred during those activities and in special training courses.

On technology: important insights

- Ownership alone is not sufficient; it must be combined with the right technology and good workmanship.
- Gender sensitivity in technical activities is crucial.
- A well designed and built drinking water system alone does not lead to improved health.

■ Ownership alone is not sufficient; it must be combined with the right technology and good workmanship.

Choosing the most appropriate technology is the basis for bringing safe drinking water to a community. Special attention should be given to the catchment area and the design and construction of the source intake, which is the most critical part for the overall quality of the system. Devices to clean and maintain the system need to be simple, safe and available locally. A sense of ownership can be developed by involving men and women in all steps and by transferring knowledge and skills in a simple and understandable manner. Direct involvement during construction work helps de-mystify the technology, reducing the community's fear of it. This encourages the sense of ownership and makes maintenance easier. *The combination of high quality technical workmanship and the community's sense of ownership of the system ensures a high level of sustainability.*

■ **Gender sensitivity in technical activities is crucial.**

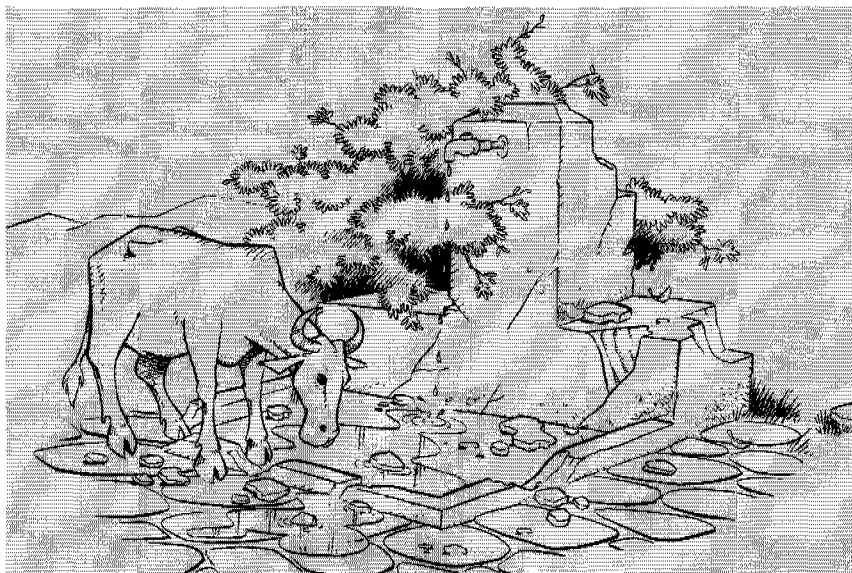
Technology is not merely a man's issue. If given a chance, women show a keen interest in the functioning of a drinking water system and are eager to learn more about it. To take advantage of this interest, community facilitators and technical personnel need to be aware of the importance of involving women. Having more female technical staff, from plumbers to engineers, working with the community, encourages women to actively participate. SRWSP has had very positive experiences with female technical workers, but community facilitators, who are more often female than male, need to have substantial technical knowledge to help solve problems on the spot.

■ **A well designed and built drinking water system alone does not lead to improved health.**

A badly designed, built and maintained system, though reducing time for water collection, will remain a health threat due to contamination at various points. A properly maintained drinking water system is one part of a broader programme aimed at improving the health of a community. Integrated educational and technical activities can have a positive impact on the overall quality of the water supply. Therefore, specific activities supporting the technology are important. Those can be skill training and health and sanitation education, but they also must include special efforts to raise awareness about catchment and source protection as well as cleanliness of the whole system.

"... overall construction quality of projects remains high and has not been significantly compromised by the increased social orientation of project work."

(External Evaluation 1997, page 67)



Women and men: Efforts towards a gender-balanced approach

Traditionally, women manage a household's drinking water supply. With the introduction of male-dominated engineered systems, women's role in this aspect of life was not fully acknowledged. The elite and influential men were now making the major decisions, including those regarding the location of tapstands and their use. This practice continued until the mid-1980's when women were slowly recognised as key facilitators in the sustainability of a drinking water system and the improvement of health in their community.

Traditionally, a drinking water and sanitation programme addresses women's practical needs such as reducing the time needed for collecting water. A drinking water system brings water closer to the house, which can then be used for vegetable production, while better sanitary facilities improve the health situation. *These changes will improve the overall living conditions of women. Their position, however, is not automatically improved by a drinking water and sanitation programme.* The latter depends on the women having equal access to the decision-making process, resources, knowledge and skills. CWSSP's women's involvement programme, which started in the mid-1980's, was a first attempt to target women in particular. The sanitation activities were designed for women, who were given responsibility for transferring the knowledge thus gained. Men in turn were made active members in the user committees and kept making the final decision on all kinds of important matters, even those which were in the women's sphere.

During the first few years of SRWSP, women rather than men were targeted for the health and sanitation education activities. The need to involve men was addressed only at a later stage. While the emphasis is still on empowering women, which is important in the effort to broaden the basis for decision-making and knowledge transfer, now men are included in HSE activities and are encouraged to become active in improving sanitary behaviour.

SRWSP realised that a gender-balanced approach can only be successful if the facilitators show understanding and sensitivity in matters of gender. Subsequently, gender sensitisation training sessions were organised. All activities within the process were analysed for their gender sensitivity and were adjusted where necessary. Special activities were added to encourage gender balance at the community level. To assess the community opinion on the SRWSP approach with regard to women and gender, special awareness-raising and assessment workshops were organised.

Important issues for gender balance

- Active involvement of women and men in all activities.
- Equal access to decision making processes.
- Women in key positions in the WSMC.
- Involvement of men and women in HSE.
- Training of women in technical skills.
- Need for gender awareness at village level.

■ Active involvement of women and men in all activities.

Though quite obvious, this is not automatically the case. Women have a very heavy workload and are not always available for meetings and gatherings. Activities should be arranged to fit women's schedules, at times agreed by them and acknowledged by men. Being present is not enough. Active participation means giving women the opportunity to express their views and opinions. Women might prefer to first consult among themselves in separate women's meetings. Also, the tools and methods used need to be adjusted since more men than women are literate. Having female facilitators gives women the confidence to become more active in their roles.

■ Equal access to decision making processes.

Access to information is necessary to make good decisions. Information flow often takes place in informal ways, e.g. while people collect firewood or play cards. Men and women have their distinct ways of transmitting and absorbing knowledge. It is important that men and women have the *same information*. Moreover, men and women might have very different ideas on a particular issue e.g. location of a tapstand. For men it might be important on whose land it will be constructed, for women the distance can be a decisive factor. Facilitation will help bring such different opinions into the open and reach a consensus. Here again, women might need separate meetings to clarify their views.

■ Women in key positions in the WSMC.

Women don't always want to hold high-profile posts such as chairperson, as these jobs involve too much travel for which women do not have the time. Women show keen interest in monitoring the funds and use of material. This could be combined with making them co-signatories of the bank account and giving them extra supervisory tasks during construction. Having female friends on the committee is important if women are to play an active role there. One or two women on a male-dominated committee are not in a position to make the women's view count in meeting. This can be overcome by increasing the number of women on the committee or by forming a support group for the women's representatives on the committee.



User's committee management workshop

■ Involvement of men and women in health and sanitation education.

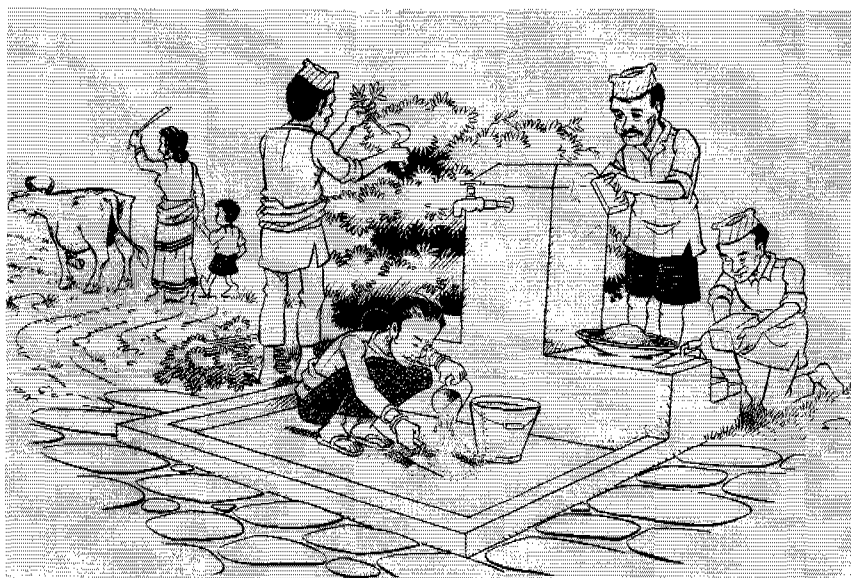
Health and sanitation education is still regarded a matter for women. Women take care of the children, the sick, the food preparation and the household sanitation. Providing women with better knowledge and awareness on the linkage between clean water, good sanitary habits and improved health are bound to have an impact. By excluding men from this knowledge, acceptance in the community has suffered. Having men as well as women involved enhances the subject's importance and at the same time encourages a better division of household tasks.

■ Training of women in technical skills.

An efficient drinking water system is very important for women. A damaged, broken or leaking tap, a clogged drain, a broken valve, or a cut pipe mean that women suffer. Women immediately realise if something is malfunctioning. Having technical skills to repair the problem is a good starting point but access to the tools is as important as the skill. Such access can be provided by giving the female WSMC responsibility for the tools, or by providing some basic tools to the women tapstand caretaker. Turning full responsibility for the maintenance of the drinking water system over to women could be considered but it will be in addition to their already heavy workload. The combination of a male VMW and female tapstand caretakers has functioned very well.

■ Need for gender awareness at village level.

In rural communities, task and role divisions are mostly based on traditional cultural and religious norms which are either taken for granted or are ingrained beyond change. In order to achieve gender balance throughout the implementation of the programme, a certain level of awareness of these deep-rooted divisions is required. Gender sensitisation training sessions during the preparation phase are a first step towards a deeper understanding of the background from which those set patterns have grown. Both men and women participate in these training sessions. Besides gender in general, specific attention is given to the gender roles in drinking water and sanitation during the implementation of a new drinking water and sanitation programme.



" ... (the special consideration given women and questions of gender) has led to overall improvements in the status of women within the project communities, levels of community ownership and project management capabilities."

(External Evaluation 1997, page 32)

Partnership: a search for different modalities

The restoration of democracy in Nepal in 1990 and the subsequent registration of national and local NGOs allowed additional types of partnerships. As a regionally based programme, SRWSP wanted to work with NGOs and the private sector from the same region. Partnerships with local authorities were established to guarantee smooth coordination and planning, while the close cooperation with the drinking water governmental line agency, established during the implementation of CWSSP, was maintained. While in partnership with these organisations, SRWSP did not maintain a direct link to the WSMC. The SRWSP philosophy underlying the implementation of *drinking water and sanitation programmes* allows for the involvement of more than one partner; hence the term 'multiple partnership'.

With a few communities, SRWSP does maintain a direct relationship and takes full responsibility for the implementation of the entire project. In these cases, the WSMC is the sole partner of SRWSP. Since only two parties are involved in this type of partnership, it is called 'dual partnership'. SRWSP chose such partnerships in order to gain valuable experience in working directly with the community. New ideas and educational material could be tested and monitored. SRWSP was still forced to work in dual partnership as well, because Nepal's civil society was, and still is, very young and immature. The more important partners for SRWSP are local NGOs, private consulting firms, local authorities and governmental line agencies.

Local NGOs

SRWSP works in partnership with district or village based NGOs. They have a number of advantages: A good knowledge of the local situation, direct contact with the community and the local authorities, they learn quickly and are highly motivated for development work. Therefore, the local NGO partners can help the community fulfill all the eligibility criteria. They are also expected to help the WSMC manage all activities related to the implementation, operation and maintenance of the project. Generally, NGO partners are responsible for the social component of the programme.

Most NGO partners are locally based and have not been exposed to the skills and knowledge needed to successfully execute a participatory community management programme. Therefore, SRWSP strives to build up the institutional capacity of the partner NGOs. This is done through NGO orientation workshops, community management and PRA field practice training, gender training, regular NGO meetings, and monitoring support for the facilitators. Those NGO partners with a keen interest in taking up technical tasks receive capacity-building training for technical people. Formal training and consultation alone are not enough to upgrade

the knowledge and skills of members. Therefore, SRWSP staff visit the project sites quite frequently and work together with the NGO facilitators. Such supervisory visits significantly develop confidence among the NGO workers.

Private Consulting Firms

Locally available technical consultants are hired for the implementation of technical work, usually for feasibility studies, detailed surveys and design, and construction of the drinking water systems. SRWSP expects a high level of professional quality of all the work done by the consulting partners. Technically this is usually not a problem, but when it comes to working in a transparent manner so as to allow skills and knowledge to be transferred to the community, such consulting firms have little experience. Here too, then, SRWSP aims to build up the capacity of the private consulting partners. The use of local consulting firms encourages the development of the private sector and thus helps improve resource availability in the area.



Survey, design, estimate

Local Authorities and Governmental Line Agencies

In Nepal the village and district based local authorities have funds at their disposal for the implementation of development projects. The construction of small drinking water schemes is among the preferred activities. Therefore, partnership options with the district authorities were explored. Unfortunately, a common understanding of implementation strategy and an overall vision could not be reached. Differences were encountered on issues such as sanitation, participatory planning, a community's sense of ownership, gender balance and technical standards. It was therefore decided not to opt for partnership with district authorities. In the meantime, the available funds have been shifted from district to village level authorities. This encourages a higher level of responsibility and accountability on the people's part. It opens up new opportunities, and SRWSP is now exploring partnership with the village level authorities, especially since the district authorities are now playing an active role in coordination and planning.

The district level governmental drinking water line agency, which was Helvetas' partner for the implementation of CWSSP, has well-trained and experienced technical staff at its disposal. Its problem, however, is its high level of bureaucracy and the difficulties it has in working in a participatory manner. Furthermore, it is a very male oriented straight-forward technical organisation, unlikely to adjust to a more social and gender-sensitive working style. Nevertheless, the long-standing relationship with the governmental line agency created an openness for cooperation. SRWSP provides all technical information to the line agency. At the national level it has been agreed that the drinking water line agency provides technical support to the WSMCs during the operation and maintenance phase. The need for this may come up when parts of the system are destroyed due to landslides or other natural disasters. The operation and maintenance fund should be sufficient to cover the cost for material.

Key issues regarding partnership

- Partnership with local NGOs has turned out to be difficult.
- A sensible diversification of dual and multiple partnerships has proven healthy.

■ Partnership with local NGOs has turned out to be difficult.

NGOs are a relatively new phenomenon in Nepal. Their credibility and capabilities vary greatly. Some national NGOs are well established, but experienced local NGOs with their own strong vision for social development are still quite rare. Existing local NGOs have the tendency to adjust to the donor's requirements, so that within SRWSP more of a donor/client relationship is maintained than a true partnership. The strength of the local NGO is its direct link with the community. Its inexperience has to be compensated with intensive capacity-building activities and strong supervision at the implementation level.

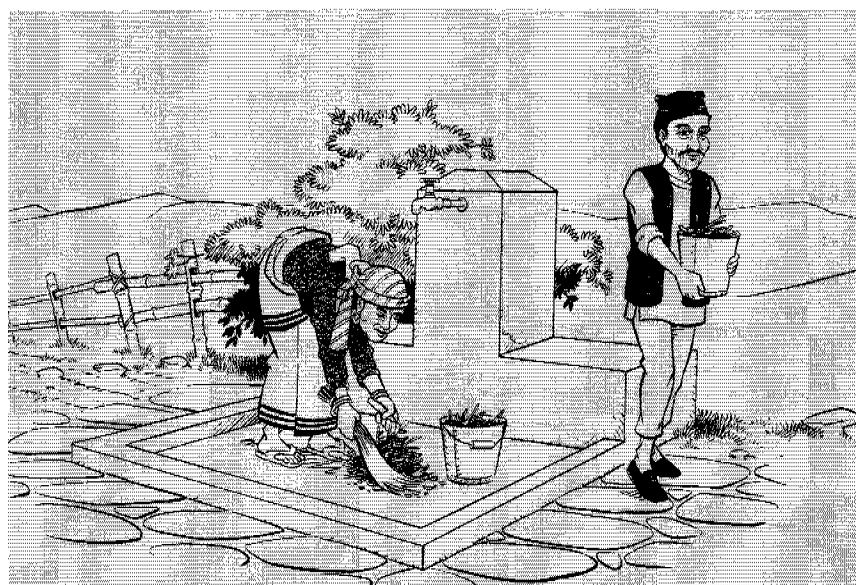
■ A sensible diversification of dual and multiple partnership has proven healthy.

It is widely acknowledged that the dual partnership model (project implementation by SRWSP personnel only) produces more predictable results in terms of construction quality and project time frames. The potential of the multiple partnership model, and in particular its role in strengthening civil society, is better suited to meet Helvetas' organisational objectives. However, for this partnership model to work, individual partners must be able to meet their own core objective while at the same time embracing the philosophy and principles of SRWSP. The dual partnership approach is important for the development of new community-led processes, 'apprentice' NGOs and exploring new initiatives. The capacity-building of local NGOs and private sector enterprises has ensured the possibility of working with the multiple partnership approach.

"Working in partnership with local organisations is a key feature of Helvetas."

"The dual partnership model should be retained as the 'golden standard' for developing community led processes... "

(External Evaluation 1997, page 35)



The Organisation: Backbone of the Programme

The capability of the organisation to put concepts into practice is the key to the success of the programme. Principles like gender balance and participatory decision-making at community level are only trustworthy if also practised within the organisation. SRWSP has made efforts to have decision-making authority delegated to various levels. Conceptual decisions are made by the Programme Management Team where colleagues from different disciplines are represented (technical, social, training, monitoring), while day-to-day decisions are made within the various sections.

In order to make the programme truly participatory, it is vital to have a mechanism that ensures continuous two-way dialogue between the community and the programme. This is enhanced by the community facilitators who are stationed near the project area. They provide regular feedback to the Programme Management Team through their own section. Sharing of field experiences and discussion of new ideas is encouraged and appreciated. A shared vision among the programme staff and its collaborating partners encourages a strong sense of ownership. This invites people to be critical, alert and open for improvements and changes. To develop and maintain a shared vision, SRWSP is using various activities. "Designing the Future", for example, is a training programme which develops a joint vision for the future through special breakthrough projects.

A particularly valuable experience has been the Participatory Self Assessment (PSA). Over a period of 6 months many different activities were organised in which the staff, together with partner organisations and the community participated. The outcome was very helpful to the External Evaluation team. The resulting evaluation thus applied to the whole of SRWSP. Annual plans of operation are prepared based on such questions as 'What do we strive for?', 'What do we expect to achieve?', 'What changes do we anticipate?', 'Which weaknesses should we work on?', 'Which strengths should we build on?', 'Which ideas should we try out?' etc. Annual budgets are prepared based on the number of communities expected to enter the construction phase.

Key issues with regard to organisation

- A competent second line management is crucial in a flattened organisation.
 - Making gender balance a reality is a huge task.
 - The Social Development Section faces most of the problems.
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■ **A competent second line management is crucial in a flattened organisation.**

SRWSP strives to develop an organisational culture which encourages decision making at the appropriate level. The second line management plays an important role in this by assuring a two-way flow of information and encouraging decentralised decision making. In such an organisation staff members must feel confident and competent, while being allowed to make mistakes. This management style is new in Nepal and thus requires a change in mentality. Special training programmes and intensive supervision are, therefore, essential. Over a period of years, major organisational changes have been encouraged and introduced thanks to this management style.

■ **Making gender balance a reality is a huge task.**

Gender balance is easy to talk about; more difficult to put into practice. First, it is important to find a common understanding of gender, one which is not merely an intellectual concept, but is genuinely felt, lived and practiced by all colleagues. On the basis of this common understanding a realistic analysis of the gender imbalance can be made, the starting point for planning improvements and changes.

In a male-dominated culture such as Nepal's, where women have only recently gained the chance to study and work, it is hard to find female candidates for higher-level posts who are as competent as men. This means that some positive discrimination in favour of women is necessary to ensure that they are able to join and progress in the organisation. It is also important to take into account that women work differently from men. SRWSP's female staff members mostly work in the fields of training and social development. Women have been trained and put to work in the technical field but unfortunately not yet at engineer level.

SRWSP has only been partially successful in making the team gender-balanced. For instance, no female candidate could be found for a senior post which had been specially earmarked for a woman. After a year of unsuccessful attempts, a male candidate was appointed.

■ **The Social Development Section faces most of the problems.**

The Social Development Section (SDS), with a high number of female staff, is responsible for the proper implementation of the social mobilisation activities, either conducted directly by the SRWSP community facilitators or by the NGO partners. From the very beginning, when the first contacts are established with a community, to the follow-up activities during the operation and maintenance phase, SDS staff have a key role to play. As a result, they find themselves confronted with most of the problems. Despite the hardship they face, their constant efforts are crucial to the success of the programme.



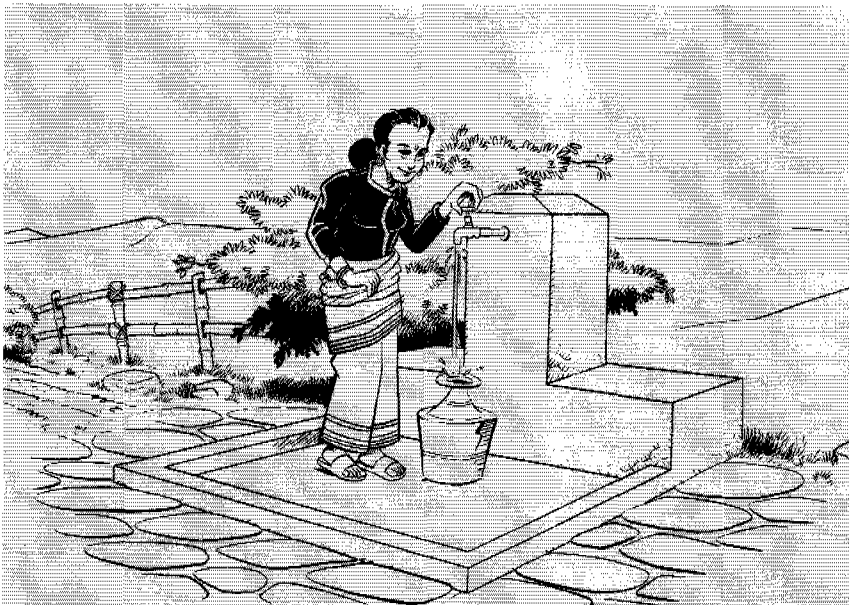
Social feasibility study

Unlike technical staff, social staff cannot rely on long-standing experience and proven methodologies. The social field is continuously changing and demands new concepts, strategies, approaches, methods and tools. Moreover, while technical staff achieve tangible results and as such receive immediate appreciation, the Social Development Staff build the foundation for these results but their work's importance is not always fully recognised.

Being there to listen to the problems and frustrations which the SDS staff experience during their motivational work in rural Nepal, and giving appropriate moral support is important in helping them maintain their sense of value.

“The organisational culture may be described as highly participatory and consistent with the principles of a ‘learning organisation’ wherein ideas circulate freely and wide-ranging discussion is openly encouraged among staff members.”

(External Evaluation 1997, page 63)



Integrated water resource management: A logical step forwards

“The SRWSP is a pioneering and highly innovative programme that has significant success in stimulating meaningful community participation in, and ownership of, projects. It has done this by placing a primary emphasis on social processes while maintaining technical standards.”

(External Evaluation 1997, page 1)

The experience with the SRWSP community-oriented stepwise process approach has been exciting as well as challenging. The Participatory Self Assessment and the External Evaluation have provided excellent opportunities to critically analyse the programme and to receive crucial feedback from partners and community people.

Despite a continuous effort to learn from experience and adjust the approach and activities accordingly, SRWSP has not been able to solve all the problems encountered. The four most important are:

■ **Disputes associated with the use of water sources.**

The most important problem faced are disputes associated with the use of water sources. Usually these disputes take the form of competition between the communities and individuals, either over the establishment of ownership over the water resources or over the mode of water use, e.g. drinking water versus irrigation. The reluctance to share water is another source of conflict. The situation is further aggravated by the gradual deterioration of water sources in rural hills as a result of the continuous depletion of trees and other vegetation.

■ **Inefficient use of existing water.**

Existing water is used inefficiently due to leakage from different parts of the system and non-use of waste water. More economical use of water is not only a technical matter but also a social issue. There is a need for raising awareness of water as a scarce commodity and for developing a sense of ownership in the communities.

■ **Lack of co-ordination and planning at the local level.**

In line with the Decentralisation Act the village level authorities submit annual plans to the district. The district development plan is forwarded to the national government for final approval. All development activities should be included, even those which do not require special funds from the national or local government. Bureaucratic procedures delay approval of the plans for a long time. Changes and cuts in budgets must also be expected and these too hamper a smooth implementation. As a result, the community decides to by-pass the official procedures and turn directly to NGOs and INGOs for support. A community can forward an application for drinking water to different organisations, without informing the local authorities. This leads to duplication of efforts and ultimately inefficient use of available resources.

■ Applications from communities with an old drinking water system.

Many applications are received from communities with an old drinking water system that no longer works, or works only partially. This may be the result of bad workmanship, lack of regular maintenance, under-developed sense of ownership, and drying up of the source. Malfunctioning systems are a health hazard, precious water is likely to be wasted, and time needed to collect water increases again. Repair of the system is very important but needs to be done in such a way as to make the change longer lasting.

The conclusion is that the underlying problem is the inappropriate selection of water sources, combined with a lack of open and democratic planning on its use. Planning of water sources and maintenance and repair of existing water systems should be done in collaboration with the local authorities and the users, including women and marginalised groups. A common, long-term vision will help bring about a consensus. Supportive educational and awareness-raising activities, including legal issues concerning water, are crucial in making long-term participatory planning possible.

Integrated water resource management

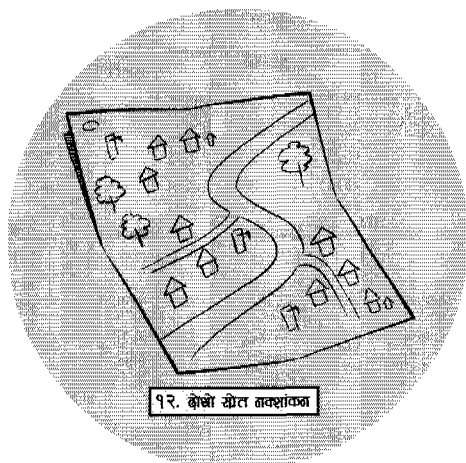
Taking the problems and lessons learned into account, the most realistic next step for Helvetas in its involvement in the drinking water sector in Nepal is to look in a holistic way at water sources and their use, while keeping water supply as the key anchor and building block of the programme. An approach which integrates the planning of all the locally available water sources is something new and needs to be developed as a concept. The SRWSP experiences, combined with those of other drinking water programmes world wide, have helped Helvetas/Nepal to arrive at an understanding and concept of Integrated Water Resources Management at the local level. IWRM is about:

- Planning of efficient water source usage where the use is agreed upon by all the stake-holders, including women and marginalised groups within the community.
- Conservation and protection of the water sources and the catchment areas.
- Water being recognised as having an economic and social value.
- Capacity building of individuals and groups involved, including educational programmes fostering legal knowledge and awareness.

Water Resources Management at the local level integrates four technical fields (water supply and sanitation, irrigation and drainage, environment and ecology, and others such as energy). The four fields are linked together through a strong supportive social and educational component which sustains activities in all areas.

Possible activities in these four technical fields are:

- | | |
|--|---|
| <p>1. Water Supply and Sanitation</p> <ul style="list-style-type: none"> ■ Source improvement ■ Environmental sanitation ■ Water supply ■ Repair and rehabilitation | <p>2. Irrigation and Drainage</p> <ul style="list-style-type: none"> ■ Proper drainage of waste/overflow water ■ Micro-irrigation for kitchen gardening ■ Drip, sprinkler and canal irrigation ■ Canal improvement |
| <p>3. Environment and Ecology</p> <ul style="list-style-type: none"> ■ Source conservation ■ Forest management ■ Stream Bank stabilisation ■ Terrace improvement | <p>4. Others</p> <ul style="list-style-type: none"> ■ Electricity generation ■ Water for cottage industries ■ Rainwater harvesting ■ Fishery |



Second social mapping

On this basis, SRWSP piloted the participatory planning component of IWRM in two different geographical areas. It started with capacity-building training sessions for men and women from the area, followed by a PRA analysis of all the water sources, their present and planned use. A technical assessment gave more detailed information on the capacity of all sources and their possible use in one of the four sectors. In a workshop, facilitated by SRWSP, representatives of the community discussed the outcome of these two participatory assessments. Possible projects were prioritised and formulated into a village Water Use Master Plan. The village representatives then decided which actions could be implemented from their own resources (private or local authorities) and which needed external support. In another workshop the Master Plan was presented to various support organisations in order to get a commitment for support. In one of the selected areas the local authorities are already implementing some activities in accordance with the Plan. The pilot programme included only a short social phase due to time limitations. Emphasis was therefore given to source investigation, planning aspects related to water use, the master plan, and building coordination mechanisms which apply when working with potential support organisations.

An outlook on the WARM Programme

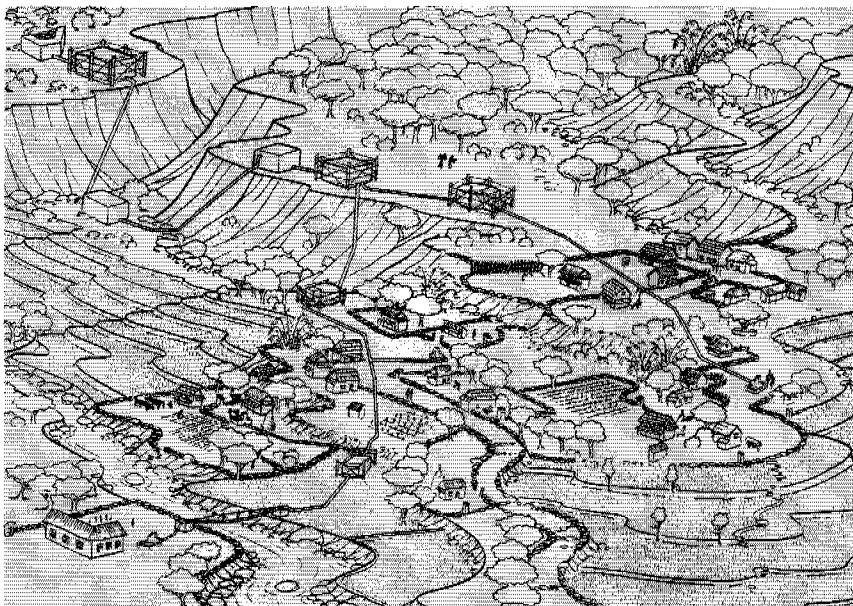
Important lessons learned from the pilot activities are:

- Capacity building for local leaders and key persons is crucial for the process to run its course in a participatory manner. Planning from the lowest level upwards is essential to the inclusion of the views of women and marginalised groups.

- A transparent and holistic approach towards planning of all water sources develops a greater interest and confidence on the part of the community. This results in a willingness to share all the water sources, including those on private land, and at the same time a readiness to prioritise according to greatest need. A long-term vision also encourages good financial planning, including the mobilisation of people's own resources.
- Extensive social mobilisation and educational awareness-raising activities are important prior to implementing the Water Use Master Plan.
- The Water Use Master Plan should be realistic, not over-ambitious, and must be broadly disseminated among all the people involved.
- Potential support organisations should preferably be involved from the very beginning.
- Local Authorities have proven to be the appropriate institutions to facilitate the planning process as a whole; this is in line with decentralisation policies.
- Conflicts are still bound to arise. New means must be developed to tackle them.

Helvetas is committed to the continuing support of the water sector in Nepal. Two major decisions will shape this support in the years to come. The first is to phase out activities in the Western Development Region; the second, to initiate IWRM activities in a more remote and neglected area of Nepal under the WARM (Water Resources Management) Programme.

Water use master plan



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