

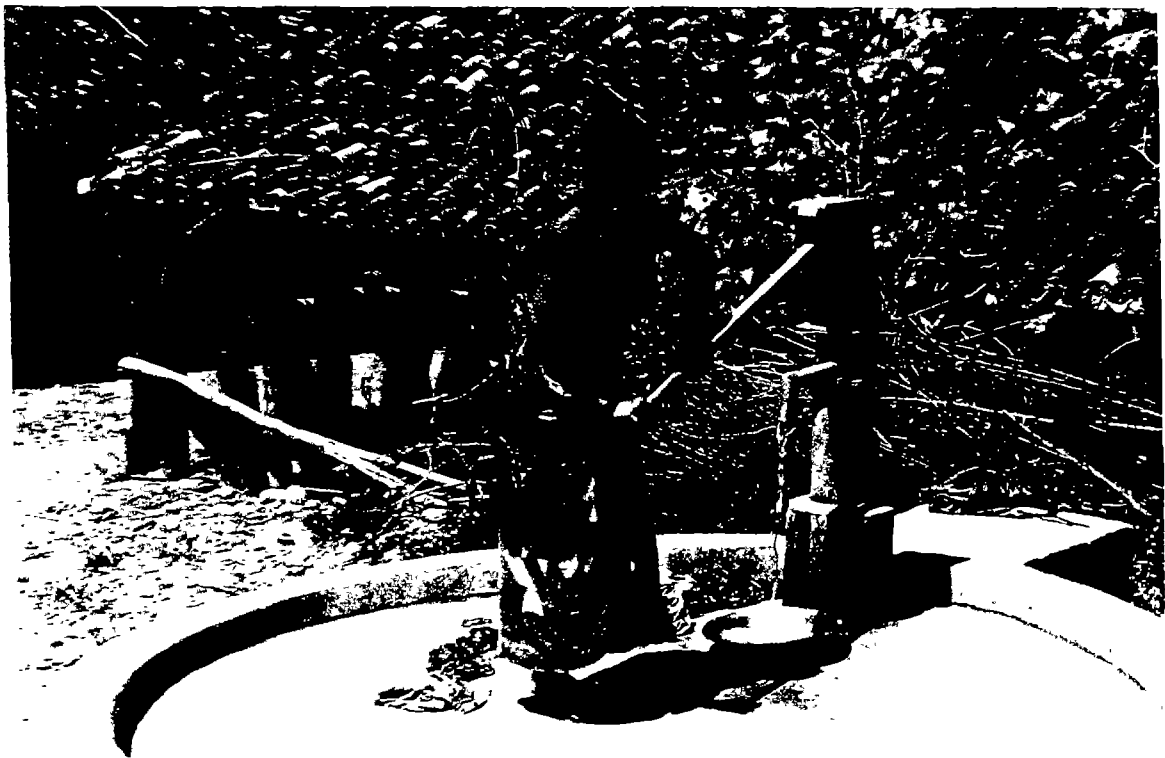
His Majesty's Government of Nepal
Ministry of Housing and Physical Planning
DEPARTMENT OF WATER SUPPLY AND SEWERAGE

and

The Government of Finland
Ministry for Foreign Affairs
DEPARTMENT FOR INTERNATIONAL DEVELOPMENT COOPERATION

RURAL WATER SUPPLY AND SANITATION PROJECT
Lumbini Zone, Nepal

PILOT STUDY OF COMMUNITY MANAGEMENT OF
WATER SUPPLY AND SANITATION SCHEMES



Butwal, July 1995
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PREFACE

The Rural Water Supply and Sanitation Project in Lumbini Zone, Nepal, has carried out community based development projects with nearly 300 Water User Committees during the period from 1990 to 1995. At the end of the Phase I, in July 1995, the completed schemes cover a population of about 200,000 people.

The Project has developed and used so called "step-by-step approach" to ensure villagers' involvement in their project from the feasibility studies to design and implementation, and to strengthen users' ownership feeling and commitment to take care of the scheme. In this approach the Water User Committee (WUC) members, Village Maintenance Workers (VMW) and Community Health Volunteers (CHV) play key roles within the communities.

The first schemes have been under community management for one to two years. This time span is sufficient to look for the first systematic feed-back from the communities. This study of the Water User Committees has covered 23 WUCs in 15 gravity schemes in the Hills and 8 groundwater schemes in the Terai. The study was made by interviewing WUC members, VMWs, CHVs and the villagers.

The study team consisted of Mr. Asko Rutila, a trainee from a further education course of the University of Helsinki, Finland; Mrs. Deepa Pokharel through the Women in Development/ Nepal; and Mr. Hem N. Acharya, a Health Education Officer in the Project. Mr. Rutila has been responsible for analyzing the results and writing the report. The other study team members as well as a number of other professionals have read and commented the draft report. In particular Mr. Purushottam Rhisal, Mrs. Maria Notley, Dr. Vijaya Shrestha, Mrs. Deepa Pokharel, Mr. Hans van Kampen and Mr. Ramesh Bhusal have given valuable comments and suggestions for the final report.

Butwal, July 1995

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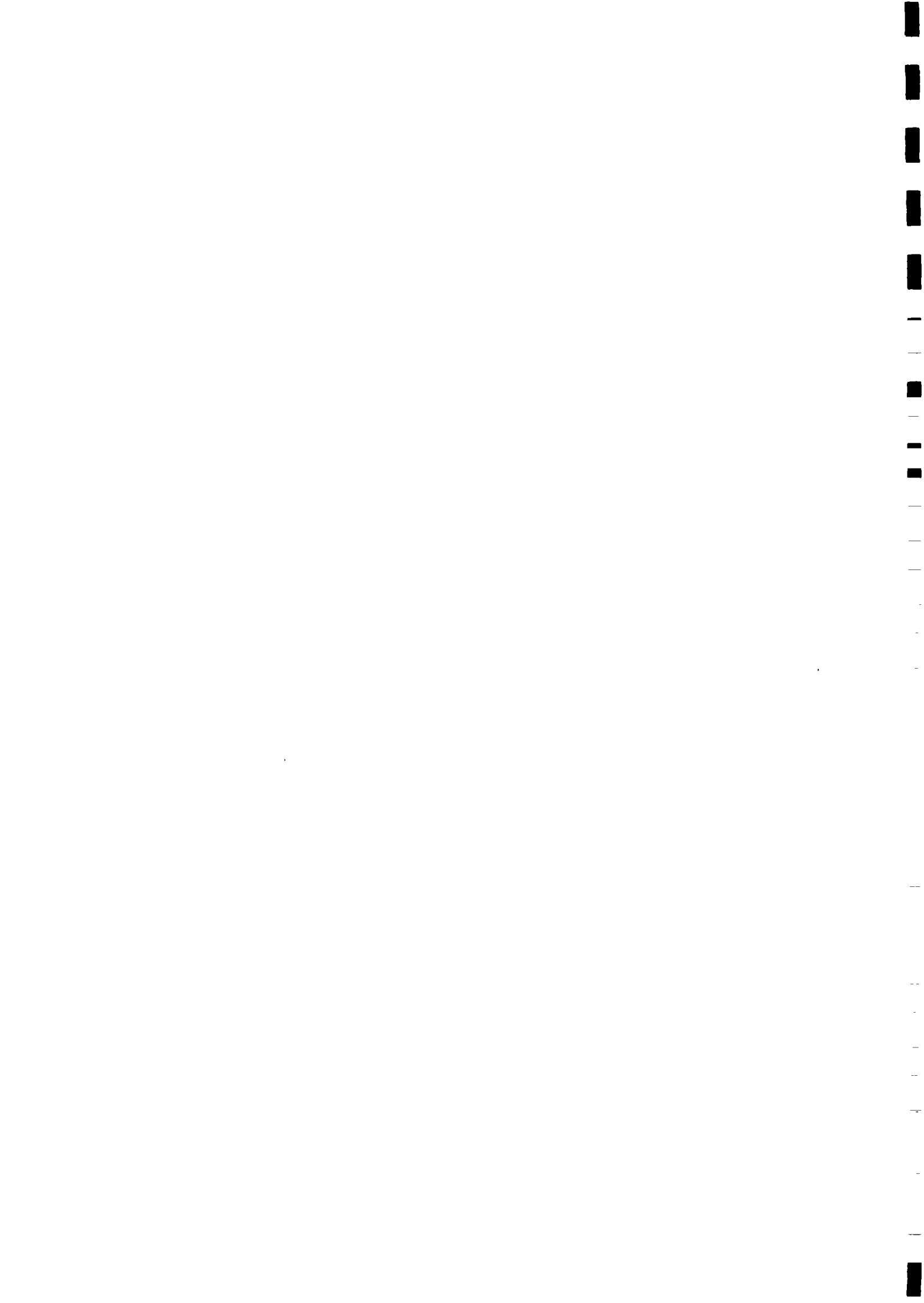
TABLE OF CONTENTS

	Page
Preface	
Table of contents	
List of abbreviations	
Executive summary	
Photographs	
1. INTRODUCTION	1
2. STUDY METHODS	1
3. MAIN FINDINGS	4
3.1. Labour contribution	4
3.2. Mass meetings	5
3.3. Water User Committees	6
3.4. Women's participation	12
3.5. Financial management	13
3.5.1. Fund collection	13
3.5.2. Fund management	14
3.5.3. Fees	15
3.6. Operation and maintenance	17
3.6.1. Groundwater schemes	17
3.6.2. Gravity schemes	18
3.7. Feeling of ownership	19
3.8. Health	20
3.9. Sanitation	23
4. CONCLUSIONS AND RECOMMENDATIONS	26
4.1. Water User Committees	26
4.2. Labour contribution	28
4.3. Mass meetings	28
4.4. Women's participation	28
4.5. Financial management	29
4.6. Operation and maintenance	29
4.7. Feeling of ownership	30
4.8. Health and sanitation	30
4.9. Suggestions for future study of Water User Committees	31
ANNEXES	
Annex I	List of schemes studied
Annex II	Map of Lumbini Zone
Annex III	Summary of questionnaires
Annex IV	Field reports



LIST OF ABBREVIATIONS

CHV	Community Health Volunteer
DDC	District Development Committee
DHO	District Health Office
DWSO	District Water Supply Office
HMG	His Majesty's Government of Nepal
NER	Nepalese Rupee
O&M	Operation and maintenance
RWSSP	Rural Water Supply and Sanitation Project
VDC	Village Development Committee
VHW	Village Health Worker
VMW	Village Maintenance Worker
WUC	Water User Committee



EXECUTIVE SUMMARY

This pilot study is the first attempt by the Rural Water Supply and Sanitation Project, Lumbini Zone, to collect systematic information on the community management of the schemes. The principal aims of the study were to find out how the Water User Committees (WUC) function, what are their management skills and how they have tackled their problems.

The study was made by interviewing WUC members, Village Maintenance Workers (VMWs), female Community Health Volunteers (CHVs) and other villagers. 23 Water User Committees in 20 scheme areas were selected among the 288 WUCs of the Project. The oldest schemes, completed mainly in 1992-1993, dominate the sample, since it was important to study schemes with at least one to two years of real post-construction time, fully under community management with little or no external intervention.

Most of the 15 WUCs of the gravity scheme areas seem to function more or less as expected. They have VMWs, either paid or volunteering, taking care of the regular checking and maintenance of the water supply system. WUCs have held meetings quite often, but do not organize mass meetings regularly. Different practices to cover the maintenance costs and VMW's salary are developed, including using the interest of the O&M fund and collecting cash "when needed". User committees collect monthly fees in half of the studied communities only.

In the Terai eight WUCs for groundwater schemes were studied, seven in shallow tube well areas and one having drilled deep tube wells. WUCs in these handpump schemes seem to become rather passive after the construction is over. Users of a particular well often take care of "their well and pump", including purchasing and replacing of the spare parts. There is not much interaction between users and Water User Committee after construction. Also the O&M fund remained passively on the bank account. The WUCs did not use it for example to finance reconstruction of dried or muddy wells.

It is necessary to consider how to activate the existing WUCs, especially in the Terai, or even how to dissolve the large wardwise committees. The WUCs should perhaps have more clear "assignment" from the Project side to promote health education and sanitation in their areas after the construction of schemes. It is also necessary to consider new approaches based on users' direct involvement in funding, construction and maintenance. The role of User Committees could even be limited to operate community's revolving fund, providing loans to individuals or to small groups of households for well construction and latrine building.

Women's awareness about the water supply system and participation in decision making has not been adequate. The recommendation of having at least two female members in the WUC has not been actively followed. It is recommended that the Project takes a more active role in following up this issue.



Most of the female Community Health Volunteers were promoting better sanitation practices by having own private household latrines. Many CHVs also seemed to be quite active health education promoters as well as distributors of first aid medicines. However, more emphasis should be given to practical preventive health care issues in the CHV training. It was also found out that most WUCs did not actively collaborate and support the CHVs. To change this situation, and to activate WUCs in health education and sanitation promotion, the CHV should be a member of the WUC.

The question of ownership was well understood by the members of the User Committees. The majority of other users also seemed to think that the scheme belonged to them, although many women were uncertain of the ownership. Yet, it is very common thinking that the Government or the Project should help in major maintenance or rehabilitation of the water supply systems.

It seems that the WUCs are active during construction but become passive after that, particularly in the handpump schemes of the Terai. This indicates that WUC training is perhaps too "hardware oriented". There should be clearer messages of post construction activities, especially concerning sanitation improvements in the training and seminars of WUCs. Also, good examples of management practices and procedures should be given and discussed with WUC members concerning e.g. fee collection, active use of O&M fund and community mass meetings.

There had not been major problems in operation and maintenance of the schemes, perhaps due to the short post-construction time elapsed so far. In the Terai, less than 10 % of wells had serious problems. Typically some wells had dried and some gave muddy water. In the Hills, users of over half of the studied schemes complained that there was not enough water for everyone. However, interruption of flow was usually found in a few taps and at certain peak times only. Sometimes the reason was wastage or improper use (water running all the time, irrigation), or the WUC had allowed some outsiders to fetch water from the system.

This pilot study has produced a lot of useful information, which the Project will use to improve its methods. There are good grounds for a more comprehensive study of the community management of the schemes. The Project intends to make a study of all WUCs in the beginning of Phase II of the Project.



PHOTOGRAPHS



Photo 1. The study team interviewing the Water User Committee and the Community Health Volunteers of Bhatukuwa, Gulmi.



Photo 2. Men usually sludge the shallow tube wells.

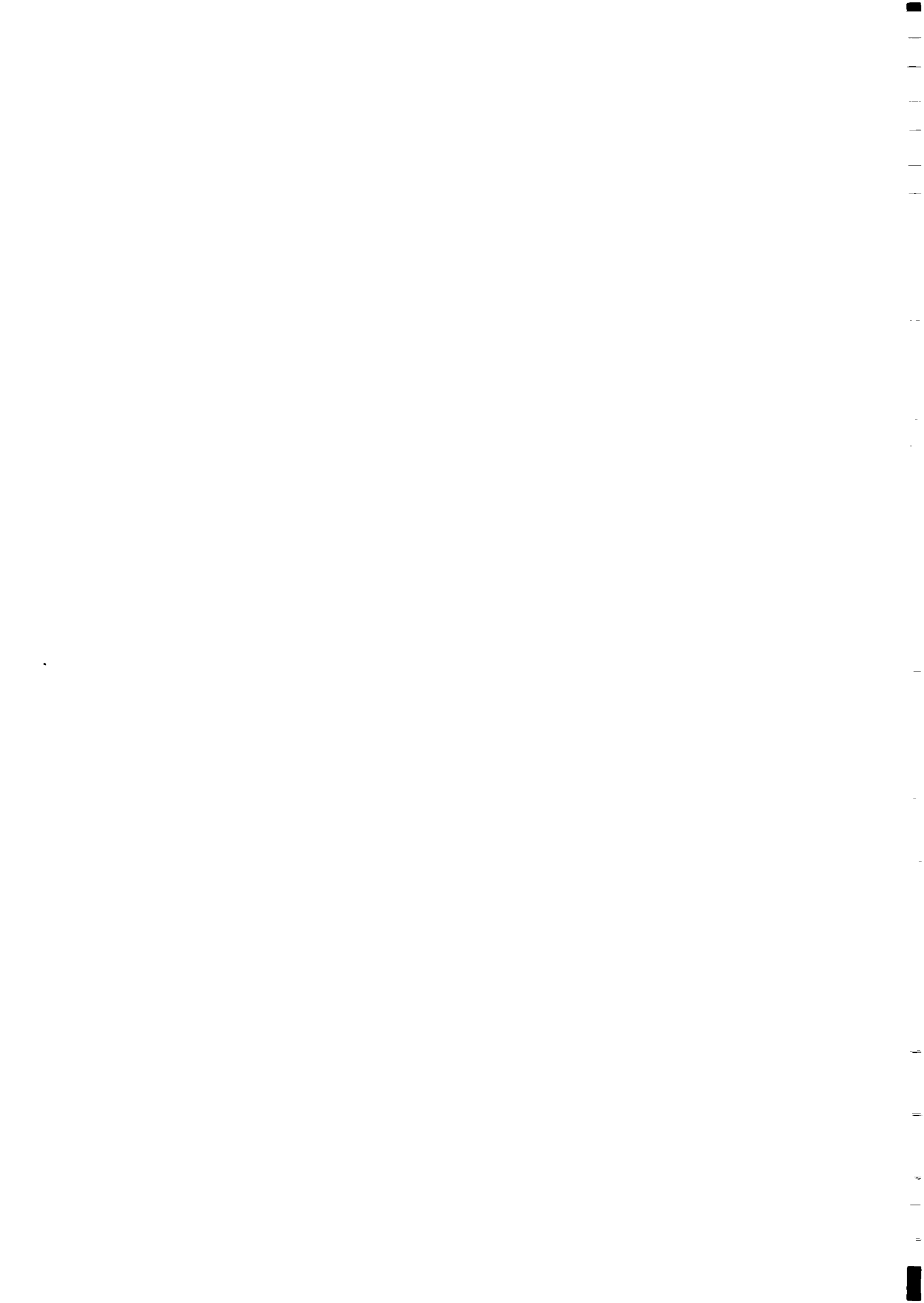




Photo 3. The handing over ceremony is important in creating a feeling of ownership among users.



Photo 4. Women are the principal users of water supply facilities.





Photo 5. The Community Health Volunteers of Simichour, Gulmi.



Photo 6. The Project promotes the building of latrines, which may be simple and inexpensive.

1. INTRODUCTION

This is the first systematic attempt of the Rural Water Supply and Sanitation Project in Lumbini Zone, Nepal, to study the functioning of community management, as many schemes have been completed only recently and some are still under construction. Much information, though, has been received before this study about the issue through field visits and WUC training seminars, and the Project staff had "a feeling" of how the WUCs have been doing.

This study was made to get systematic information on how the Water User Committees (WUCs), Village Maintenance Workers (VMWs) and Community Health Volunteers (CHVs) actually work, what are the management skills, procedures and operation and maintenance (O&M) experience of the WUCs and how they have tackled their problems. Also some matters not directly concerned with WUCs (e.g. some health questions) were studied.

The underlying motive for the collection of information has been to find out how the Project could better reach its objectives. The aim is to clarify what changes should be made to the organization, working procedures and financial arrangements of the WUCs as well as to the O&M arrangements, to the training of WUCs, VMWs and CHVs and to the working methods of the Project. This seems especially important as Phase II of the Project is just about to begin. Need to gain experience for a further study of all Water User Committees and to find the best practical ways of studying them were also important motives for this pilot study.

This study was made first of all to benefit the Project. It is hoped that it will be of use to the Project staff and to other persons involved in the water supply and sanitation sector.

It should be emphasized that the study was not made to find out who have and who have not done their duty in any particular scheme. To find that out, a much more detailed scrutiny and interviews of many other institutions and persons would have been needed. Still, the field visit reports offer additional information, that may be useful to persons involved in particular schemes.

2. STUDY METHODS

To conduct the study WUCs, VMWs, CHVs and villagers were interviewed. The questionnaire is presented in Annex III. Relying not only on answers to the questions, the study team also inspected facilities and made observations of villages and their inhabitants.

Interviews and questions were, when necessary, adapted to the particularities of the schemes and communities. The questions annexed are more like lists of the issues that the study team tried to find out, and do not show the exact way questions were presented to the interviewees. The study team asked additional questions, when interesting matters came up during the interviews, and cross-checking questions were made when deemed necessary. The study team tried to avoid leading questions.



The study was made in 20 Project schemes, which were chosen to form a fairly representative sample of the altogether 110 schemes. The number of Water User Committees studied was 23, as two WUCs per scheme were studied in three schemes. There are altogether 288 WUCs in the Project. In order to learn how the Water User Committees function in the longer run, the sample included mostly schemes that had been started in the beginning of the Project. That may have influenced the results, as everything may not have been working smoothly in the "learning stage" of the Project.

Eight of the WUCs operated in groundwater and fifteen in gravity schemes. Gravity schemes were emphasized in the sample, as the Project will concentrate more on them in Phase II. The sample included 11 Terai WUCs (three of them in gravity schemes close to the Hills) and 12 WUCs in the Hills. To ensure geographical diversity in the sample, each of the six districts of the Lumbini Zone had at least two schemes in the study.

The study team interviewed 23 WUCs, 29 VMWs and 43 CHVs. Numerous villagers were also interviewed, although their exact number was not counted. The field research was made between March 7 and April 21, 1995. One field visit lasted on average 1,5 days.

Some terms used in the report may need clarification. For simplicity, hereafter the word *scheme* is used to refer to the area and facilities managed by one Water User Committee, although officially a Project scheme area may include several WUCs. *A-scheme* is a scheme of which the design report was approved before July 1993. *B-schemes* are the schemes taken up for construction to cover the whole Village Development Committee where *A-schemes* had started and of which the design reports were completed by the end of February 1994. *C-schemes* are the schemes remaining to cover the whole population of the 54 target VDCs. These schemes were not implemented because of budget and time limitations of the Project. *Sub-scheme* is constructed and managed together with one or several other sub-schemes, but it has a separate intake and pipe line. The term *main Water User Committee* is used for a WUC, that operates on VDC-level, covering several usually wardwise WUCs that have their own funds. The words *Project* and *RWSSP* are used interchangeably for the Rural Water Supply and Sanitation Project of Lumbini Zone, Nepal.

Limitations

Although the study team tried to clarify some of the changes brought about by improved water supply, this is not primarily an impact study, but more a study of how the project concept is working. The main emphasis is on the functioning of the Water User Committees after completion of construction. Management during construction was studied only on a limited scale.

As most of the schemes of the Project have been completed only a short time ago, the possibilities to make judgements about their sustainability are limited. Many of the schemes selected for the study were among the first ones completed by the Project, and almost all had been handed over to the

communities. However, definite conclusions about the sustainability of the schemes can only be done after a few years.

Since this is a pilot study to a more comprehensive survey of all WUCs, only a small sample of schemes was studied. The time spent by the study team in each village was usually about one day due to limitations set by the schedule. Because of the lack of time, the villagers interviewed represented only a small fraction of the whole scheme population.

When reading the report, and especially individual field reports, one has to bear in mind that they are for the most based on what the WUCs, villagers etc. told to the study team. What they reported as facts, may sometimes reflect only one side of the story, as the study team did not have a chance to interview the involved line agencies of HMG to get their view.

Reporting

This report is a summary of the findings of the study. The field reports in Annex IV contain more detailed information collected from the schemes, and should be of interest for people involved in particular schemes.

The main findings of the study are presented subsequently for each issue area, followed by recommendations that can be directly drawn from the results. At the end of the report some more general conclusion are presented together with all recommendations. In the last chapter some suggestions for future research on WUCs are made. Annexed are a list of the schemes studied, a map of the study area, a summary of questionnaires and field reports of the scheme visits.

3. MAIN FINDINGS

3.1. LABOUR CONTRIBUTION

Villagers provide unskilled labour to construct the schemes. In shallow tube well schemes labour is needed mostly for the sludging of wells and for platform building. Usually only 3-10 man days are required from each household. In gravity schemes the need for community participation is greater with often long portorage of construction materials and a lot of trench digging for pipe lines. In the schemes studied the average number of working days per household was 80, with some schemes requiring even 110 days of labour.

In most schemes the community labour required was divided equally among households. There were only four exceptions. In two gravity schemes households with more members worked more than smaller ones. In one scheme households worked between 50-92 days, depending on the length of the pipe line to their tap. In another scheme with two additional taps build by the villagers after the handing over, the households using those taps did the extra trench digging needed.

In most schemes there were households that had refused to provide labour or had been absent during construction. However, with the exception of one scheme their number was small compared to the total number of scheme households. In one scheme 3-4 mass meetings were needed to motivate people to provide labour, since half the villagers did not believe that a water supply system was actually going to be built, as a result of unfulfilled promises made earlier by other implementing agencies. This kind of situation is now unlikely, as the Project has acquired a good reputation in the Lumbini Zone by successfully implementing a large number of schemes.

Four Water User Committees either fined or threatened to fine the few reluctant households between 20-50 NER per day. In five schemes there were no sanctions against them. In six schemes the absent households either hired someone else to do their share of the work load or paid between 600-1,400 NER to the WUC as a compensation.

The proportion of illegal settlers varied considerably from zero to more than half the population. The policy of HMG has been not to provide water supply to illegal settlers, and the Project has followed that guideline when designing schemes. In spite of that, illegal settlers had provided labour for construction and the WUC had allowed them to use the water point closest to them in six of the schemes studied. In two schemes they pay for spare parts and had even paid their share of the fund, although in the other case the money had later been given back to them, when the WUC had been told of the HMG rule.

3.2. MASS MEETINGS

An important channel to involve local communities in planning, designing and managing the schemes are mass meetings of the users. Active and widespread participation of the users in decision making through mass meetings contributes to their feeling of ownership and ensures that the scheme serves their needs.

Table 1. Number of mass meetings.

Number of mass meetings	Schemes
1	1
2	4
3	11
4	5
5	1
More than 5	1

On average three mass meetings have been held in the schemes since the start of the project. A predominantly Tharu village was an exception, as the WUC had held all its meetings (about 15 so far) together with mass meetings, and the attendance of users was still high. Four schemes had held user meetings on clusterwise, intakewise or wellwise basis as well.

In most schemes mass meetings had chosen the Water User Committee, decided how the fund was collected and how labour contribution was divided among households and approved the scheme design or sites of the water points. Some mass meetings had discussed sanitation questions and also other financial matters than fund collection. Only in a few schemes had maintenance or health matters been major items on the agenda of the meetings.

Siting of water points was the most common topic of disagreement among users in mass meetings. At least in two cases the approval of the scheme layout had not taken place in a mass meeting. **The Project should see that at least the scheme layout, if not the whole scheme design, is always approved by the users themselves to ensure that it reflects their needs.** A mass meeting approval of scheme layout prior to construction reduces the likelihood of controversies and dissatisfaction among users afterwards, increases their feeling of ownership and reduces, if not eliminates, the chances of WUC members misusing their power to get a water point right next to their house.



Less than 1/3 of the WUCs had organized mass meetings after the construction of water supply facilities had been completed, and no WUCs arranged mass meetings regularly. It seems that most WUCs do not regard it necessary to have mass meetings after construction unless decisions "important enough", like to start collecting monthly fees, need to be taken.

The study team asked the Water User Committees and the users how many people usually attend mass meetings. From the answers given it can be estimated that on average 80 % of households attend the meetings. This high figure has to be treated with some caution, though, as especially the WUCs tended to exaggerate the attendance. Attendance is usually limited to one person per household.

Minutes of mass meetings were kept in most schemes. Three Water User Committees did not keep minutes at all and two WUCs of only some mass meetings. Many WUCs send a person to go from house to house to invite people to the meetings and to distribute information about the scheme when necessary.

Handing over ceremonies

Every scheme is formally handed over to the Water User Committee and the users after the construction has been completed and the necessary training to the WUC, the VMWs and the CHVs has been given. The handing over ceremony of the scheme is important in creating the feeling of ownership among villagers and WUC members.

Nineteen schemes had been handed over by the time they were studied. The handing over ceremony had usually taken place in a mass meeting with high attendance of the users. The attendance was much lower if many schemes from the whole VDC or from several VDCs were handed over in the same occasion. In one scheme the mass meeting had not been specifically arranged for the handing over, and in another scheme only WUCs, VMWs, CHVs and some teachers had been invited. Although it may be difficult for the Project staff to find the time to attend all handing over ceremonies, when many schemes are handed over during a short period of time, they should nevertheless take place in a mass meeting arranged especially for the handing over and preferably for that particular scheme only.

3.3. WATER USER COMMITTEES

Responsibilities

Water User Committee (WUC) is the management body of water supply schemes and as such the crucial link between the Project and villagers. An active WUC is in a key position to ensure the sustainability of water supply facilities and to promote hygiene and sanitation in their areas. The main responsibilities of a WUC are:

- co-ordinate with the RWSSP and the DWSO
- collect O&M and health funds

- solve possible source disputes
- take responsibility of construction materials
- mobilize and organize people for construction
- select Village Maintenance Workers and support them in maintenance of water supply
- keep up to date records of finances and report to users about them
- encourage women's participation in water supply, sanitation and health activities
- take over all responsibilities of completed schemes.

Some gravity scheme Water User Committees were asked how they saw their main responsibilities. All of them replied in one way or another that their responsibilities are the management of the fund and the maintenance of the scheme. Some WUCs defined their maintenance responsibility to taps only and one WUC explicitly said that pipe lines and intake are the responsibility of Village Maintenance Workers.

Water User Committee types in groundwater schemes

Most groundwater scheme Water User Committees are formed wardwise. Only one WUC comprised two small wards. The number of water points under one WUC varied between 6 and 49, the average being 18. When interviewing Water User Committees the study team got the impression that the greater the number of water points under the WUC, the more difficult it is for the WUC to be informed of the situation in the scheme (wells, VMWs etc.). This was reflected in difficulties to give clear and precise answers to questions.

Groundwater and gravity schemes differ in the way the Water User Committees are organized into different "main" and sub-committees. Two of the eight groundwater schemes studied (Dudrax and Hathausa) had a "main WUC" for all the WUCs of the Village Development Committee. In addition one VDC-level Water User Committee had become passive after the completion of construction.

The Dudrax VDC-level WUC was formed before construction and even prior to the election of wardwise WUCs. It had monthly meetings during construction but no meetings afterwards. It felt that its main functions are to give advice and support Water User Committees and to take care of handpumps that were not working well. The Hathausa VDC-level WUC was formed just before the field visit at the handing over meeting of all the schemes of the VDC. The VDC-level WUC saw the provision of tools and materials as its main function, including rotating ring casting frames, that the Project has provided for latrine construction, among different wardwise WUCs. Its chairman felt that it was responsible for the schemes in Hathausa. In addition one VDC was planning to have a common fund, where all Water User Committees of the VDC would give half of their fund. The idea is to get a fund that would give enough interest to finance the sludging of new wells to replace ones that have dried up.

These VDC-level Water User Committees have served a function during construction as the DWSO could deal with only one WUC in each Village Development Committee instead of nine wardwise WUCs. However, they are no longer necessary for running groundwater schemes after construction. On the contrary, they may confuse the feeling of responsibility between different WUCs and add bureaucracy.

Water User Committee types in gravity schemes

VDC-level Water User Committees of Terai type are unknown in the Hills after construction. However, two gravity WUCs studied had sub-committees, the others formed on wardwise basis and others for each reservoir tank and its taps. In addition two schemes (Khaliban and Patauti) had "main" Water User Committees to co-ordinate construction of several schemes of the same area. These "main WUCs" had e.g. received material from the Project and organized the use of labour. In Khaliban the main WUC had become passive after construction, but in Patauti the main committee continued to manage altogether six sub-schemes and the sub-committees had in turn become passive.

Table 2. Number of taps under gravity Water User Committees.

Taps	Number of schemes
1 - 10	5
11 - 20	6
21 - 30	2
31 - 40	2

The number of taps under one Water User Committee varied between 4 (with two additional taps made by users after the handing over) and 40. The average number of taps under one WUC was 16. The number of households varied as much, between 28 and 287. Most of the gravity WUCs operated in one ward only, with five WUCs managing schemes in 2-3 and one in 7 wards. Twelve of the fifteen gravity WUCs managed either one scheme or one larger main scheme together with very small schemes of 1-3 taps.

Some WUC members of a large gravity scheme of seven wards complained that the scheme area is too big. It can be expected that Water User Committees with a small scheme, only a few taps and a limited number of households, will find it easier to be aware of the situation of the scheme and manage it better. It is also more likely that in a small scheme, the users will more easily develop a feeling of ownership to the whole scheme. Large gravity schemes, with several wards and large sub-schemes, should not be handed over to one single Water User Committee only. This should be



planned in the early stages of the scheme, so that the O&M fund would be collected to the WUCs that are going to run them after construction as well, and not to the "main" WUCs of the construction period.

Composition of Water User Committees

The Water User Committees studied consisted of 5-20 members, the average being 11 for both groundwater and gravity schemes. The size of the WUC does not necessarily reflect the size of the scheme as some of the big WUCs are not necessarily in the larger schemes and some large schemes have only 7-8 members.

Water User Committees are organized and have a chairman, vice-chairman, treasurer and a secretary. Nearly all members are farmers with teachers in a few WUCs. Most WUCs seemed to have representatives from all wards and clusters of the scheme area. Some relatively small gravity schemes had one WUC member per tap.

Contacts between Water User Committees and Village Maintenance Workers should be good as most WUCs had at least one VMW either as a member or attending their meetings when the WUC discussed maintenance questions. Contacts between Water User Committees and Community Health Volunteers did not seem as close. Only five WUCs had CHV members, and although some WUCs told that they do invite CHVs to their meetings, many CHVs interviewed said that they had not attended any of them. Of women's participation in Water User Committees see Chapter 3.4.

Fifteen Water User Committees had contacts with Village Development Committees, as they had at least one VDC member. At least six VDC chairmen were members of Water User Committees. In one scheme five out of eight WUC members were also members of the VDC, and WUC meetings were held together with VDC meetings.

The Water User Committees seemed to reflect quite well the ethnic and caste composition of the scheme area. As most of them had at least one representative per ward or cluster and many of them were composed of one member per tap or well, also the lower castes were represented, although often in somewhat smaller proportion than their share of the population. The sample of the WUCs is too small to draw conclusions about the performance of WUCs of different ethnic backgrounds.

Water User Committees should be chosen in a mass meeting. In one scheme, however, the VDC-level Water User Committee had replaced a "passive" WUC, from which the chairman and two other members had moved away, by a new one in July 1994. Only one member of the original WUC remained in the new one. A mass meeting to choose a new WUC had not been organized yet, although the VDC-level Water User Committee told that such a meeting would be arranged "soon". Changing WUCs without mass meetings decreases users' feeling of ownership and is against the principle of self-government of the scheme by the users. **The Project needs to find procedures to ensure that a Water User Committee or its member can**



be changed only by a mass meeting. The Ministry of Local Development and the Ministry of Housing and Physical Planning have guidelines regarding the formation, reelection etc. of Water User Committees, which should naturally be taken into account.

Water User Committee meetings

If the activeness of a Water User Committee is measured by the number of meetings it has held, the activeness varies considerably. Most groundwater WUCs had held only 3-4 meetings, whereas gravity scheme WUCs had held on average 15 meetings with considerable variation, though. The greater number of meetings in gravity schemes may be explained by the construction period, which is much longer and requires more organizing from the WUC than in groundwater schemes. At the other end was a gravity Water User Committee that had not held a single meeting, since "they have not been needed as matters have been decided at mass meetings". They had arranged only three mass meetings. Most active in this sense were two WUCs that had held 53-54 meetings, most of them during construction.

Most Water User Committees told that they held meetings "when needed". Only one WUC held meetings regularly every six months, and two other told that they were "going to have" regular meetings. Two WUCs held their meetings in conjunction with mass meetings. 2/3 of the WUCs had kept minutes of all their meetings, a few WUCs of some meetings and only two WUCs had not kept minutes at all. In some schemes the problem seemed to be that there were not many literate people. One Water User Committee wished that they would receive training on how to keep minutes.

Nearly all WUCs had a rule that more than half of the members needed to be present at the meetings. According to WUCs, attendance of members is high, usually between 80-100 %.

Training

As part of its training program the Project organizes seminars for Water User Committees before, during and after construction. The WUCs were asked what training they had received, what was their opinion about it and what kind of further training would be useful.

The number of seminars attended by Water User Committee members, as given at the WUC interviews, have to be treated with caution. It is probable that the number is too small compared to the actual figure. For the first, many seminars are only attended by a small number of WUC members, some of whom might not have been present at the interview. Secondly, some seminars were held years ago and the attendants may not recall them quickly at the interview. Thirdly, and interestingly, it seems that the attendants have not always realized that what they had attended was actually called a seminar.

Three Water User Committees told that they had not received any training (one of them was formed in July 1994). 14 WUCs had attended one and



three WUCs two seminars. Five WUCs had attended Pre Construction, five During Construction and ten Post Construction seminars.

Most Water User Committees were satisfied with the seminars that they had attended. Many WUC members thought that they had been useful because they had been so practical. One WUC was not satisfied with During Construction seminar as "it was only about sanitation". Another Magar WUC complained that they had not understood everything at their During Construction seminar.

Groundwater scheme Water User Committees did not feel as much need for further training as gravity WUCs. Most often they wanted training on sanitation and management. Further training on maintenance, especially about maintenance of taps to more people, and sanitation was most often needed by gravity WUCs. Some Water User Committees wished to have training on how to motivate people e.g. to use drinking water properly. They also suggested that the Project could give training directly to villagers e.g. about sanitation

Users' opinions about Water User Committees

The majority of villagers interviewed were satisfied with the actions and decisions of their Water User Committee and felt that the WUC was doing well. Most of them also felt that they had received enough information about the scheme, although some wanted more information about the financial situation of the scheme.

In three schemes the WUC or some of its members were quite heavily criticized. In two of them party political controversies seemed to affect the operation of the scheme.

In the first scheme the WUC/VDC chairman and some other people had said in the start of the project that their party had brought the project to the village. Eight households supporting another party had refused to pay to the fund or to provide labour and were not allowed to use the taps.

In the second scheme the vice-chairman of the Water User Committee criticized the chairman of having a monopoly and one villager accused that he had changed, under some pretext, the WUC secretary chosen by a mass meeting to another one for political reasons. One villager would have changed the whole WUC. Whether these accusations were politically motivated or not, could not be confirmed by the study team. That party politics affects many areas of life including the management of common water supply systems seems unavoidable in Nepal, where the free operation of political parties is still a quite new phenomenon.

In the third scheme the Water User Committee chairman and two of his relatives were criticized for using tap water during night time for irrigation and to fill a cattle pond, when some taps did not give enough water even for drinking. The chairman, who was also the only VMW, was also accused for adjusting the control valves of the taps to have more pressure from his own

tap. One WUC member told that people did not expect the chairman to act that way when they chose him.

3.4. WOMEN'S PARTICIPATION

The main purpose of this study was not to analyze gender questions, as the Project is going to make a comprehensive gender analysis in the beginning of Phase II (autumn 1995). Based on the study some remarks can still be made concerning the role of men and women in different stages of a water supply project.

To promote the participation of women in water supply decision making the Project has a rule that at least two women should be included in the Water User Committee. Only nine out of 22 WUCs had at least one female member. Two WUCs promised to add two women to the WUC after the interview. Four WUCs claimed that they had not heard of the recommendation of two female members. The reasons given by all-male WUCs for not having female members included: "women are not interested to be in the WUC", "women are shy and hesitate to go to a mass of men", "women are too busy" and "active women cannot be found as most literate women move away from village". It was also interesting to note that only in very few Water User Committee interviews did women participate in the discussions, and even then staying in the background most of the time. **The Project has to follow that at least two female members are nominated to Water User Committees.**

The study concentrated on schemes that were started in the beginning of the Project. Women's involvement in the Water User Committees has been more emphasized by the Project in its later stages. A further study of all schemes may reveal better results in this respect.

Women do not usually seem to participate in large numbers in mass meetings either. As the attendance is often limited to one person per household, they most often attend only if male household members cannot be present.

In general women did not have as much information about the schemes as men. They were much less aware even of the basic facts concerning their scheme. Very often they did not know the Water User Committee, who owned the scheme, how money was collected or used, who the Village Maintenance Worker was etc. In many schemes women also, although polite, seemed much more hesitant to discuss with the study team.

The involvement of women in decision making and their awareness of their scheme does not seem to be as widespread as could have been hoped. **New ways need to be found to promote women's influence in decision making and to increase their information about their scheme.**

All Village Maintenance Workers in the Project, chosen by the WUCs, are men. Yet, there are no physical reasons why women could not be trained to take care of wells and tapstands as well. Most WUCs, consisting predominantly of men, saw no active role for women in other O&M activities either.



Only when they were asked who cleaned the platforms of water points, did they often admit that they were women.

Whereas maintenance seems to be restricted mostly to men as a "technical" activity, women have a strong role in "softer" sector of health and sanitation. Almost all Community Health Volunteers are women, and in many places Mothers' Groups are active.

Men had done most of the construction work for groundwater schemes. Perhaps sludging of a well is considered men's work. In some schemes women did light work, such as portering of light materials and filtering of sand for concrete, or they participated if their household had no men present at the time of construction. In gravity schemes labour was divided more evenly between men and women. Although men were mostly responsible for construction in 10 out of the 15 schemes, women provided on average as much labour for portage and collection of construction materials.

3.5. FINANCIAL MANAGEMENT

3.5.1. Fund collection

As a prerequisite for starting the construction of a scheme the Water User Committee must collect an operation and maintenance (O&M) fund from the coming users. The fund should be deposited in a bank account. The successful collection of an O&M fund is an indicator that the community is willing to participate in the construction and maintenance of the scheme and can afford it financially.

The Water User Committees are expected to collect 500 NER per shallow tube well, 1,500 NER per lift tube well or 1,000 NER per tap to the O&M fund. For institutional water points (schools, health posts, temples) no fund is collected. In all schemes a sufficient O&M fund had been collected and deposited except for one fund that was 320 NER short of the requirement. In two gravity schemes only 500 NER per tap had been collected, as only that much was collected in the early stages of the Project. Some WUCs had even collected little extra money, which they had then spent e.g. on spare parts, on necessary traveling by WUC members or put into a community fund. For the collection of health funds see chapter 9.

In gravity schemes the O&M fund payment was most often divided equally among the user households of a particular tap. Only in two cases did the households of the whole scheme pay the same amount. For one tap the users had paid according to their distance from it. In groundwater schemes the fund collection varied more. In some cases the payments were divided equally among the users of a well, in some according to the ability of the household to pay and in some wards all households paid the same amount.

The fund per household was below 100 NER in most shallow tube well schemes, 125 NER in the only lift tube well scheme studied and 100-150 NER in most gravity schemes. For taps with only a few user households, the payment was higher rising up to 330 NER for a few households.



The fund payments did not seem to be too big for most households. However, in more than half the schemes at least some of the poorest households either had difficulties in finding the money for their fund payment, were freed from paying or paid less than others. Especially in the Hill areas households had to sell some of their property (e.g. animals), borrow or provide extra construction labour instead of the better-off households who paid their share. It seems that in most schemes the number of households with payment difficulties was limited to only a few, and most people were happy to provide money for the much needed improvements in water supply. It is necessary that Water User Committees pay attention to the situation of the poorest households and consider reductions to their payments. To pay at least a nominal amount of money instead of nothing would be preferable, since it is likely to increase the household's commitment to the scheme.

It is interesting to note that in at least three out the eight groundwater schemes of the Terai, where fund payments were only about half of that of the gravity schemes, there were households that had refused to pay their share. In spite of that they were allowed to use the wells. The most striking example was a ward, where half of the households, not necessarily the poorest, had refused to pay or provide labour on the grounds that "it's a Government project, why should we pay". Later they have paid for spare parts, though. Interestingly enough the bordering ward had no major problems with fund payments.

In one ward many people did not believe that they would actually get a water supply system, and had refused to pay in the beginning. They paid later when they saw that the scheme was actually going to be built. As mentioned earlier (see chapter Users's opinions about Water User Committees p. 11-12) party political controversies have also disturbed fund collection and labour contribution. It seems that had pre-feasibility and feasibility studies been carried out more carefully, these problems might not have occurred. The Project needs to pay more attention to the quality of the social part of pre-feasibility and feasibility studies and to ensure that they are all carried out properly and according to Project guidelines.

3.5.2. Fund management

It is expected that the Water User Committees use the O&M fund to cover the operation and maintenance costs after the scheme is handed over to the users. The WUCs should manage the fund in a way that does not decrease its real value. As most WUCs seemed to have put the O&M fund and the health fund together and did not treat them separately, both of them will in most of what follows be treated as one fund for simplicity.

Only one WUC had used the fund, and even that only 360 NER for travel costs and portorage. The interest from the fund had been used by seven WUCs.

Three out of the eight groundwater Water User Committees had divided the interest equally between handpumps to be used for their spare parts. Two other told that they planned to use it for O&M. One WUC told that if a well



had major problems they would use the interest (only 1,300 NER at the time of the interview) and collect fees, if necessary, to sludge a new well.

Four out of fifteen gravity Water User Committees had used the interest. The Dedgaon WUC had used almost 4,000 NER for improving the scheme by building a collection chamber and control valves to pipe lines. One WUC had used interest together with fees to repair a damaged intake and to buy spare parts. Two had bought ordinary spare parts and two stationary etc. for the WUC. Interest had also been used for travel costs and one Water User Committee subsidized CHVs' medicine prices. In addition one WUC planned to use it for spare parts if necessary.

Half of the Water User Committees kept the fund on a savings account and the other half on a fixed account. Three WUCs had the capital on a fixed account but had moved the interest onto a savings account. One WUC kept the health fund on a current account with no interest and one WUC did not keep the fund in the bank at all, as it loaned the capital to its members. The interest rate on savings accounts varied between 7 and 9 % and on fixed accounts between 8 and 13 %. The former had an interest rate average of just under 8 % and the latter about 10 %. Three Water User Committees had to move their fund from a more yielding fixed account onto a savings account with a considerably lower interest rate on request from the bank. On the other hand, one WUC had done just the opposite with an interest rate rise of 5 %! As most of the WUCs had not touched the interest, they often did not know its exact amount.

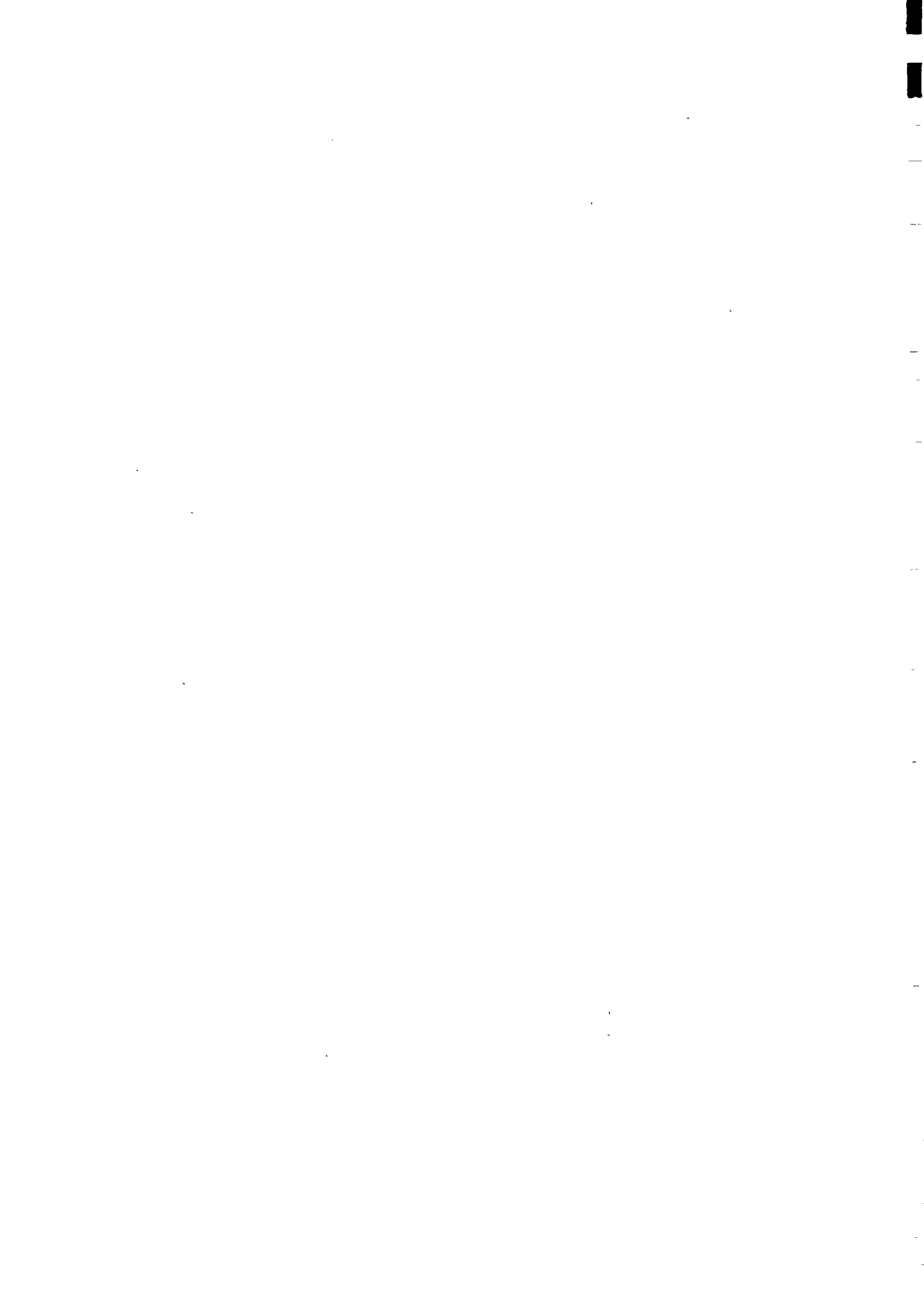
One Water User Committee loans the capital of the fund to its members for different purposes with a 30 % interest. Borrowers pay back the loans with the interest after one year. The WUC has strong internal mechanisms to make sure to get the loans back. It is of course highly questionable whether other WUCs can use the fund in the same way.

Most Water User Committees had not needed to keep any sophisticated book keeping, as the money transactions had most often been limited to collecting the fund and depositing it in the bank. None of the WUCs expressed the wish to receive training for that purpose either.

One WUC that managed six handed over sub-schemes had not been able to use its fund at all. The DWSO had told them not to use the fund until other A-schemes, that were going to be handed over to them later, had been completed. The fund consisted of money collected from the handed over schemes as well as from the schemes under construction. The inability to use the fund seemed to have created some problems, which could have been avoided had the WUC been allowed to use two separate accounts. After all schemes had been handed over, the funds could have been united.

3.5.3. Fees

The Project recommends that WUCs regularly collect fees from users to cover expenses. The interest from the fund is usually barely enough to maintain the real value of the fund because of inflation. If the WUC uses the



interest e.g. to buy spare parts and does not collect fees, the real value of the fund will slowly decrease. Besides, collecting fees will remind the users that their water supply is not a "gift", and thus increases their feeling of responsibility to take care of the facilities.

A clear distinction can be made between groundwater and gravity schemes as far as the collection of fees is concerned, with gravity Water User Committees much more inclined to collect fees. None of groundwater WUCs interviewed had collected regular fees. One groundwater WUC was going to call a mass meeting to decide about collecting a monthly fee of 2-5 NER per household to build up the fund. Two other WUCs had somewhat vaguer plans to call a mass meeting to discuss the matter, the other one only if interest was not enough for O&M.

On the other hand eight out of the 15 gravity Water User Committees were already collecting fees, and three other had fairly detailed plans to start collection. Only one WUC explicitly told that "people are too poor to pay fees". The reason for the inclination of gravity WUCs to collect fees is revealed by the fact that they were in six cases collected for one or all Village Maintenance Workers, who often have much a heavier work load than their colleagues in groundwater schemes. One WUC had already used fees to repair intake and was collecting them for the same purpose. In one scheme tapwise "user committees" collected the fees and used them to buy tap spares.

The amount of a monthly fee varied between 2-5 NER per household. In one scheme the fee was collected tapwise (75 NER per tap) and one WUC planned to collect a fee of 50 paisa per person. The WUC had decided about the fee collection in five schemes and a mass meeting in two.

The Water User Committees were asked if they had plans to build up the fund for a major rehabilitation of the scheme after a possible breakdown e.g. with an intake or the main pipe line. Most WUCs replied that they would first use at least some of the fund and maybe even collect some extra fees. After that they would ask the DWSO or the RWSSP for financial help, as they thought that the fund would probably not be enough. The WUCs of three handed over schemes told that they would go directly to the DWSO or the RWSSP to ask money. Only one Water User Committee was collecting fees to build up the fund and two told that they were "thinking of doing it".

The fund is usually quite small compared to the demand after a major breakdown and the interest does not increase its real value. The DWSOs do not have large resources for major rehabilitations either. **The Water User Committees should therefore be strongly encouraged to collect fees regularly to build up their fund.**

There was an exceptional gravity WUC, that had already repaired the intake with money from the interest and fees. The members told that they would need only technical help from the DWSO to finish the repair. The WUC could use 4,000-5,000 NER more for the remaining repair.



3.6. OPERATION AND MAINTENANCE

The creation of adequate operation and maintenance (O&M) arrangements is the key to sustainability of water supply schemes. This has been the weakest part of many water supply projects.

For every scheme the Project has trained Village Maintenance Workers (VMWs), who are expected to take all responsibilities of maintenance and repair of the water supply systems. They should work in close co-operation with the Water User Committee. They should also mobilize the users to maintain the facilities properly. The VMW training is practical and lasts two days for shallow tube wells and one month for gravity schemes.

3.6.1. Groundwater schemes

The study was made in seven shallow tube well and one lift tube well scheme area. One ward visited had mostly artesian wells with usually two taps connected to each well.

The great majority of the shallow tube wells studied were functioning well. Two wells out of altogether 139 shallow tube wells in the study had dried. Other major problem was muddy or sandy water in eight wells. Some pumps, while still giving at least a little water, had handles that were stiff or thrust back after being pulled down. In two schemes some people complained that they had to wait about half an hour to get water in the morning. In the only lift tube well scheme studied the amount of water had decreased since construction period. The Water User Committees of those schemes wanted more wells. Out of 12 lift tube wells one gave muddy water and one well had to be used for a long time in the mornings before it gave clear water. Waste water was used in four schemes.

In two schemes the DWSO staff had been informed just before the handing over about the wells that were not functioning properly. In the other one they had promised to take care of them (only two weeks before the interview), in the other nothing had happened since the handing over one year ago. One WUC told they knew how to make new wells to replace dry or muddy ones, but lacked the money for that. They had told about those wells to the VDC-level Water User Committee, which had held a seminar on broken handpumps with the DWSO and the DDC.

Spare parts most often needed in handpumps were bucket washers, which last a few months, and nuts and bolts. Flapper valves last little longer, from six months to more than a year according to VMWs. In most of the shallow tube well schemes users collected the money for spare parts and bought them from the local market. Two WUCs had recently divided the interest among handpumps for spare parts. Whether that would be enough for future needs was uncertain. Stocks of spare parts were kept only in two schemes, as they were quite easily available. In the lift tube well scheme no spare parts had been bought so far, as the Project had provided spare parts estimated to last for about two years.

In most shallow tube well schemes many users not only bought the spare parts, but also changed them without any help from a VMW. In two schemes a meeting of handpump users was called in case something was broken. The work load of VMWs did not seem heavy.

The number of shallow tube wells per Village Maintenance Worker varied between four and ten. None of them received any remuneration. In one ward three VMWs had either moved away from the area or died and the WUC had not proposed anyone else for VMW training. The VMWs interviewed were mostly satisfied with their training, but many of them wanted to know more about construction and maintenance of the underground parts of wells. In two schemes VMWs complained that the Project had not given them wrenches of right size.

3.6.2. Gravity schemes

In most of the gravity schemes the Water User Committees and other villagers were eager to tell the study team about the problems with water supply. In more than half of the schemes they complained that all taps were not giving enough water. Some taps had low pressure, some gave water only in the morning and some did not give enough water on Saturdays, when the use of water is highest. However, usually only a few taps had problems and only during dry season. These shortages created long queues to many taps in the mornings. At least two schemes had problems with muddy water during the monsoon season, as the intake was not protected well enough.

The objective of the study was not to find out reasons for water shortages, as that would have required a study of its own with detailed measurements, observations of the use of water and recalculations of the scheme designs. However, for some schemes probable reasons can be given. In three schemes people, who had not been included in the population coverage of the scheme design, used the water. In two of them the WUC had allowed other people of their ward to use the taps, and in one scheme people from the surrounding wards came to fetch water. In three schemes some people were accused for using the tap water for irrigation, often during night time.

Many WUCs and VMWs told that some people let the water run unnecessarily from taps. They complained that those people are careless and do not listen to them when they tell them not to do it. One scheme had, at least in principle, a 50 NER fine for letting the water run unnecessarily.

Only a few schemes seemed to have serious problems with the cleanness of platforms, although most schemes were far from perfect in this respect. Some WUCs had appointed one person per platform, who had the responsibility to keep them clean, two had sub-committees with that responsibility. Only a few schemes had enough water for kitchen gardening or for cattle, but at least in half the schemes waste water was used for those purposes.

Leakages in pipes had been repaired usually 1-5 times. Bhatukuwa scheme was a notable exception, as already 22 repairs had been done to the plastic pipe. In all cases villagers had helped the VMWs in the pipe line repairs with

digging. The VMWs had not needed any other outside help. One VMW complained that he did not have tools, as the technician had taken the tool box with him. In another large scheme with three VMWs, the Project had provided only one set of tools.

In almost all schemes several washers and taps had been changed. In five schemes Village Maintenance Workers made washers from bicycle tires or slippers, apparently because the travel to buy them seemed too long for them. Many VMWs bought spare parts from Butwal where they are cheaper than on local markets. Brass taps originally provided by the Project had often been changed into steel ones. Some VMWs claimed that steel taps were better, in some cases the lower price was the reason for the change. One VMW complained that he could not buy control valves to taps from the market to replace broken ones. Only two schemes had a large stock of spare parts most often needed.

In nine schemes the money for spare parts was collected from the users of the tap, one of them had a monthly fee of 5 NER per household. At least in one scheme the users also bought the spare parts. Three WUCs used the interest of the fund and one interest and fees combined. In three schemes users had refused to pay for a new tap to replace a broken one. In one of them the VMW had bought spare parts for the whole ward with own money.

Gravity scheme Village Maintenance Workers have more work than their colleagues in groundwater schemes. Many of them walk regularly several hours just to check an intake. In seven schemes out of 15 VMWs were paid for their work, and two additional WUCs had plans to start collecting fees for that purpose. Monthly remuneration varied between 100 and 1,140 NER per VMW. One VMW received upon own request 12 kg rice per household as a yearly compensation. Three Village Maintenance Workers interviewed were unhappy of getting no compensation for their work.

Four WUCs had at least some problems with Village Maintenance Workers, who had either gone to India or were working outside the village most of the time. Three of them had already had another person trained or were thinking about it.

Most of the VMWs interviewed were satisfied with their job. They were also quite satisfied with their training and did not usually feel any need for further training. Some of them asked and received advice from the DWSO when needed.

3.7. FEELING OF OWNERSHIP

A scheme can sustain only if the users feel that they own it and that they are responsible for maintaining it. The Project tries to create this feeling of ownership by the active involvement of the community in all stages of the project cycle. The basic strategy to achieve this is the application of the step-by-step approach. This approach ensures several chances for the villagers to participate in the project. These include the request of the villagers for



an improved water supply, resource mapping using Rapid Rural Appraisal methods, a design meeting discussing the preliminary design of the scheme and a handing over ceremony. As mentioned above, villagers also show their commitment to the scheme by collecting among themselves the O&M and health funds.

All Water User Committees and many villagers were asked who they thought owned the scheme. Practically all WUC members of schemes that had been handed over replied that the scheme was "theirs". Only one WUC chairman said that the scheme was owned by the RWSSP and the FINNIDA.

A clear majority of villagers answered in the same manner that the scheme was theirs. However, in seven schemes at least some users either thought that the government owned it or were not sure who it belonged to. Especially women seemed unaware about the ownership. It has to be remembered that the question was asked from villagers representing only a fraction of the total population of each scheme.

The question of the feeling of ownership can also be approached by looking at its manifestations in practice. It can be assumed that people are committed to maintain their water supply facilities, if they willingly pay their share of fund and provide unpaid labour for construction. In most schemes studied the overwhelming majority expressed commitment in that way. Only in one shallow tube well scheme more than just a few households had refused to pay or work. Two other schemes had experienced similar problems before the scheme was started, but had overcome them after some time.

The feeling of ownership is also reflected in the fact that many households attend mass meetings. Most households also pay for spare parts or pay fees. Some refusals e.g. to pay for a new tap indicate, however, that not all households care about other users of the same scheme.

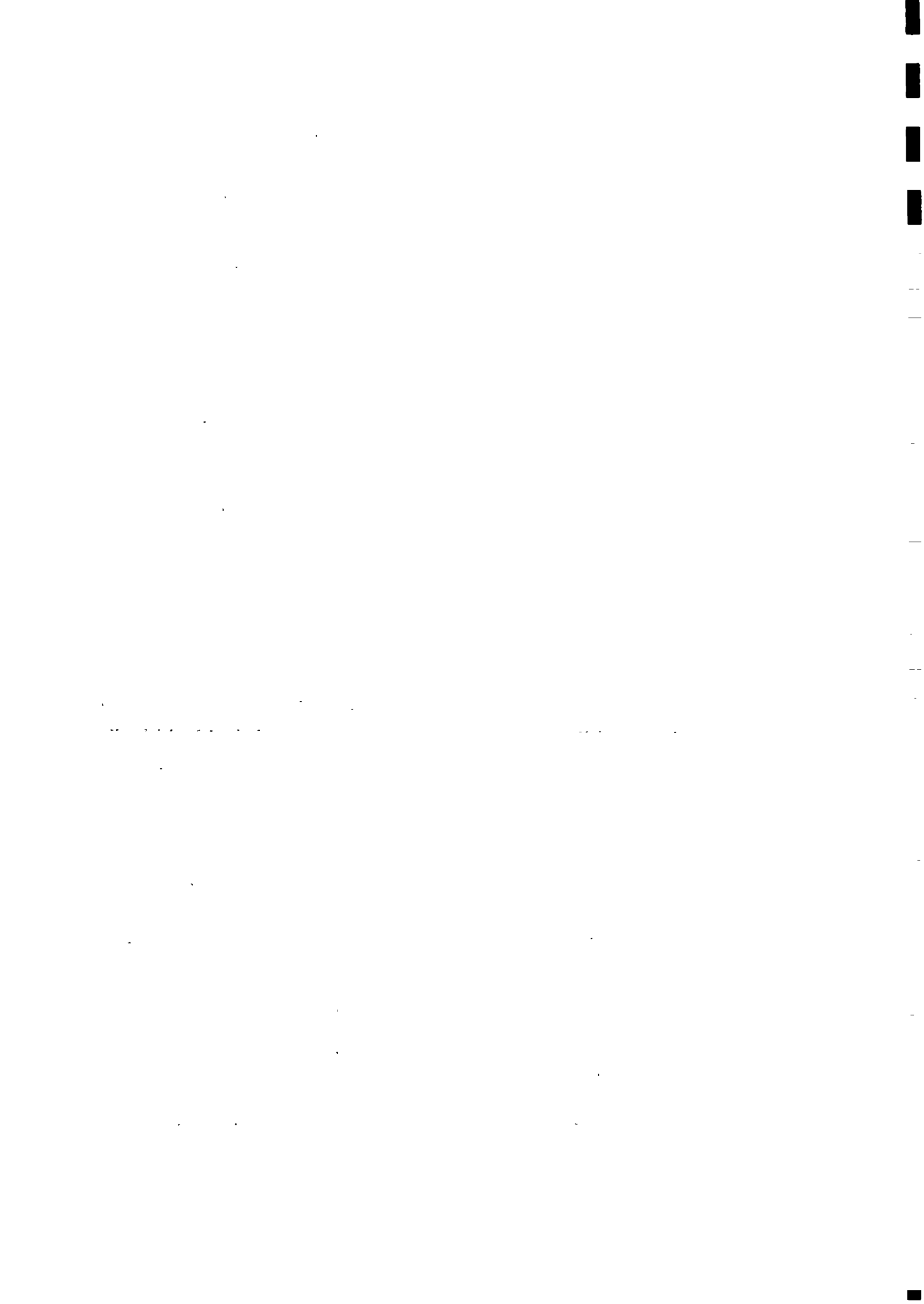
Although nearly all WUCs were convinced that it was their scheme, their eagerness to rely on either the DWSO or the RWSSP in case of a major breakdown shows a different attitude. Perhaps the WUCs feel that the DWSO and the RWSSP are responsible for the durability of construction even after the scheme has officially been handed over to the community.

3.8. HEALTH

Community Health Volunteer system

The main responsibilities of a Community Health Volunteer (CHV) are:

- provide first aid services to villagers including refilling the health kit and keeping records of medicines sold and health problems
- motivate people to build household latrines
- be a role model in personal and environmental hygiene
- encourage women to involve in hygiene, sanitation and water supply activities
- work in close co-operation with Water User Committee



- motivate people for immunization, family planning etc.
- give health education to villagers
- provide information to Village Health Worker (VHW) about death and birth occurred in the village.

In the beginning of the Project more than 100 Community Health Volunteers were trained by the Project itself. After around mid-1993 the Project started co-operation with HMG, and the District Health Offices started to train also the CHVs selected by WUCs. Now the Project mostly only funds their training. Before, one CHV for about 20-30 households was nominated in the scheme areas. Now only one CHV per ward is selected and trained as according to HMG policy.

The number of Community Health Volunteers per Water User Committee studied varied mostly from zero to six, one large scheme had 16 CHVs. In more than half the schemes CHVs had been chosen by the WUC, in six schemes by a mass meeting and in one by clusterwise meetings.

For Community Health Volunteers chosen before mid-1993 a health fund of 300 NER per CHV should have been collected and deposited, before they were given training. These funds were in most schemes properly collected and deposited together with the O&M fund. In three schemes the health fund had either not been collected at all or not deposited in an account. Apparently the collection and deposition of health funds was not always closely monitored by the Project, at least in the early stages of the Project.

Curative health care

Community Health Volunteers are expected to maintain their health kit by refilling it with money received from selling the medicine. About two-thirds of the CHVs interviewed had at least quite full health kit bags. One-third had either totally empty bags or only little medicine. Reasons given by CHVs for not having medicines included for example "not received enough money from selling", "market is far away" and "don't know where to buy them".

Most Community Health Volunteers told that they sell medicine to a market price according to a price list given to them at their training. In a few schemes the prices used were lower than market prices. In more than half the schemes the CHVs gave at least some medicine free to the poor. Many CHVs also complained that many people who get medicine on credit never return to pay. As a result of all this at least in six schemes CHVs had to put in their own money to refill the health kit bag. Some of them were frustrated because of this situation. Four WUCs had financially helped CHVs to refill the bag. **As the intended refilling mechanism often did not seem to work in practice, more emphasis on this aspect should be put in Community Health Volunteer and Water User Committee training.**

Most Community Health Volunteers kept records of medicine, health problems and of the money received and spent. The ones that were less active also often had not kept records, some because they were illiterate. The

availability of medicine seemed to be a problem for some CHVs with a long way to buy or only expensive medical stores close to them.

The number of patients received by CHVs also had a great variation. Most CHVs had treated around 15 to 40 patients a year. The use of CHVs' services seemed to have a close correlation to the proximity of the nearest (Sub) Health Post. Where the Health Post was near, the CHVs as a rule had only a few patients. It is highly questionable whether Community Health Volunteers are needed to provide first aid treatment in wards that are situated close to a (Sub) Health Post. In such places their training and duties should emphasize giving health education to the villagers and promoting sanitation.

Villagers gave also other reasons for not using CHVs' services. There seemed to be a widespread suspicion about the knowledge and skills of the CHVs. Comments like "she is not educated", "she is not a doctor" and "I don't trust her" were not unusual. Many villagers did not even know any CHV. In some schemes CHVs also had difficulties to convince people that they had to sell the medicine, although they had received it free. The Water User Committees should "market" the Community Health Volunteers more by informing the villagers about their services and their training.

Preventive health care

Almost all Community Health Volunteers co-operated with the VHW or other Health Post staff in one way or another. Many of them mentioned that they help them to give vaccination and some to distribute vitamins. Some CHVs were assisting in family planning or by providing morbidity/mortality information of their ward. Some of them had also received further training and got advice from the Health Post when needed. Only one CHV criticized the VHW's behaviour heavily.

There were Mothers' Groups in some schemes and the CHVs usually attended their meetings giving education on health and sanitation questions, often together with the VHW. However, the attendance of these meetings had declined in many wards and some CHVs had stopped to arrange meetings altogether because of lack of attendants. Many CHVs had also given informal education for example by going from house to house. However, as many Community Health Volunteers did not seem to be active in preventive health care, more emphasis should be given to that in CHV training. For example, Mothers' Group meetings seem like a good opportunity to deliver information to women and CHVs should be encouraged to have them regularly.

Community Health Volunteers and Water User Committees often had only little official contact. As mentioned earlier, only five WUCs had CHV members, and although some WUCs told that they do invite CHVs to their meetings, in more than half the schemes CHVs had not attended any of them. In one scheme the WUC "had not found a suitable candidate" for CHV training at the time requested by the Project. Instead one CHV had been trained by the United Mission to Nepal (UNM) only recently. A couple of WUCs explicitly admitted that they had not been successful in supporting the CHVs and



felt responsible for their problems. To improve the relations between Water User Committees and Community Health Volunteers and to get the WUCs more active in health and sanitation questions, the CHVs should always be included in the WUCs.

The Community Health Volunteers were quite satisfied with their training. In some of the first schemes of the Project they had first been trained by the Project and later by the DHO. Some CHVs had also received further training from the Health Post. The CHVs were asked what kind of further training they wished to receive. The answers were diversified, but most often CHVs hoped to receive refresher training, midwife training and training on sanitation and vaccination. Training concerning various diseases was also often mentioned. The DHOs are expected to include all CHVs of the scheme areas in their scheduled refresher training after 1-2 years from their basic training.

Despite some problems in the working of the Community Health Volunteer system, most of them seemed satisfied with their work. Somewhat surprisingly some CHVs wanted to be paid for their services. Some CHVs remarked that the occurrence of illnesses, especially diarrhoea, had decreased since the start of the Project.

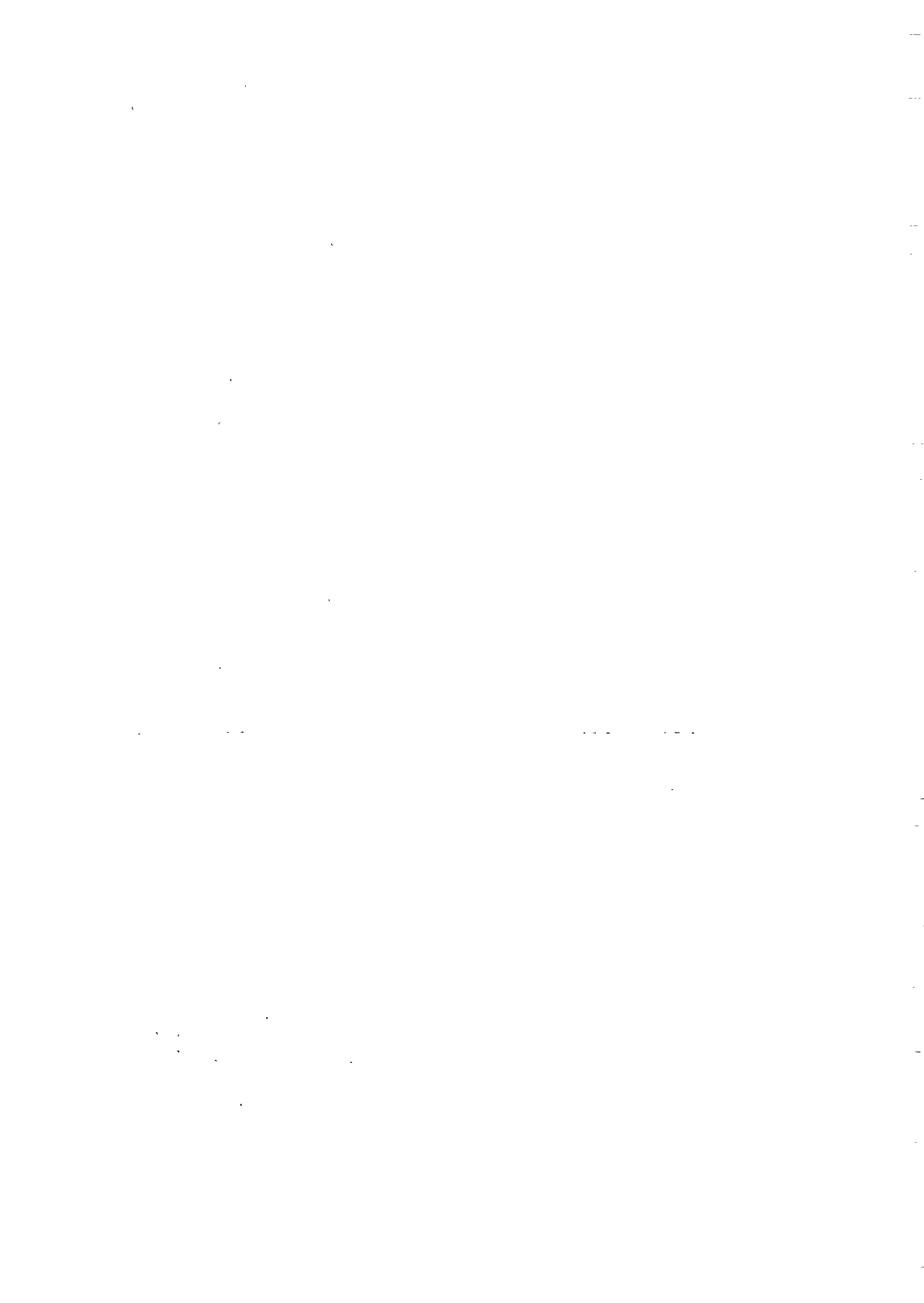
3.9. SANITATION

Improvements in water supply are not enough to improve people's health situation, better sanitation is also needed. The Project's approach to sanitation promotion has been based on awareness creation and provision of technical assistance together with influencing opinion leaders of the communities. The Project tries to promote latrine building e.g. through Community Health Volunteers and by building institutional latrines at schools and health posts. The importance of sanitation is stressed in the seminars for WUCs, CHVs and teachers. The Project also employs three Village Hygiene Promoters, whose major task is to promote latrine building.

The proportion of households using a latrine had in most wards risen considerably during the Project, in some wards as result of latrine promotion by the Project. There was a lot of variation in the proportion of households using a latrine, as has already been noted with many other scheme aspects as well. Five schemes studied had practically no latrines at all, while in six schemes latrine coverage was, according to the WUCs, at least 75 %.

That sanitation situation is generally better in the Hills than in the Terai could clearly be noticed during the study. In nearly half of the Hill schemes latrine coverage was quite good, while only one Terai scheme out of 11 had a satisfactory situation. In many Terai wards the environmental hygiene was also bad with poor drainage of waste water, water logging and wrong hygiene habits.

Much of the poor latrine coverage in the Terai seems to be a result of high water table during monsoon season, which tends to destroy latrine pits. In many Terai wards numerous pit latrines were constructed in the beginning of the Project, but after water had filled the pits during monsoon season, no



new ones had been built to replace them. Pit latrines had also problems with rats in both the Terai and the Hills. In some schemes the Project is now promoting latrine building by providing moulds to cast concrete rings for latrines. In Gajedi ward no 8 this had given considerable results. However, some villagers complained that they were too poor to cast the rings.

In the Hills many households had build pit latrines when the construction of the scheme was started. It seemed, however, that after the pits were filled up, some people had not dug new ones, but had returned to old sanitation habits.

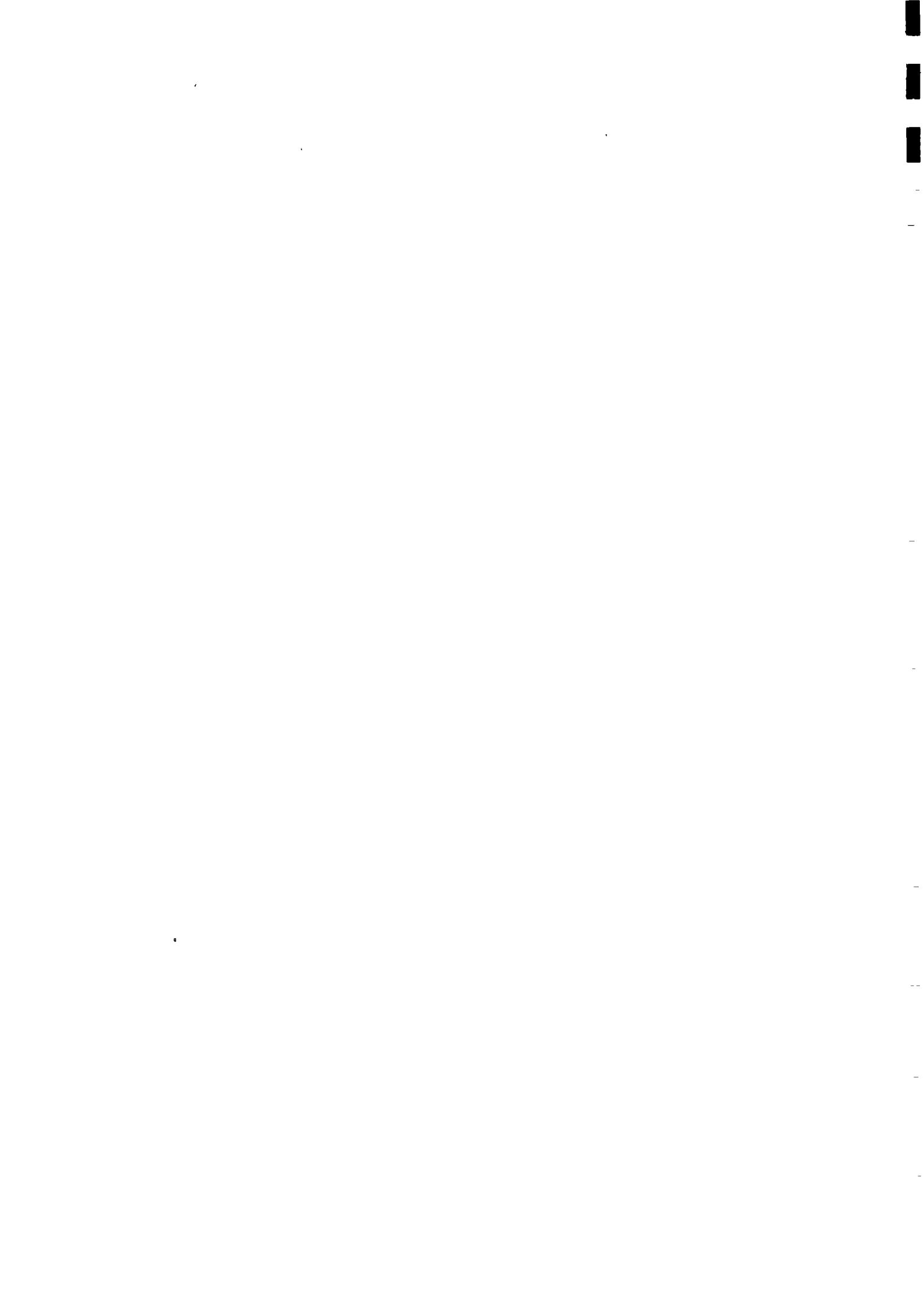
Much of the variation in sanitation both in the Terai and the Hills seems also to be connected with ethnic group/caste and income level. In general "lower castes", e.g. Tharus in the Terai and Magars in the Hills, which also have a lower economic status, had a worse sanitation situation than Bahuns, Chhetris or Newars. Often the difference could be clearly observed within the same scheme or even same cluster. The personal hygiene of "low caste" people, especially children, was also in many places strikingly poorer.

Most common reasons given by villagers who did not have a latrine were: "latrine is too expensive", "no time", "no space" or simply "not interested" and "no need". It seems that usually the real reason is that people are unaware of the benefits of using a latrine, and do not see any need to build them, if there are suitable places for defecation in the open air. A simple pit latrine does not cost too much for most people, as most households can easily collect all materials needed. In the Terai the situation is somewhat different, as many pit latrines need concrete rings to last for a longer time.

The Water User Committees and Community Health Volunteers are expected to be role models to other villagers by using a latrine. In five out of eleven Terai schemes and nine out of twelve Hill schemes practically all WUC members and CHVs had a latrine. In most cases the proportion of WUC members using a latrine, as told by themselves, was clearly higher than among villagers. The CHVs were even more active as nearly 100 % of the ones interviewed had a latrine. The "demonstration effect" of latrine building by WUC members and CHVs cannot be estimated, as it was not systematically studied. It is interesting to note, however, that in three schemes where the WUC members did not have latrines, the villagers did not have them either.

Most schools in the areas visited had latrines, or they were being built at the time of the visit. Only three schemes did not have school latrines, two of them in areas where latrine coverage was very poor among villagers as well. The study team did not inspect school latrines systematically, but most of the ones checked were in satisfactory condition. Only the condition of some urinals was unsatisfactory, as they had been used for defecation "by villagers", or the drainage did not work. Although separate latrines were usually clearly marked for boys and girls, in many schools one latrine was locked and used only by teachers who had the key.

The Community Health Volunteers seemed to be the most active promoters of sanitation with Mothers' Group meetings and other education. Sanitation



questions were discussed in some WUC and mass meetings, and many WUCs were asking for latrine promotion from the Project. It seemed that most WUCs had not been very active themselves to promote latrine building and expected outside help, either in the form of construction materials, sanitation education or both.

4. CONCLUSIONS AND RECOMMENDATIONS

This chapter presents conclusion and recommendations that can be drawn from the findings of the study. Page number after the recommendation refers to the part in the main text, where it was first presented and where further arguments for it can be found.

4.1. WATER USER COMMITTEES

Groundwater schemes

It seems that the Water User Committees in the Terai groundwater schemes become rather passive after the construction period. Many users of the shallow tube wells seem to be able to do most common maintenance of their handpump (even without formal Village Maintenance Worker training). The purchase of spare parts is also often done by users of the handpump themselves. In many schemes the VMWs had actually very little to do. The WUCs do not seem to have an active function in their community regarding sanitation and health either.

The groundwater Water User Committees have not used the O&M fund actively as expected by the Project. None of them had used the O&M fund to sludge new wells to replace the ones that had dried up or were giving muddy water. Only some had contributed to supply spare parts, but not in a proper manner. They had distributed the interest to users (wellwise), which does not increase users' feeling of responsibility for the maintenance of their well. It will also decrease the real value of the fund in long term.

It is recommended that the Project develops approaches to involve users more directly in the management of shallow tube wells. This means that the institutional set-up has to be changed.

At least two options can be seen in this context:

- 1) A community fund would be raised for the construction of wells and latrines in the community. Part of the fund would be collected within the community and part of it would be provided by the Project. The coming user households of a well (or individual households in case of latrines) would first agree among themselves to build a well, and then ask for financial support from the community fund. The fund would be used to provide a loan (e.g. a soft loan with low or no interest) and/or to subsidize construction costs, either as a fixed proportion of estimated construction costs or as a lump sum regardless of actual costs. After loans are paid back to the fund, they can be used again to finance the building of new wells and latrines. The main role of the Water User Committee would be to collect and manage the community fund.
- 2) Instead of using a community fund, the households would file a request for financial support from the Project funds. To the groups of households fulfilling agreed criteria the Project would provide a subsi-

dy. The distribution of Project funds would require a lot of work, and would in practice have to be trusted to other organization(s) than the Project itself. In this alternative the Project would need to ensure that someone is given the responsibility for those duties of present WUCs that are not connected with construction or O&M of a well, like promotion of sanitation and support to CHVs. In both of these options the user households would be responsible for the O&M of their well.

The new arrangement for shallow tube wells needs to be carefully planned to ensure its proper functioning. The Project has to take care that every group of user households receives enough training for the necessary knowledge and skills for O&M, that proper platforms are built, that users understand the importance of keeping the platforms clean etc.

Gravity schemes

The Water User Committees of the gravity schemes were functioning more like the Project had expected compared to the WUCs of shallow tube well schemes. The maintenance seemed to be working fairly well with Village Maintenance Workers usually actively taking care of the scheme and many Water User Committees collecting fees regularly to pay for them. The gravity WUCs had also more meetings than in the Terai, although this may be partly explained by the longer construction period.

There were some shortcomings in the functioning of the gravity schemes and the recommendations below concern them as well. There does not seem to be, however, any reason to change the basic concept of the Project in the Hills.

General recommendations

It is recommended that the Project takes action to activate the present large Water User Committees. More clear guidelines for post construction activities of WUCs, and accordingly training, should be developed and given. The WUCs should perhaps have more clear "assignment" from the Project side to promote health education and sanitation in their areas after the construction of schemes. One possible way to activate the WUCs would be to arrange refresher training at regular intervals, where the WUCs could discuss their problems with e.g. DWSO personnel and share experiences with other WUCs.

For construction purposes it is often more efficient to have one Committee for schemes constructed simultaneously in the same Village Development Committee. The Project has favoured this approach in many areas, both in the Terai and in the Hills. These "VDC-wise Water User Committees" should serve only co-ordinating functions, and they should be dissolved after construction is completed. **Large artificial schemes should not be handed over to one single Water User Committee (p. 7-9).**

In one scheme the whole Water User Committee had been changed by a VDC-level WUC without any mass meeting, which is against the principle of



self-government of the scheme by the users. **The Project needs to find procedures to ensure that a Water User Committee or its member can be changed only by a mass meeting (p. 9-10).**

4.2. LABOUR CONTRIBUTION

There were usually no problems in getting the majority of villagers to provide labour for construction. Only two schemes had difficulties in this respect. Now that the Project has successfully implemented a great number of water supply schemes all over the Lumbini Zone and acquired a good reputation, it is even more unlikely that large scale refusals will occur, provided that pre-feasibility and feasibility studies are done properly.

4.3. MASS MEETINGS

The Water User Committees had arranged mass meetings usually only before or during construction. Mass meetings after construction had been few, although it has to be remembered that many of the schemes studied had been completed only recently. None of the WUCs held mass meetings regularly.

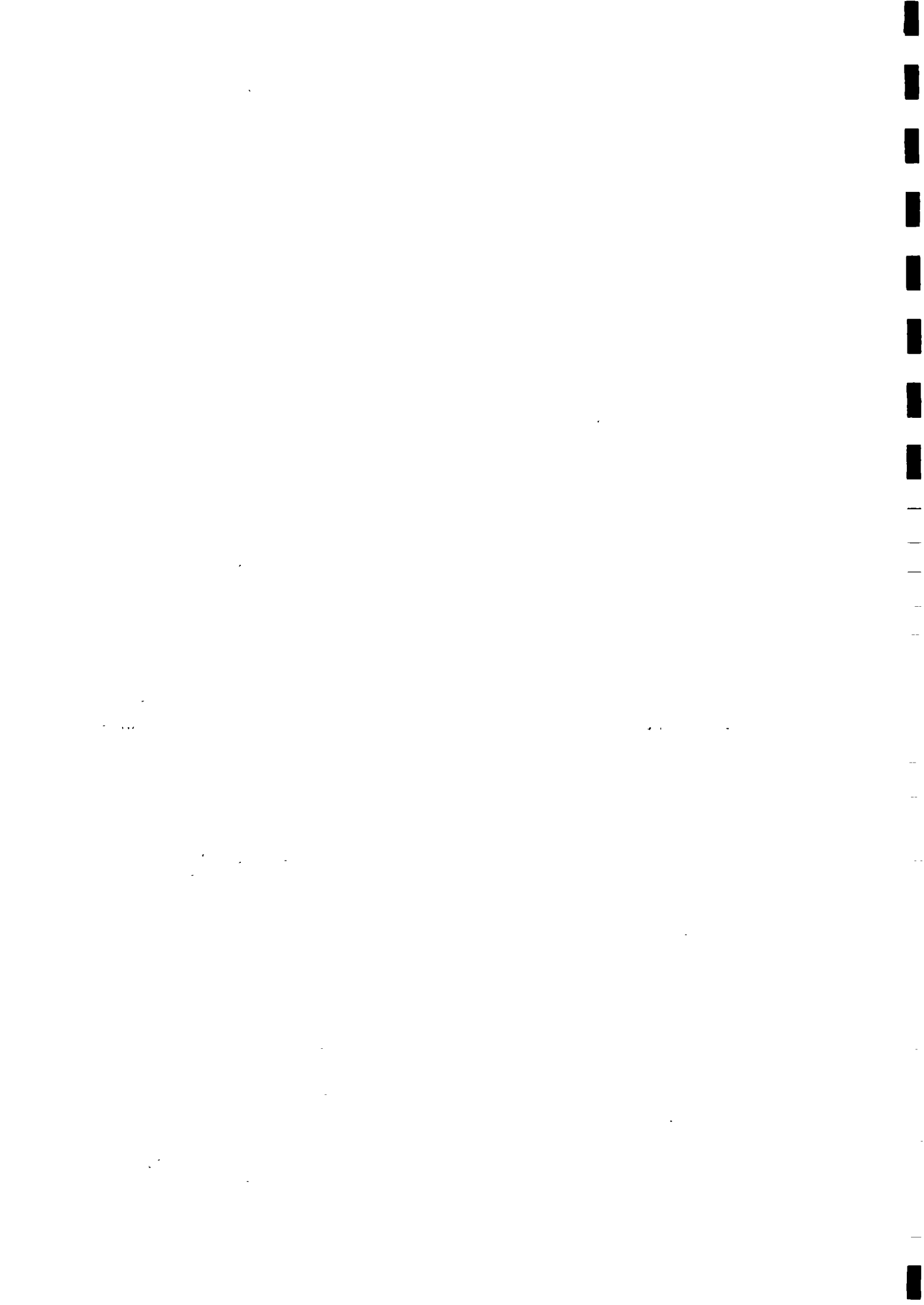
In two schemes some villagers were dissatisfied with the WUC or its chairman. **The Project should strongly encourage Water User Committees to have at least one mass meeting every year, where the WUC for the next year would be chosen and financial situation of the scheme would be presented.** In an annual mass meeting users would also get a chance to express their opinions to their committee and the WUC could distribute information. A discussion of the future plans could also take place in such meeting. This is especially important in larger schemes, where communication between an ordinary user and the WUC may otherwise be less intense. If the villagers are satisfied with their committee, the meeting could concentrate on this aspect.

Siting of water points was the most common topic of disagreement among users in mass meetings. At least in two cases the approval of the scheme layout had not taken place in a mass meeting. **The Project should see that at least the scheme layout, if not the whole scheme design, is always approved by the users themselves to ensure that it reflects their needs (p. 5).**

Handing over ceremonies were usually attended by the great majority of villagers. The attendance was much lower in the cases where the scheme was not handed over in a special mass meeting held for that purpose only. In such situations the villagers may not get as clearly the feeling that the scheme is actually handed over to their responsibility. **Handing over should take place in a mass meeting arranged especially for that purpose and preferably for that particular scheme only (p. 6).**

4.4. WOMEN'S PARTICIPATION

Women are the principal users of water supply facilities in the rural communities. Women's participation in the decision making and awareness about



the water supply does not seem as widespread as could have been hoped. Despite the rule that at least two women should be included in the WUCs, more than half of them did not have any female members. Women's participation in mass meetings was also low. As a result, they knew much less about their scheme than men. **The Project has to follow that at least two female members are nominated to Water User Committees. In addition new ways need to be found to promote women's influence in decision making and to increase their information about their scheme (p. 12).**

4.5. FINANCIAL MANAGEMENT

The fund payment did not seem to present problems to most households. Only the very poorest households seemed to have payment difficulties, especially in the Hills, where fund payments are about twice as high as in shallow tube well schemes. **It is necessary that Water User Committees pay attention to the situation of the poorest households and consider reductions to their payments. To pay at least a nominal amount of money instead of nothing would be preferable, since it is likely to increase the household's commitment to the scheme (p. 14).**

There had been only few widespread refusals to pay to the fund for various reasons. Even if rare, such situations should be avoided by a careful study of the opinions of the proposed scheme population. **The Project needs to pay more attention to the quality of the social part of pre-feasibility and feasibility studies, and to ensure that they are all carried out properly and according to Project guidelines (p. 14).**

Groundwater schemes do not collect fees and do not use the funds at their disposal actively. Instead the O&M fund is kept lying idle on a bank account. **The Project should encourage especially the wardwise Water User Committees of groundwater schemes to use their fund more actively, e.g. to establish a revolving fund to provide loans to scheme households to build latrines or to resludge dry or muddy wells.**

Regular fees were collected in half of the gravity schemes, usually to pay to the VMW, but not to build up the fund to be used in a major rehabilitation. The gravity WUCs seemed to rely on the Project or the DWSO for funds in such a case. As the Project is not going to stay in the area for very long, and as the funds available for major rehabilitations by the DWSOs are limited, **the Water User Committees should be strongly encouraged to collect fees regularly to build up their fund (p. 16).**

4.6. OPERATION AND MAINTENANCE

The great majority of groundwater wells were functioning well. Less than 10 % of them were either dry or gave muddy or sandy water. Although the share of wells not functioning well is relatively low, no far reaching conclusions about the quality of design and construction can be made yet, as most of the wells have been operating for a fairly short time. In many groundwater schemes in a way unofficial sub-committees had in fact been born for O&M, as many users knew how to do the simple maintenance themselves



and the users also took care of the purchase of spare parts. In many schemes the role of VMWs did not seem to reflect Project's original concept. They had little to do, and they did not seem to be very active in promoting the proper use of handpumps.

In more than half of the gravity schemes villagers complained that there was not enough water for everyone. However, the situation was unsatisfactory usually in a few taps and at certain peak times only. The reasons for the lack of water seemed in some schemes to be the improper use of drinking water or the use by outsiders.

The O&M concept seemed to work in the gravity schemes more the way the Project had planned. The VMWs had more work, and in half the schemes they were paid for it. Some schemes had slight problems, because the VMWs had gone away from the village. As in groundwater schemes, money for spare parts was often collected directly from the users of the tap. In three schemes some users had refused to pay for the spare parts, which indicates that they did not have a feeling of ownership for the scheme.

4.7. FEELING OF OWNERSHIP

The Water User Committees seemed to have understood that the scheme had been handed over to them, although their eagerness to rely on the DWSO or the Project in case of a major breakdown shows a slightly different attitude. The majority of the users also seemed to feel that the scheme belonged to them, although especially the women seemed to be uncertain. Users' feeling of ownership is also reflected in the fact that a great majority of the households attend mass meetings. However, further studies are needed to draw more definite conclusions in this matter both regarding the WUCs and the users.

4.8. HEALTH AND SANITATION

Most of the Community Health Volunteers were taking care of their health kit bags properly, but there were also many that seemed less active and had empty bags. As the intended refilling mechanism often did not seem to work in practice, more emphasis on this aspect should be put in Community Health Volunteer and Water User Committee training (p. 21).

The number of patients treated by the CHVs was very low near the (Sub) Health Posts, and many CHVs seemed frustrated because of the situation. It is therefore highly questionable, whether Community Health Volunteers are needed to provide first aid treatment in wards that are situated close to a (Sub) Health Post (p. 22).

Since villagers often seemed to have doubts about the competence of the CHVs, or were unaware of their services, the Water User Committees should "market" the Community Health Volunteers more by informing the villagers about their services and their training (p. 22).

Some CHVs were active distributors of health and sanitation information. However, in many schemes the CHVs should place more emphasis on preventive care by giving education to villagers on how the diseases are spread and by promoting proper sanitation. **More emphasis should be given to preventive health care issues in CHV training (p. 22).** Mothers' Group meetings seem like a good opportunity to deliver information to women, and CHVs should be encouraged to have them regularly.

Whether the Community Health Volunteer was active or not, often seemed to depend on the character of the person. Most WUCs did not support the CHVs actively, and most of them did not seem to feel that they had responsibilities to ensure active operation of the CHV system. The WUCs and the CHVs often had only little contact and the CHVs only seldom attended the WUC meetings. **To improve the relations between Water User Committees and Community Health Volunteers and to get the WUCs more active in health and sanitation questions, the CHVs should always be included in the WUCs.**

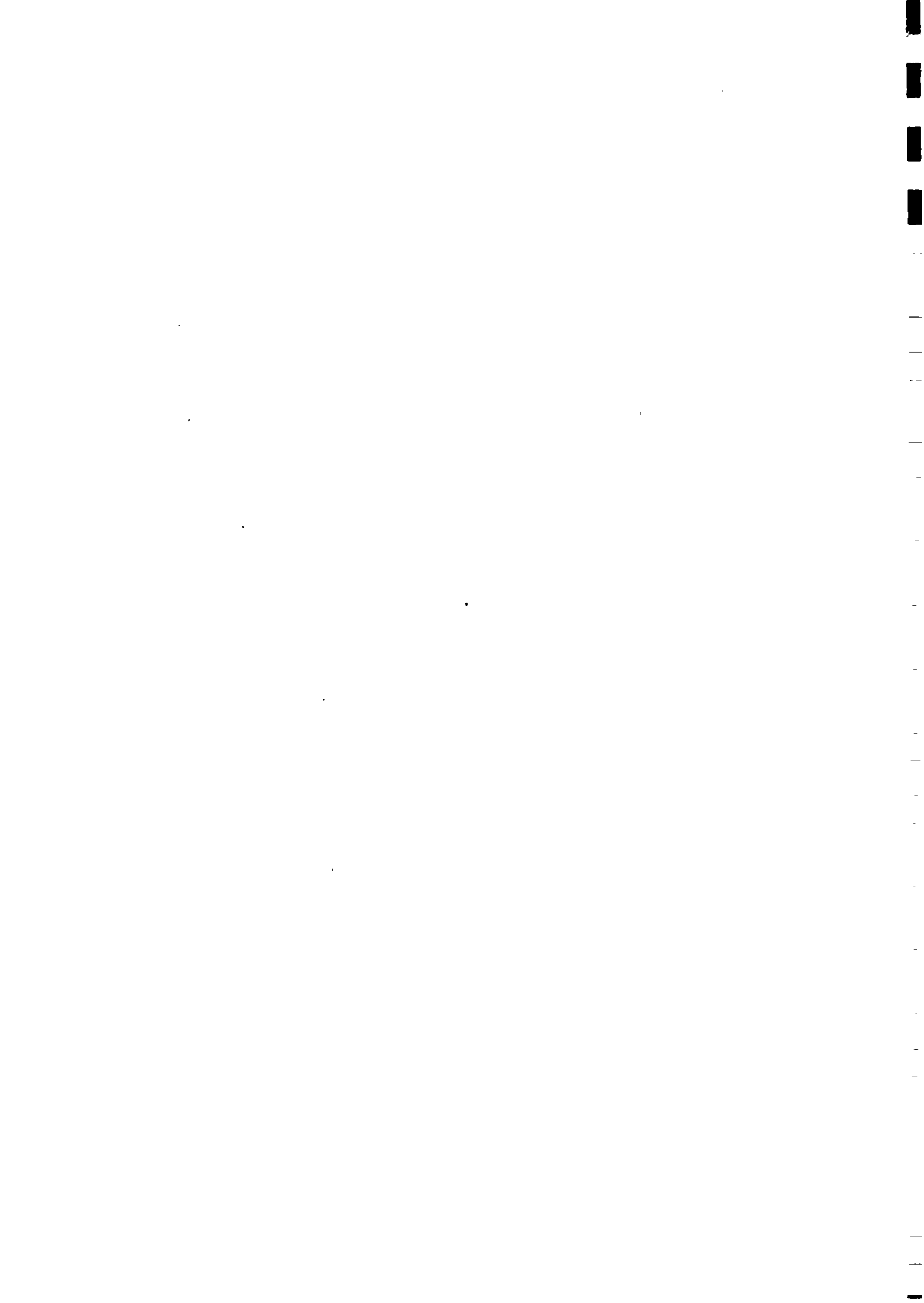
The latrine coverage varied a lot from scheme to scheme, but was better in the Hills than in the Terai. In the Terai the rise of water table as a result of monsoon rains seems to be the most important reason for the poor situation. Much of the variation seems also to be connected with ethnic group/caste and economic status.

The Water User Committee members and especially the Community Health Volunteers were in many schemes good role models to the rest of the population, as they had built latrines for their own use. Where the general latrine coverage was low, only few WUC members had a latrine either. The WUCs do not seem to be very active in promoting latrine building themselves. In many schemes they were expecting somebody from outside the village to come and do the promotion.

4.9. SUGGESTIONS FOR FUTURE STUDY OF WATER USER COMMITTEES

This study was the first attempt to collect information systematically of a larger number of WUCs. As the report clearly shows, only preliminary answers can be given to many questions by studying 23 out of 288 WUCs. It has therefore been suggested, that the Project should make a study of all WUCs, in order to be able to draw more definite conclusions. The present study is also a pilot study to the more comprehensive one. One of its aims was to provide information, so that interesting research questions could be specified and adequate research methods could be found.

The present study shows that there are good grounds for studying all WUCs. Based on this study alone, many recommendations to improve the working methods of the Project can be made. Studying the remaining WUCs would not only warrant more reliable conclusions, it would also provide a chance to use statistical methods to discover relationships between variables that the Project can influence (e.g. size of a scheme) and variables measuring the success of the Project (e.g. user satisfaction). It would also enable to analyze what socio-economic factors (e.g. ethnic composition of



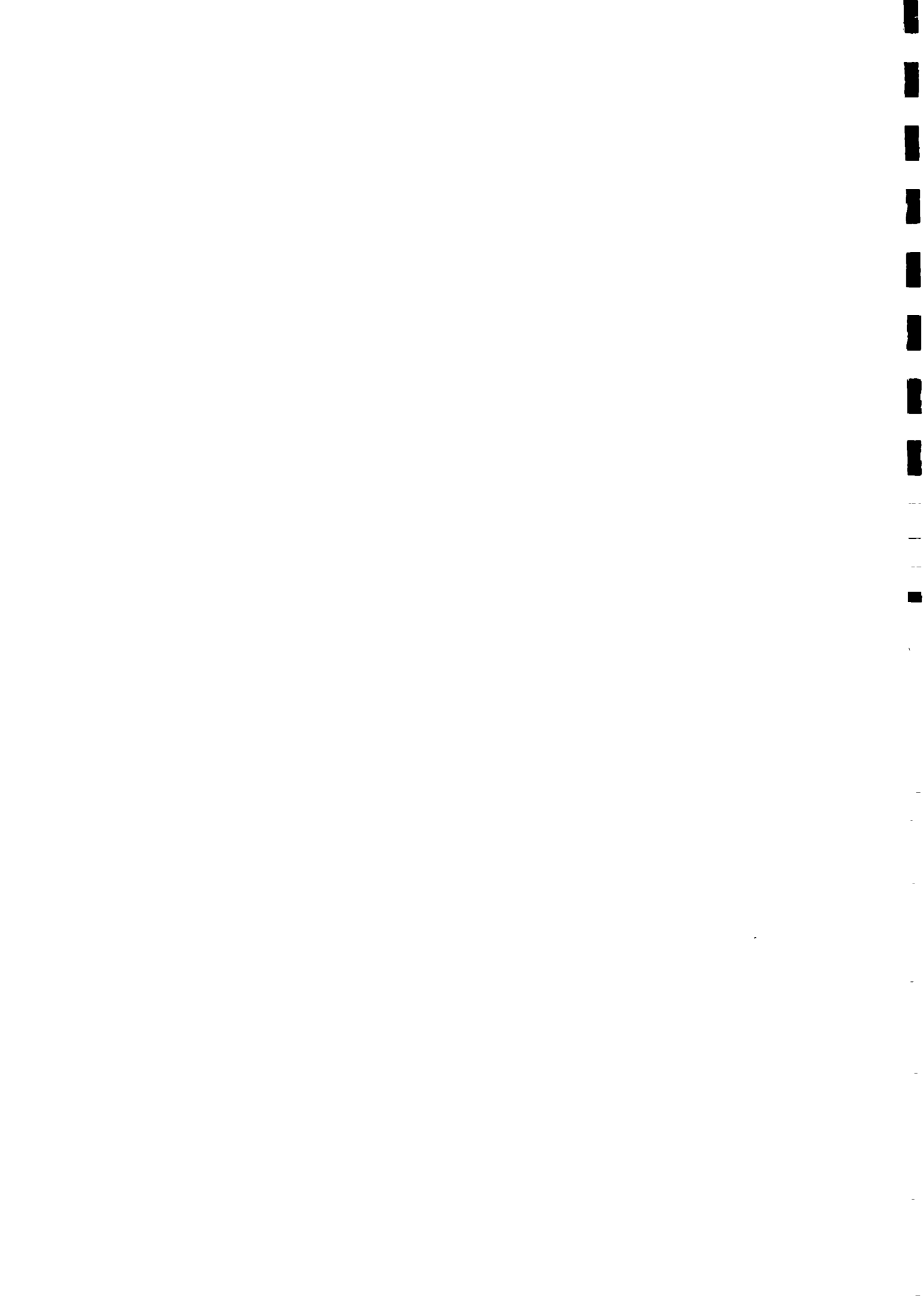
population) are connected with the success/failure of a scheme. Differences among districts would also be interesting to find out.

The study of all Water User Committees will require a lot of manpower to visit the schemes and collect the information. In practice, most of them would probably be persons that are not familiar with using questionnaires. They should be given a briefing on the objectives of the study and they should be trained on how to collect the information in practice.

For statistical analysis, fairly structured questionnaires are needed, since open questions are difficult to classify. The inexperience of study personnel is also one reason for using standardized questions. The people collecting information should, nevertheless, also be encouraged to give their own comments and observations.

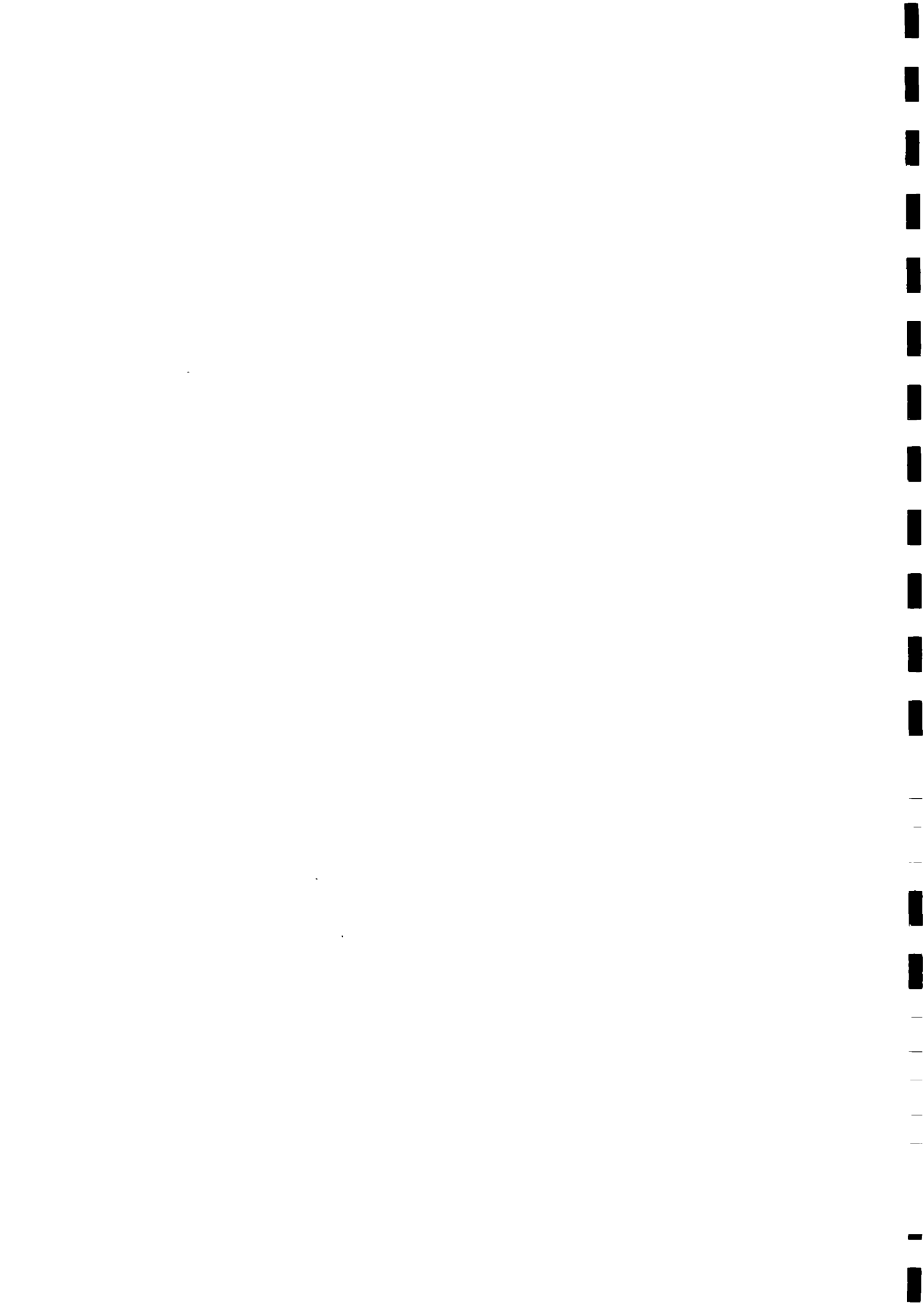
A complementary study could be made of a small but representative sample of the WUCs. This would allow to study them more carefully, spending more time in each scheme. In-depth interviews and participatory research methods could be used in this part of the study. This would require more from the people making the study, as they would be required to make their own judgements and not just to rely on ready-made questionnaires.

To end the report, some practical suggestions for conducting studies on WUCs are given. If at all possible, WUCs should be informed beforehand about the interviews, to have most of them present in the village. To be able check the information the WUCs give, they should be asked beforehand to have minutes and records available at the interview. When villagers are interviewed, it should be done before meeting the WUC. The team that did this study had difficulties in convincing Water User Committee chairmen that their presence is not desirable at villager interviews.



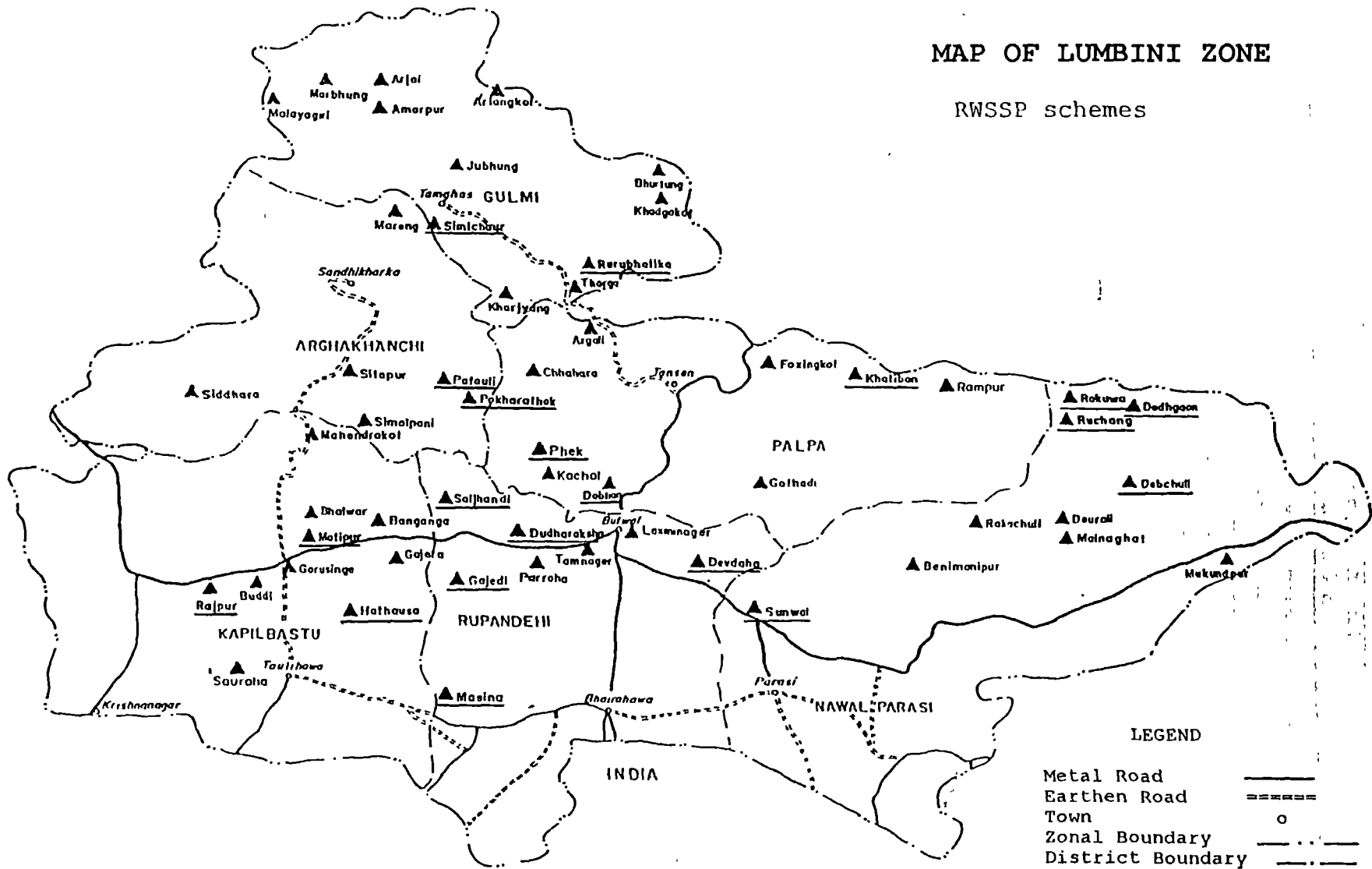
LIST OF SCHEMES STUDIED

Scheme name	Scheme code	Ward no
I. Groundwater schemes		
1. Bagderiya	A 13140	1-2
2. Dudrax	A 11010	7
3. Gajedi	A 11145-6	2
4. Gajedi	A 11145-6	8
5. Hathausa	A 13130	8
6. Masina	A 11120	3
7. Masina	A 11120	2
8. Motipur	A 13080	7
II. Gravity schemes		
9. Bhatukuwa (Ruru VDC)	A 14120	7-9
10. Dedgaon	A 12200	3-5
11. Deuchuli	A 12210	1
12. Dobhan I	A 16111	6
13. Keuli (Devdaha VDC)	B 11090	3
14. Khaliban	A 16041	8
15. Patauti	A 15070	1-3 and 9
16. Phek	A 16100	2
17. Phek	A 16100	1
	and B 16105	
18. Pokharathok I	A 15050	8-9
19. Rakuwa	A 12190	1 and 4-9
20. Ruchang	A 12230	6-8
21. Saljhandi	A 11070	7
22. Simichour II	A 14010	1-8
23. Sunwal	A 12140	6



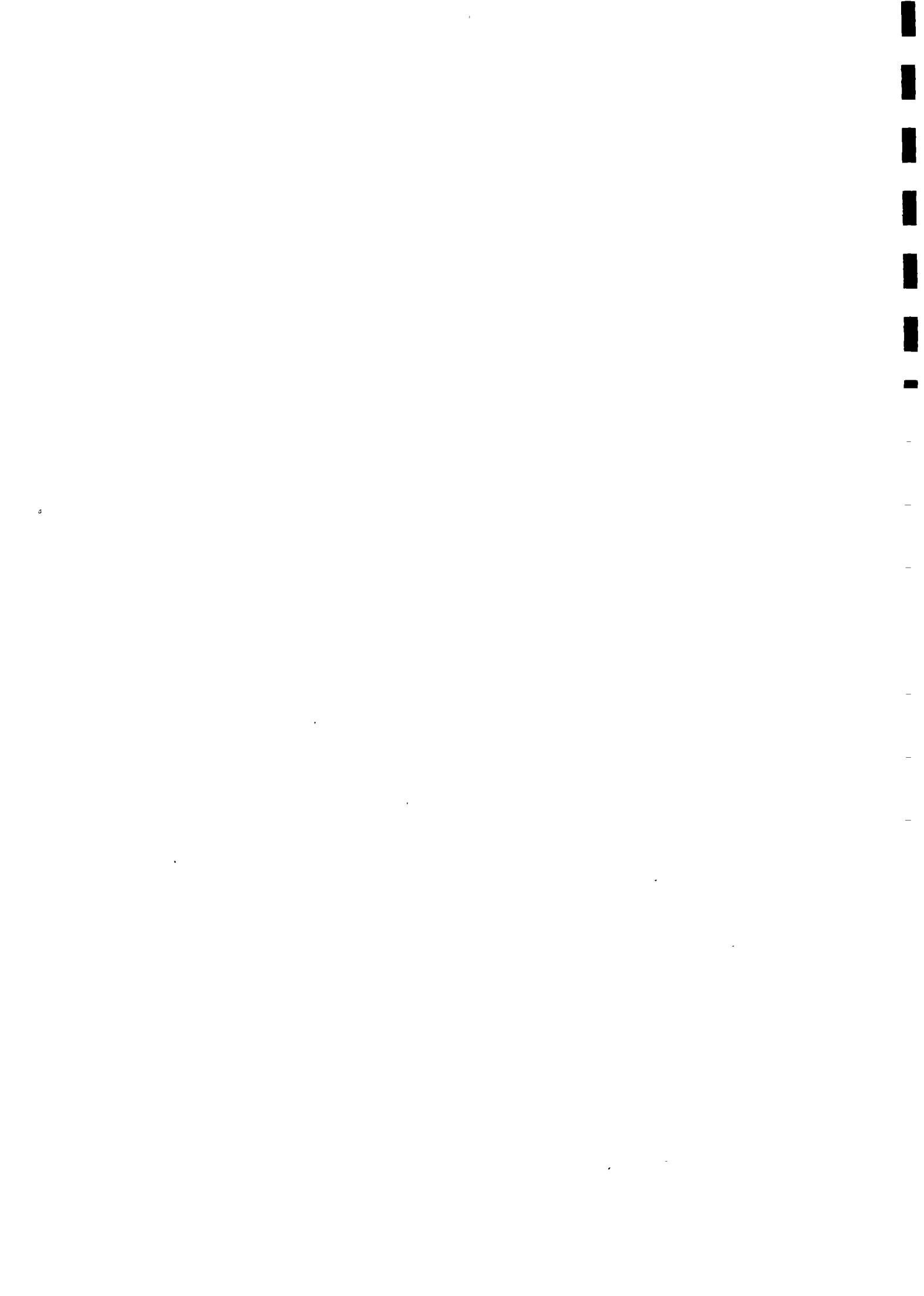
MAP OF LUMBINI ZONE

RWSSP schemes



LEGEND

- Metal Road —————
- Earthen Road =====
- Town o
- Zonal Boundary - - - - -
- District Boundary - . . . - .
- RWSSP Project Area ▲
- Study schemes



SUMMARY OF QUESTIONNAIRES

This summary of the questionnaires lists the questions of the study. For each group of interviewees a separate questionnaire was used. The right column shows which groups the question was asked from (V = villagers). For villager interviews, only a limited number of questions was selected by the interviewers.

I BASIC INFORMATION ABOUT THE SCHEME

II COMPOSITION OF THE USER COMMITTEE

Information collected of the WUC members: name, position in the WUC, ethnic group/caste, cluster, membership of VDC, sex, profession, use of latrine.

III CONSTRUCTION MANAGEMENT

Fund collection and management

- | | |
|-------|---|
| WUC | What was the basis of the fund/household (fixed rate, ability to pay, household size etc.)? The amount of the fund/household? |
| WUC | Was any stock money in the community used? How much? Where had the stock money come from? |
| WUC/V | Did any households have problems in providing the fund? What kind of households? |
| WUC | Was labour or materials accepted instead of a fund? What about households that did not pay? |

Organizing the voluntary and paid work force and collecting material

- | | |
|-------|---|
| WUC/V | Who did the work (type of people, male/female)? Amount of work/hh?
a) porterage
b) material collection
c) construction |
| WUC | Did all households provide labour? What about households that did not have any men present at that time? What about people who were not in the village at the time of construction? Did they give some kind of payment or material instead of labour? |



IV POST CONSTRUCTION MANAGEMENT

Feeling of ownership, mass meetings and distribution of information.

- WUC/V Who owns the scheme (villagers, WUC, the project, government etc.)?
- WUC What are the main responsibilities of the WUC?
- WUC/V How many mass meetings have been organized? For what reasons (e.g. to form the WUC, to decide about fund collection, scheme layout approval, siting of water points)?
- WUC/V How many people attend the meetings? Type of people attending (castes/ethnic groups, women/men, clusters)?
- WUC/V What kind of occasion was the hand over? Who were present?
- WUC Are there minutes of the mass meetings (ask to see them if they are easily available)?
- WUC/V What kind of questions have raised most discussion in mass meetings? What kind of different opinions have been expressed?
- V Do you feel that your opinions are taken into account at mass meetings?
- WUC How have the villagers been informed about the scheme? About which matters etc.
- V Have you received enough information? What would you like to know more about?
- User committee meetings
- V For how long is the user committee elected?
- WUC How often do you have meetings (regularly or when needed)?
- WUC Are there minutes of the meetings? Ask to see the minutes if easily available.
- WUC Minimum number of members needed to be present? Average number of members present? Average number of women members present?
- WUC What kind of matters are discussed at the meetings?
- WUC/CHV/VMW Are CHVs and VMWs present?
- V Do you feel that your opinions are taken into account at the user committee?

V Are you satisfied with the decisions and actions of the user committee? If not, why?

Collecting fees and managing funds

WUC/V Do you still have the O & M fund? How big is it at the moment (capital/interest)? Is it on a fixed or a savings account? Interest %?

WUC For what purposes have you used the capital/interest/fees?

WUC/V For what purposes do you plan to use the existing funds in the future (e.g. for a new water point)?

WUC/V Have you collected the fees? How much fees have been collected? Ask to see the accounts.

WUC/V How was the fee/household determined?

WUC What is the basis of the fee (fixed rate, ability to pay, amount of consumption, household size etc.)? The amount of the fee/household? How often is it paid?

WUC Is labour or materials accepted instead of a fee? What if someone does not pay the fee?

WUC Have the fees collected met the demand after the completion of the scheme?

WUC Any problems encountered in managing the funds?

WUC/V Are the users informed about how money is used and collected?

Service level

V Are you satisfied with the new system of water supply (quality of water, quantity, service time etc.)? If not, why?

V How long do you have to wait to get water from water points?

V What are the most important improvements you propose to
 a) water supply
 b) sanitation
 c) health care?

V Have you proposed that to the user committee? If not, why?

Health questions

- WUC Number of CHVs in the scheme area?
- CHV Who selected the CHV (WUC, Mothers' group)?
- CHV How empty/full is the health kit box?
- CHV How many times has the box been refilled? If it has not been filled, why not?
- CHV How do you get the money to fill the box (from WUC, by selling medicine or both)?
- CHV How do you determine the price for the medicine that you sell? Do you give any medicine free?
- CHV Do you keep records of
 a) medicine
 b) health problems
 c) health kit box funds
- CHV How easily can you get the medicines you need? From where?
- CHV/V Are the medicines in the kit the ones that villagers need? What medicines are needed that you do not have?
- CHV What kind of co-ordination is there between the CHV and VHW/Health Post?
- WUC/CHV Does the WUC support the CHV?
- V Have you contacted the CHV? In which matters?
- V What is your opinion about the services given by the CHV?
- Sanitation
- V How many households in the scheme area have a latrine at home? Type of latrine?
- V Reasons given by villagers not having a latrine (not important, too expensive, too much work needed etc.)? If too expensive, how much does a latrine cost?
- WUC How many of the WUC members use a latrine? Was the latrine build before or after the starting of the project?
- CHV Do you use a latrine at home?



WUC Proportion of households using a latrine before and after the scheme?
Type(s) of latrines?

WUC Number of latrines in Health Posts and schools in the scheme area? If there are no institutional latrines, why not?

Division of roles between men and women

WUC/V What are the duties and roles of men/women in
a) construction
b) operation and maintenance
c) user committee?

Contacts and co-ordination with DWSO and the RWSSP

WUC What is your opinion about the support and advice given by the DWSO and RWSSP?

V OPERATION AND MAINTENANCE

WUC Number of VMWs in the scheme area?

Usage of the water supply facilities

WUC/VMW/V Is there enough water for everyone in the scheme area? If not, why?

WUC/VMW/V If there is not enough water, is the water used properly for right purposes? What are the most common ways of improper use (e.g. letting the water run unnecessarily, using drinking water for other purposes, not using waste water)?

WUC/VMW/V Who use the water improperly?

WUC/VMW Has the VMW/WUC done something to stop the improper use?

V Do you use waste water? For what purposes?

Problems and their reporting

WUC/VMW/V How well does the water supply work?

WUC/VMW/V What kind of complaints have people had with the water supply facilities?

V If you had problems, needs, complaints etc. about water supply, who would you contact?



- VMW/V Have you informed the user committee about the problems?
- V How did the person you contacted react? What were the results of your contact?
- VMW/V How long does it take from the time something is broken until it is repaired?
- Maintenance
- VMW How many times have you repaired the water supply facilities?
- VMW Do you do regular check-ups of the facilities? How often (monthly, weekly)?
- VMW Number of times you have needed outside help? In what type of situations? Who did you ask for help? Where did you get it?
- Spare parts
- VMW Type and number of spare parts regularly needed?
- VMW Who is organizing the purchases?
- VMW Where do you get the spare parts that you need? What is their quality?
- VMW/V How does the VMW get the money for the spare parts?
- VMW Do you keep record of spare parts?
- VMW/V Have villagers provided labour for the maintenance? What type, in which situations? Have there been any problems in getting support from users?
- Payments
- VMW/V What kind of payment does the VMW get from his work? From whom, how much etc.?
- Management of the village maintenance worker and other necessary manpower for the operation and maintenance work.
- WUC How easy/difficult was it to get candidates for a maintenance workers? Criteria of choice?
- WUC Has the WUC had to change maintenance workers since the start of the project? If yes, why?



- WUC Have you needed outside village manpower for maintenance and operation? Where can you get it? Criteria of choice? How was their work organized?
- VMW What is your opinion about the support, advice and aid given by
 a) User Committee
 b) RWSSP
 c) DWSO
- WUC/VMW Do you have plans to build up the fund for major rehabilitation after a possible breakdown?

Visual inspection of the scheme with the VMW (taps, intake etc.)

TRAINING

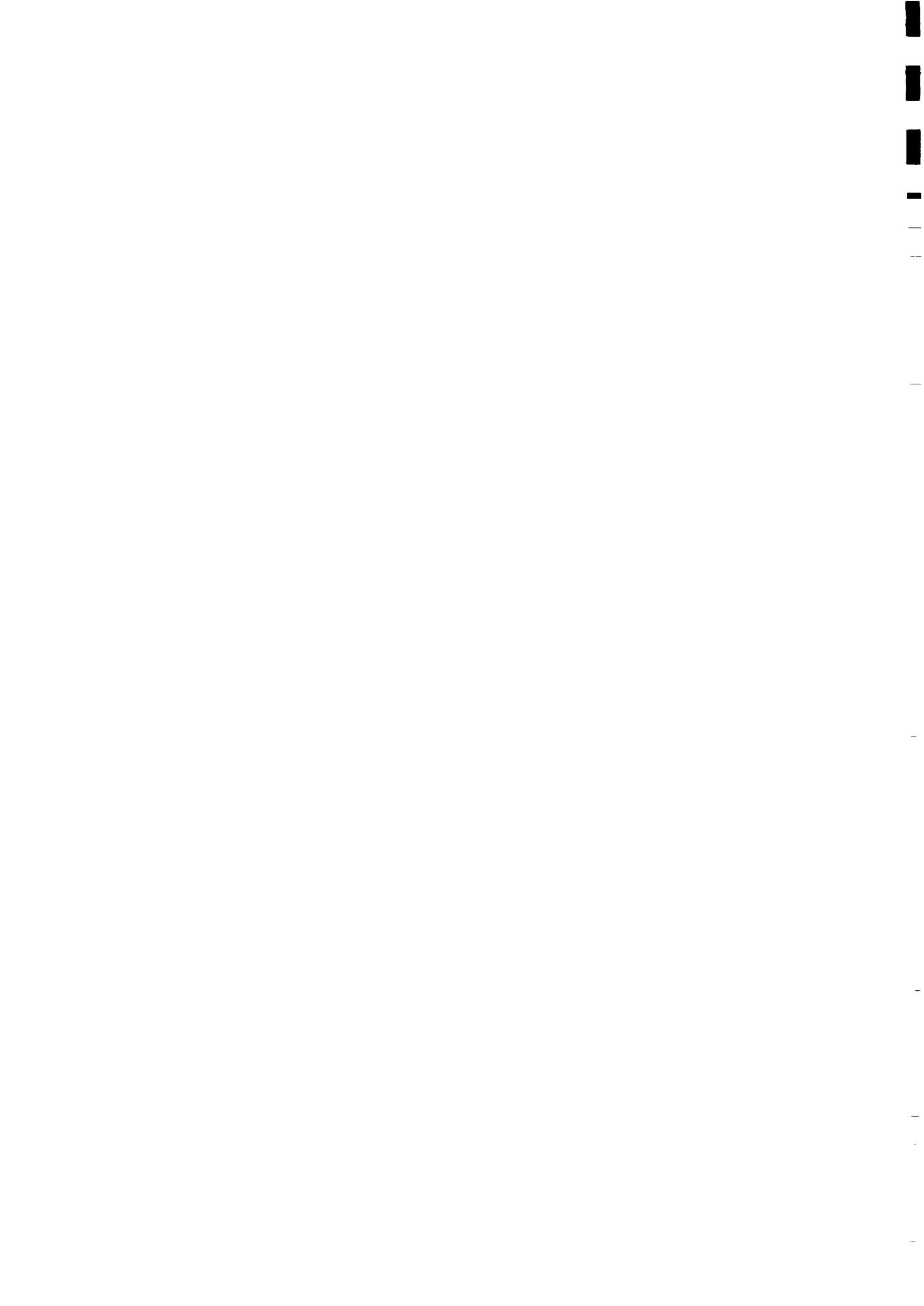
- WUC/VMW/CHV How do you find your training compared to the problems you encounter?
- WUC/VMW/CHV What kind of further training would be most useful? Why?

VI OTHER USER COMMITTEES IN THE VILLAGE

- WUC What kind of other user committees are there in the scheme area (e.g. forestry, irrigation, soil conservation etc.)?
- WUC How they function? How are they organized, funds, mass meetings and user committee meetings, incomes, labour etc.

VII OTHER REMARKS AND OBSERVATIONS ETC.

- WUC/VMW/CHV What are your plans in the future?
- WUC/VMW/CHV/V Other remarks, wishes, suggestions etc. by the interviewed
- WUC/VMW/CHV/V Observations



FIELD REPORT

Scheme name and district	BAGDERIYA, Kapilbastu
Scheme type	Shallow tube well
Wards visited	1 and 2
Number of wells	11
Construction started/completed/handing over	7.91/7.92/2.94
Population	790
Average population per well	72
Ethnic composition (%)	Tharu 96 Bahun 4
Dates of field visit	March 12 and 13, 1995

CONSTRUCTION MANAGEMENT

The water supply scheme in Bagderiya was started quickly, because the area was suffering from a cholera epidemic, which killed seven people. Each household had provided 1 kg rice/person, which was sold at the market. 6,000 NER was taken to the main fund and 600 NER to the health fund for two health kits. The rest was put into a community fund.

Community work was divided equally between households. Only men participated in construction. The three Bahun households of the predominantly Tharu wards did not provide labour nor paid any money instead, although the chairman of the WUC has tried to collect money several times. The Bahuns use the wells, however.

POST-CONSTRUCTION MANAGEMENT

The scheme was handed over two weeks before the field visit in a VDC-level mass meeting, which was not especially arranged for the purpose of hand over. About 15 households (out of 83) from the scheme area were present at the meeting. The chairman of the WUC said that the scheme is owned by the people.

Mass meetings have been arranged together with WUC meetings, which had been held 15-16 times so far. No minutes of the meetings were found during the field visit (the secretary of WUC was away). It seems that there are only very few literate people in the village. According to WUC nearly 100 people have attended mass meetings.

The WUC has 11 members, all of whom are Tharus and farmers. All clusters are represented. There are no female members in the WUC, but the CHVs as well as the VMWs attend WUC meetings.

Neither the capital nor the interest of the main fund has been used. The WUC did not have any plans to use the fund either. The people present during the field visit could not tell how

big the interest was. No records of the funds were found, only two bank deposit receipts. The WUC has not collected fees on a regular basis.

OPERATION AND MAINTENANCE

According to people three wells out of the 11 included in the scheme had problems. One had given sandy water for two months, one was giving muddy water some of the time, and one artesian well did not give water at the end of dry season. They felt that a handpump was needed for the artesian well. According to the WUC the district engineer and an overseer visited the scheme the day before the hand over and promised to take care of the wells that were not working properly.

One well originally included in the scheme design first started to give muddy water four months before the field visit, and then dried up before the hand over. It was excluded from the scheme. The villagers complained that now nearly 200 people had to use the well next to it and do not get enough water. The WUC had informed an overseer about the dry well.

There are two VMWs in the two wards, the WUC chairman is the other one. The other VMW told that the average age of a washer is 2-3 months. He does occasional check-ups of the wells. He has not needed outside help but was confident that the villagers would help if needed.

VMWs complained that the project had not provided them with a wrench of right size (or a slide wrench) to maintain one of the pumps. The WUC had not bought one either.

The VMWs collect the money for spare parts from the users of the well and buy them from a market nearby. Washers (25-30 NER) are most often needed. VMWs are not paid for their work. They found their training meaningful and practical.

HEALTH AND SANITATION

The scheme area experienced a cholera epidemic and seven people died. The project started the well construction quickly and now the water from the old wells is not used for household purposes anymore. According to one CHV the incidence of illnesses has decreased after the construction of the wells.

There were defects in the environmental hygiene of the area. Dishes were washed in the same water that the cattle drinks. The drainage did not work effectively either, as the water stagnated in the drainage trenches. The need for improvements in the drainage was recognized by the villagers.

One CHV had been selected by the WUC and two by the HMG. The one selected by WUC had an full health kit box that had been filled many times. She sells the medicine for the same price as she buys them. Medicines are available either from the nearby market or from Butwal. She has nowadays left the habit of keeping record of the use of medicine.

The CHV directs the patients to VHW or to hospital in case she cannot take care of them. The VHW comes twice monthly to give injection during which time she and the CHVs meet. The CHV found the training given by the project effective and important.

According to the CHV there were only four latrines in the scheme area. None of the members of the WUC nor the CHV interviewed had one any more, as the ones that they had built had collapsed. Many households had built pit latrines, but the pits had been destroyed as a result of high water table. The school had a latrine but not a urinal. The WUC asked the RWSSP to provide household latrine promotion to help them make concrete rings for latrines. They estimated that "at least 60 latrines would be built".

FIELD REPORT

Scheme name and district	DUDRAX, Rupandehi
Scheme type	Shallow tube well
Ward visited	7
Number of wells	49
Construction started/completed/hand over	4.91/7.92/11.92
Population	2282
Average population per well	46
Ethnic composition (%)	Bahun/Chhetri 34 Magar/Gurung 29 Tharu 14 Kami/Damai 7 Others 17
Date of field visit	March 7,8 and 11, 1995

CONSTRUCTION MANAGEMENT

According to the WUC altogether 21,700 NER had been collected to the main fund (according to RWSSP information 24.602 NER). The O&M fund was 500 NER/hand pump, which was divided equally between the households using a particular pump. Fund/hh was 35-83 NER 4-5 households did not pay their share of the fund on the grounds that "it is a Govt. hand pump, why should we pay for it". All the rest paid eventually, some households little by little.

Construction was done mainly by men. Those households that did not have men present at the time of construction were represented by women. Households that did not work provided food and lodging for DWSO employees.

POST-CONSTRUCTION MANAGEMENT

The WUC said that the scheme is owned by the villagers and the WUC. The villagers interviewed (around 15) thought that the HMG owned the scheme.

Three mass meetings had been organized to form the original WUC, for feasibility study and for the approval of the scheme design. Each household is represented by one member, usually a male. According to the WUC nearly 300 persons (out of 450 hhs) attended mass meetings in the beginning, because all were curious about the project. The villagers interviewed had not attended mass meetings but were aware of them. According to the WUC the villagers and the WUC participate actively in the meetings, the chairman of the WUC being the leader of the meeting. There had not been any major disagreements and decisions had been taken unanimously. Minutes of the meetings are kept. A meeting of the users of a particular hand pump is called whenever needed e.g. in the case the pump is broken. The present WUC was formed in July 1994, when the bank asked the WUC to move the fund from a fixed account onto a savings account, on the grounds that the WUC was not

officially registered. The chairman and two other members of the original WUC had moved away and the WUC had become passive. The present WUC was nominated by the VDC-level WUC. According to the VDC-level WUC, a mass meeting will be arranged soon to elect the WUC for ward no 7. Only one member of the original WUC is in the present WUC.

The WUC has meetings only when needed, and since July 1994 only one meeting had been arranged. Minutes of the meetings are not kept systematically, only in July 1994 did they have to keep minutes to show to the bank. Decisions are made unanimously. At least 50 % of the members need to be present at meetings. There are no women in the WUC, and the CHVs and VMWs do not attend meetings.

The capital of the fund has not been used, and the WUC does not have any plans to use it. The interest of 7 % (instead of 12 % earlier on the fixed account) is divided between hand pumps for O&M and kept by the WUC until needed by the VMW. If interest/hand pump is not enough for O&M, a fee is collected from the users of the pump.

The WUC had not made any contacts to the DWSO or the RWSSP after construction. Contact would be made only in case of a major problem. The present WUC had not received any training. They wanted training about maintenance of water supply systems, budgets, keeping minutes of meetings etc.

OPERATION AND MAINTENANCE

Seven of the hand pumps were not working properly according to the WUC. Three hand pumps had handles that required a lot of force to move, two wells gave muddy water and two wells were dry, including a school well which had been dry for one year. The WUC had asked the VDC-level WUC for help with the hand pumps that had handles that were hard to use. The WUC felt that they had maintenance responsibility only with the constructions above the ground. Underground problems are the responsibility of the DWSO and the RWSSP according to both ward wise and VDC-level WUCs.

The WUC told that they knew how to make shallow tube wells, but did not have enough money. Excluding the seven hand pumps the rest were giving enough water. Waste water was used for cattle.

The scheme has 12 VMWs, who had been selected by a mass meeting. Three VMWs had either moved away or died, but no VMWs had been nominated nor trained to replace them. The WUC was not aware that the teacher responsible for the broken school hand pump had moved to India.

The VMW interviewed had seven hand pumps under his responsibility. He had repaired every hand pump at least twice and three major problems had occurred. He had needed used outside help only once when the villagers helped to dig a 10 feet hole around one pump to check the G.I. pipe in the ground. He told that one of his hand pumps had not given enough water since July 1994.

Nuts, bolts and washers are spare parts most often needed. The VMWs organize their purchase from Bhairawa or Butwal. Nuts, bolts and washers are in many cases distributed to the households, who can change them without the help of VMWs. The VMWs get no remuneration.

The VMWs were satisfied with the training concerning the hand pump itself, but wanted more knowledge about underground constructions and their maintenance.

HEALTH AND SANITATION

Cluster meetings had selected three CHVs (one male) and the RWSSP had trained them. 900 NER had been collected for health kits but not deposited in a bank. The RWSSP took away the boxes 1,5 years ago because of that. The WUC promised that the CHVs would start working and the 900 NER would be deposited, if the RWSSP returned the boxes. One CHV had been trained by the HMG.

According to the WUC 75 % of households had a latrine, only most of the Tharus do not have a latrine. There are 4-5 pucca latrines, the rest are kuchha type. Before the project there was only one latrine in the ward. All members of the wardwise and the main WUC had a latrine. The villagers estimated that in their cluster only five households out of 40 used a latrine anymore. Most of them had a pit latrine before, but they had collapsed as a result of high water table.

The two schools in the ward had reasonably clean pucca latrines. One of the school urinals had been used for defecation by outsiders according to one teacher. For the other school urinal the soak pipe was missing and the wall against sight had fallen down.

VDC-LEVEL USER COMMITTEE

The main WUC was elected in June 1990 by a VDC-level mass meeting where 400-500 people were present. After that the main WUC member of each ward, who is also the chairman of the wardwise WUC, arranged a meeting to form the wardwise WUC. Larger wards have more members in the main WUC. The main WUC has 12 members, ten of them are Bahuns and only one female. Three members are members of VDC.

The main WUC had monthly meetings during construction but no meetings after construction so far. It has not collected any funds or fees. It keeps minutes of its meetings. The main WUC had a one-day orientation seminar and feels no need for further training.

The VDC-level WUC feels that it has at least following functions: give advice and support to wardwise WUCs about working procedures, solve disputes between users during construction, communicate with wardwise WUCs about problems after construction and change passive WUCs if needed.

The main focus of the main WUC will be on the O&M of hand pumps that are not working well. It has checked all hand pumps and their maintenance problems in the VDC. One month ago they had a seminar with the DDC and the DWSO about broken pumps. They are also concerned about the drinking water supply to illegal settlers and to the increasing population.

OTHER COMMITTEES

On VDC-level there is a forest protection committee and a family planning committee. The forest protection committee does forest protection through e.g. plantation and fencing. The Department of Forestry (HMG) provides them with free seedlings, but does not participate in the work of the committee, which has 13 members elected by a mass meeting. The committee has no funds.

FIELD REPORT

Scheme name and district	GAJEDI, Rupandehi										
Scheme type	Shallow tube well										
Ward visited	2										
Number of wells	25										
Construction started/completed/hand over	12.91/7.93/6.94										
Population	1417										
Average population per well	57										
Ethnic composition (%)	<table> <tr> <td>Bahun/Chhetri</td> <td>24</td> </tr> <tr> <td>Magar/Gurung</td> <td>22</td> </tr> <tr> <td>Tharu</td> <td>22</td> </tr> <tr> <td>Kami/Damai</td> <td>10</td> </tr> <tr> <td>Others</td> <td>22</td> </tr> </table>	Bahun/Chhetri	24	Magar/Gurung	22	Tharu	22	Kami/Damai	10	Others	22
Bahun/Chhetri	24										
Magar/Gurung	22										
Tharu	22										
Kami/Damai	10										
Others	22										
Date of field visit	March 19, 1995										

CONSTRUCTION MANAGEMENT

There are 25 shallow tube wells in Gajedi ward no 2, 22 hand pumps and three artesian wells. One well was originally sludged by the Red Cross and rehabilitated by the Project. According to the WUC there are 249 households, of which 144 hhs are illegal settlers.

A total sum of 12,500 NER has been collected for the O&M fund. The 500 NER/well collected was divided equally between the users of the well, making the share/hh 40-75 NER. In addition 900 NER was collected for the three health kits.

Illegal settlers were collected their share of the fund, but the money was later returned to them after the advice from HMG. They provided labour and are allowed to use the wells. They also participate in O&M and are paying fees.

During construction women did the light work (e.g. filtered sand, transported cement mixture) and men the heavy work. The average amount of labour/hh was 3-4 days. Households of only women and children provided only little help. There was a 40-45 NER/day fine for households who had men present but did not participate. The WUC gave that money to hire a substitute worker. Only three households had to pay the fine.

There were two mass meetings before construction and two clusterwise meetings during construction of which minutes had been kept. Matters discussed included division of labour, fund collection, number of hand pumps, role towards the RWSSP, formation of the WUC, maintenance and sanitation problems. No mass meetings have been arranged after the construction. 150-175 persons attended the meetings, also women. The hand over took place at a VDC-level mass meeting where 30-35 persons from ward no 2 were present, among them the WUC. A Chaukidar is used to deliver information and call people to meetings.

POST CONSTRUCTION MANAGEMENT

There had been only three WUC meetings so far. The WUC told that they were going to have monthly meetings from now on. Of 11 members four are Bahun, three Magar, two Tharu, one Kami and one Mallaha. Two members are female, one of them a CHV. Two members are also members of the advisory committee to the VDC. Both clusters of legal settlers are represented. The treasurer has gone to Malaysia. Six members have to present at meetings and, according to the WUC, the CHVs and VMWs are also invited. However, the CHV interviewed had not attended WUC meetings and the VMW only once. Minutes of the meetings are kept.

The WUC and the villagers interviewed felt that the scheme belonged to them. The villagers, including women, seemed to be fairly well aware of the scheme, how money was used, about the O&M system, the WUC etc. and they were quite satisfied with the water supply. Water for farming seemed to be their most urgent need.

The WUC has not used the capital, which was kept on an account giving an 7.5 % interest. The interest was taken out for the first time just a few days before our visit. The WUC divided the interest between the wells, which made it 147 NER/well. No regular fees have been collected.

The WUC had not received pre construction training and they were not satisfied with post construction training. They wished that the RWSSP would arrange a refresher type two-day seminar on sanitation and management.

OPERATION AND MAINTENANCE

There was enough water and the service level was good for the legal settlers of the scheme area, but not for illegal settlers. Water of the wells was also used for washing, cleaning, bathing and for cattle. Waste water was used for vegetable gardens.

Two wells were giving muddy water. An overseer and a WSST from the DWSO had been informed about the problem one year ago just before the hand over, but nothing had been done.

There are four VMWs in the ward each having a certain number of wells under his responsibility. One VMW will go to India. We were told that the users of the wells under his responsibility knew how to change a washer, and that other VMWs would help when needed. He was not going to be replaced by a new VMW.

Bucket washers had been changed every 3-4 months and flapper valve washers every 6 months. Also nuts and bolts were regularly needed. It takes altogether 2-3 days to buy a new washer and change it. No stocks of spare parts were kept. Before the interest was divided between the wells for O&M, the users of the well collected the money between themselves. One person per well had been nominated to collect the money and organize the purchase either from Butwal or from ward no 7. The VMW needed one helper to change a washer or a flapper valve. VMWs were not paid. The male members of the WUC told that women did not take part in maintenance unless men specifically told them what to do.

The VMW was satisfied with his training. He wished to receive further training on how to make threads into pipes. He complained that the wrenches provided by the RWSSP were too small for some bolts, but he could borrow right size wrenches from other villagers.

HEALTH AND SANITATION

Three CHVs had been trained by the RWSSP but one box had been returned. They had been selected by a mass meeting. The CHV interviewed had a full health kit box that she had refilled many times. She wished that she could also give medicine against worms. The price for medicine is determined according to the market price, but sometimes medicine is also given free. The CHV kept records of the medicine, health problems and health kit box funds.

The CHV did not attend WUC meetings. Once monthly she attended Mothers' Group meetings where vaccination from the Health Post was given. She criticized the local VHW very heavily for dominating the villagers and taking advantage of them by charging too much money. She found other Health Post members co-operative. She told that the WUC members also sometimes give her money to help to refill the box. Her training had given her enough skills to take care of the most common health problems, but she wished more training on sanitation. She wished that she could be paid for her services, but was prepared to continue to work as before. The villagers seemed to be satisfied with the CHVs. They told that diseases were decreasing though they still had diarrhoea.

There are about 50 kuchha latrines in the ward according to the WUC, almost all of them built after the project started. The villagers felt that latrines were too expensive. Ten WUC members and the CHV interviewed have had a latrine after the project started. The school also had a latrine.

VILLAGE DEVELOPMENT COMMITTEE

The chairman, vice-chairman and some members of the VDC were interviewed. They told that there had been no need for a VDC-level WUC since many VDC members are also members of the wardwise WUCs.

The VDC had used 15,000 NER this year to sludge two new wells. Last year there had been one successful and one unsuccessful well sludging. The VDC was going to arrange a meeting of wardwise WUCs to discuss the possibility to form a common fund, including a monthly fee, for all the schemes of the VDC. The VDC was thinking that the wardwise WUCs would shift some of their funds and get a share of the decision power of the use of the common fund accordingly. The VDC thought that a common fund would provide enough interest to sludge new wells to replace dry ones. We hoped that the VDC would inform the RWSSP about the future meeting.

The VDC was concerned with the water supply of illegal settlers. The 300,000 NER provided by the Government, however, is used for road and bridge construction and drainage.

FIELD REPORT

Scheme name and district	GAJEDI, Rupandehi
Scheme type	Shallow tube well
Ward visited	8
Number of wells	13
Construction started/completed/hand over	12.91/7.93/6.94
Population	574
Average population per well	44
Ethnic composition (%)	Bahun/Chhetri 55 Magar/Gurung 17 Tharu 11 Kami/Damai 3 Others 3
Date of field visit	March 20, 1995

CONSTRUCTION MANAGEMENT

Gajedi ward no 8 has 13 shallow tube well of which one is artesian. There are 70 hhs according to the WUC (94 according to the DDP), 14 of them are illegal settlers.

A total amount of 6,500 NER was collected for O&M fund. The 500 NER/hand pump was divided between the users of the pump according to their ability to pay, making the fund/hh 20-100 NER. A few poor households did not pay but provided extra labour instead. Illegal settlers are in the same position as in Gajedi ward no 2.

Women provided some light labour (e.g. sand filtering, passing light loads) if men were not present in the household. For construction one man had been hired from outside the ward, but most work was done by the community.

POST CONSTRUCTION MANAGEMENT

Three mass meetings have been arranged before and during construction. Items discussed were: 1) collecting data about households and about the need of wells, well siting and land easement agreements; 2) formation of the WUC and fund collection and 3) role and responsibilities of the WUC. According to the WUC all households have participated. Minutes of the meetings have been kept. A Chaukidar is used to deliver information and call people to meetings. Both the WUC and villagers interviewed felt that the scheme was theirs.

The WUC consists of nine members of which five are Bahun or Chhetri, three Magars and one Thakali. All five clusters of the ward are represented. The VDC chairman and one VDC member are in the WUC. Both VMWs are also members. There are no women in the WUC, but the WUC promised to add two women when the question was taken up. The CHV usually attends meetings, but sometimes she has not been informed about them. Five members have to be present. The villagers did not seem to know much about the WUC.

The WUC has had four meetings so far. Items discussed have included the selection of the CHV and the VMWs, O&M problems and the use of interest. There are also informal wellwise meetings to discuss O&M questions and to decide about the use of the wellwise O&M money.

The fund was earlier kept on a fixed account giving an 14 % interest, but was later moved onto a savings account, on which the interest rate is 8 %. The capital has not been used, but the interest of 1,639 NER was divided three months ago equally between the wells, which gave an wellwise O&M fund of 117 NER. Interest is planned to be taken out yearly from now on. No fees have been collected yet, but the WUC is going to call a mass meeting to decide about a monthly fee of maybe 2-5 NER/hh to build up the fund. The men interviewed knew the basic facts about the financial arrangements, but women seemed to be totally uninformed.

The WUC found both the pre and the post construction seminars effective and practical. They did not feel any need for further training for themselves.

OPERATION AND MAINTENANCE

There is enough water at least for the legal settlers and the water from the wells is clear. Waste water is used for farming.

The two VMWs of the ward have not had any major problems, washers have been changed about every six months and nuts and bolts have been changed and greased during the occasional check-ups. Mostly the villagers change the washers themselves and the VMW intervenes only when needed. Before the interest was taken out the households of a particular well rotated the turn to buy a washer from the next VDC (about 5 minutes walk) and to change it. It usually takes 3-4 days before a washer is changed. The WUC saw no role for women in the maintenance.

The VMWs felt that their training had been sufficient and that further training was not necessary. The villagers thought, however, that the VMWs needed more training to do major repairs. In case of a major problem the WUC would go to the DWSO, which has promised technical help.

HEALTH AND SANITATION

The CHV selected by the villagers had a health kit box containing only Cetamol, Jeevan Jal and condoms. She wished that she could also use medicines for stomach aches and high fever. The box had been refilled four times. The CHV complained that the availability of medicines was not good. She sells the medicine for a market price as decided by the WUC. Jeevan Jal and sometimes also other medicines are given free to poor people. The WUC used also the health fund interest for O&M purposes but collected money to buy medicines whenever needed.

The CHV keeps records of the use of medicine, health problems and health kit box money. The Health Post had given her training on family planning and help her whenever she asks them about health problems. She found her training quite sufficient, but wished that more training would be given to her about different diseases and minor surgery. She hoped that there would be one more CHV in the ward, preferably a male.

There were only two latrines in the ward before the project started. Now the number is 25 (only two pucca latrines). Concrete rings have been made for 28 latrines as a result of latrine promotion by the project. Some villagers complained that they cannot afford to make latrines with rings. They estimated that such a latrine would cost around 700-1,000 NER. All WUC members have a latrine but the CHV does not. The WUC wished that there would be health and sanitation education for the villagers.

OTHER USER COMMITTEES

There is a VDC-level road construction committee and wardwise bridge construction and forest protection committees. Villagers provide labour for road construction and bridge building, but they are not collected funds nor material.

FIELD REPORT

Scheme name and district	HATHAUSA, Kapilbastu	
Scheme type	Shallow tube well	
Ward visited	8	
Number of wells	25	
Construction started/completed/hand over	5.92/12.93/12.94	
Population	894	
Average population per well	36	
Ethnic composition (%)	Bahun/Chhetri	50
	Magar/Gurung	2
	Tharu	36
	Kami/Damai	2
	Others	9
Date of field visit	March 15, 1995	

CONSTRUCTION MANAGEMENT

A main fund of 8,279 NER had been collected and deposited on an account three years ago. Most households paid 75 NER, a few of the poorest paid between 35-60 NER and couple big landowners up to 100 NER. One villager suspected that not all the cement reportedly used for platforms had in fact been used for that purpose. He did not, however, accuse any particular person or body.

Households that already had their own wells did not pay nor use the new wells. Illegal settlers did not pay and do not have their own wells, but they provided voluntary labour just as others and are allowed to use the well of the next cluster.

Only men participated in construction work. Households that did not have men were freed from providing labour. The WUC considered that women were too busy with other work to participate. The only task considered suitable for women in the maintenance of the water supply system was platform cleaning.

The amount of labour was 15 days/hh. Households that were reluctant to participate were threatened with extra payments. After that they hired someone else in the ward to do their share of labour for them.

POST-CONSTRUCTION MANAGEMENT

The scheme was handed over last week of February in a VDC meeting where all wardwise WUCs, VMWs, CHVs and one teacher from each of the six schools of the VDC were invited. The WUC felt that the ward people owned the scheme.

Two mass meetings have been arranged. Items discussed included formation of WUC, fund collection, division of voluntary work and well siting. There had been no major controversies.

According to the WUC 100-120 men have attended meetings, more Tharus than Bahuns. Minutes of meetings were available.

The WUC has 13 members, of them seven Bahuns, five Tharus (including the chairman) and one Sarki. Two CHVs are members of the WUC. The VMWs do not attend meetings. One WUC member represented the ward in the VDC. There are three clusters in the area, but the one with only illegal settlers is not represented in the WUC. At least 50 % of members (7 out of 13) have to be present. Two meetings were arranged before and one after construction. Minutes were kept.

The main fund is 12,720 NER at the moment. It is kept on a savings account, which gives an 7 % interest. The exact division between capital and interest could not be clarified during the interview. The WUC has not used nor plans to use the capital or interest. Money necessary for O&M will be collected from the users of a broken well. Fees are not collected regularly. The WUC promised that a mass meeting will be held later in March to discuss the use of funds.

The WUC hoped to get only technical support from the DWSO or the RWSSP. They had attended a three-day post construction seminar but no pre construction seminar. They felt that further training on health questions and on environmental sanitation, also for the users, would be useful.

OPERATION AND MAINTENANCE

The water supply system seemed to be working well. There is enough water for everyone in the scheme area. The WUC was going to forbid women to use platforms for washing dishes, since they did not clean them afterwards.

Clusterwise meetings had selected the three candidates for VMWs, which the WUC then nominated. Criteria for choice were honesty, trustworthiness and likelihood of staying in the village. VMWs received no remuneration and they had not needed help so far.

Washers, nuts, bolts and taps were the spare parts most often needed. The users of the well collected the money for spare parts and bought them from Taulihawa, sometimes from Butwal or Bhairahawa. The VMW interviewed had only once needed to change a washer to a hand pump. He did not do regular check-ups of the facilities.

HEALTH AND SANITATION

There had been a cholera epidemic before the construction of the wells in the area, after people had drunk polluted water from a pond. Three persons had died. After construction of the wells there had been no cholera and less people were suffering from worms.

There are two CHVs in the scheme area selected by a mass meeting. The CHV interviewed had a full health kit box, which she had refilled 6-7 times with Cetamol, ear drops and eye drops. Other items were needed less often. Medicines were available from Butwal. She sold the medicine for a price set by the WUC, but liquid for cuts was given free. She also sold medicine on credit, which had caused her personal expenses, since some of the patients did not pay afterwards. Records of the medicine, health problems and health kit box funds were kept.

CHVs help the VHW with vitamin distribution, immunization and family planning. They provide the Health Post with records of morbidity and mortality. They also give health education.

The CHV interviewed felt that her training had given good skills for a minimum treatment. She hoped for more training concerning other medicines and diseases e.g. pneumonia, typhoid, jaundice, hydrocell problems and fainting.

The WUC estimated that 90 % of Bahuns had a latrine while only one Tharu household (the CHV's, one of the poorest) had one. Four Tharus out of five in the WUC did not have a latrine. The Tharu chairman of the WUC, who also did not have a latrine, promised to call a Tharu meeting to start latrine building among them. The chairman of the VDC-level WUC was also optimistic that the Tharus are slowly understanding the importance of latrines. The secondary school of the scheme area had a latrine.

VDC-LEVEL WATER USER COMMITTEE

The VDC-level WUC was formed in February at the hand over meeting of all the schemes of Hathausa VDC, which decided that it was needed. The VDC-level WUC has 17 members, 1-4 members from each wardwise WUC. The VDC-level WUC is headed by the chairman and the vice-chairman of the VDC, who themselves are not members of wardwise WUCs. They are going to have monthly meetings.

The wardwise WUCs will submit monthly written reports to the VDC-level WUC about the water supply situation. The VDC-level WUC will contact the DWSO if necessary. According to the chairman the VDC-level WUC is responsible for the schemes in the VDC. The WUC of Hathausa Ward no 8, however, did not see any need for a VDC-level WUC except the provision of tools not given to the wardwise WUCs.

The chairman saw the provision of materials and tools as the main function of the VDC-level WUC. They rotate the ring casting frames for latrines borrowed from the DWSO among wardwise WUCs and provide them expensive and heavy tools and spare parts, like G.I.pipe, chain wrench, pipe wrench, iron chain and slab casting frames. They have not received the tools yet, but they have been promised them by the DWSO and the RWSSP.

The Hathausa VDC has 300,000 NER (next budget year) from the Government, 30,000 NER for water supply from the DDC and 10,000-15,000 NER in local taxes at its disposal. According to the VDC chairman those funds "may be used if there occurred a sudden problem in the water supply". He said that if wardwise O&M funds were not sufficient, the wardwise WUCs should first ask the main WUC for money.

FIELD REPORT

Scheme name and district	MASINA, Rupandehi
Scheme type	Shallow tube well
Ward visited	3
Number of wells	10
Construction started/completed/hand over	3.92/12.93/8.94
Population	100 households
Average population per well	10 households
Date of field visit	March 21, 1995

CONSTRUCTION MANAGEMENT

Masina VDC ward no 3 has been moved to Jogada VDC. There are 100 households (no illegal settlers) according to the WUC.

5,000 NER was collected for the main fund and 300 NER for the health fund. 40-60 households, not necessarily poor ones, did not pay their share of the fund nor participated in the community work, because "it is a Government project, why should we pay". They provide money for spare parts, however, and are allowed to use the wells.

The 500 NER per well was divided between the remaining users of the hand pump. The WUC told that the amount was divided equally between the users of the hand pump, but the villagers said that there were no hard and fast rules and people paid according to what they could afford.

Households provided 2-7 days labour for sludging and 3-4 days for platform construction depending on the well. Only men participated. Households that were absent at the time of construction did not provide any payment nor materials instead.

POST CONSTRUCTION MANAGEMENT

Two mass meetings were held before construction discussing fund collection, WUC election and siting of wells. One meeting was arranged after construction and one for the handing over ceremony. Attendance has been around 50-60 people, with only 2-4 women participating. Minutes of the meetings are kept. Both the WUC and the villagers interviewed felt that the scheme belonged to them.

The WUC consists of seven men: four Dawal, two Yadab and one Gupta. One of them is the VMW and one is a teacher. The CHV does not attend meetings. Usually 6-7 members are present the minimum requirement being four. Minutes are kept. Three WUC meetings have been held so far discussing e.g. the division of labour and O&M questions.

Neither the capital nor the interest of the fund has been used. The capital is kept on a fixed account, but the interest of 1,300 NER has been removed onto a savings account. The WUC

told that if a major problem occurred they would use the fund to sludge a new well and collect fees if necessary. The WUC was going to call a mass meeting during the same month to discuss the collection of monthly fees. The villagers wanted information about the interest.

Women did not participate in the construction, operation or maintenance of the water supply system. The WUC told that women hesitate to go to a mass of men, and the male villagers said that "women are only for cooking and cleaning". The WUC had not heard of the recommendation of two female in the WUC, but promised to add them in the next mass meeting.

OPERATION AND MAINTENANCE

The WUC felt that there was enough water for everyone in the ward, but the villagers wanted more wells. They said that they had to wait 30-45 minutes in the morning to get water. Waste water was not used.

One hand pump had given sandy water for three months. Some hand pumps had handles that required extra force to move them and some handles thrust back when pulled down.

The bucket washers last between 15 days and 6 months, the other hand pump type needing more frequent changes than the other. The minimum age of a flapper valve washer is one year according to the VMW. Nuts and bolts are also often needed. The users of a well collect the money for the spare parts among themselves and buy them from the same cluster, nuts and bolts from a nearby bazaar. Money is provided also by the households that did not provide money to the O&M fund. Many users know how to change the washers and bolts themselves and the VMW does it only when asked. Two persons are needed to change a washer.

The VMW was satisfied with the support given by the WUC and the RWSSP. He found his training practical, but wanted to know how the hand pump worked at the lower end of the pipe, and why the handles were sometimes hard to move and sometimes thrust back.

HEALTH AND SANITATION

The only CHV of the ward was not present for an interview. Villagers had contacted her in cases of stomach ache and fever. They told that "she finds it difficult to give medicines since she is not educated".

There were no latrines in the ward. The WUC thought that "it is better in the open air than in a closed building". The villagers thought that latrines were important, but complained that they were too poor to build them.

OTHER USER COMMITTEES

There is an irrigation committee and a forest protection committee. The World Bank financed groundwater irrigation system was managed by a five-member UC elected by a mass meeting. The community participated in material transportation and trench digging. The UC managed a 4,500 NER fund, which had been collected on the basis of 300 NER per hectare. They also collected a fee of 30-40 NER per hour of water used.

FIELD REPORT

Scheme name and district	MASINA, Rupandehi
Scheme type	Shallow tube well
Ward visited	2
Number of wells	6
Construction started/completed/hand over	3.92/12.93/8.94
Population	65 households
Average population per well	11 households
Date of field visit	March 21, 1995

CONSTRUCTION MANAGEMENT

Masina VDC ward no 2 has been moved to Jogada VDC. There are six shallow tube wells for 65 households according to the WUC. An O&M fund of 3,200 NER was collected from households according to what they could afford. Some very poor households were freed from the payment. Men provided most of the community labour, women participated only in portage. There was no strict division of labour.

POST CONSTRUCTION MANAGEMENT

Four mass meetings have been held, one to elect the WUC, one to decide the well sites, one about sanitation and one for the hand over ceremony. The WUC claimed that all households had attended meetings, but no minutes had been kept to verify it. Both the WUC and the villagers felt that they owned the scheme. The villagers were satisfied with the amount of information they had received.

In the beginning there had been a VDC-level WUC, which had become passive after wardwise WUCs were formed. Three WUC meetings had been held together with the WUC of the adjoining ward no 3 WUC. Matters discussed at the meetings have included sanitation, O&M and cleanness of the platforms. Minutes had been kept. Four out of the seven WUC members have to be present. The VMW is a member of the WUC and also the CHV has attended meetings. There are no female members in the WUC since "women are so shy". Two members had attended the post construction seminar.

The capital of the O&M fund is kept on a fixed account and the interest on a savings account. Neither the capital nor the interest had been used. The amount of interest so far was not known by the WUC members interviewed (chairman not present). They planned to use the existing funds for small O&M items. Fees had not been collected. The villagers seemed to be well aware of the financial arrangements of the scheme.

OPERATION AND MAINTENANCE

There seems to be enough water for domestic use (drinking, washing, bathing, washing dishes), but the villagers complained that some households have to go far to fetch water. They told that people had to wait for about half an hour to get water. Waste water was used for irrigation. The ward population is increasing yearly by 10-15 households according to the WUC, so they want two more wells in ward no 2 and four more in ward no 3.

One well has given sandy water since the beginning, but the WUC has not informed the DWSO about it. As in ward no 3, the users of a well collect the money for the spare parts among themselves and buy them from the same cluster, nuts and bolts from a nearby bazaar. Bucket washers are changed every two months or so and the change takes 2-3 days. The ward has one VMW who was not available for an interview.

HEALTH AND SANITATION

There is one CHV in the ward trained by the Government, which also provides her the medicines from time to time. She was selected by the villagers and attends a Mothers' group meeting once a month. The WUC has not supported her so far but she attends their meetings.

The sanitation situation seemed to be quite poor. There are no latrines and the people and the environment were not clean. Many villagers did not seem to be aware that many diseases are borne due to these problems. Both the WUC and the villagers told that the lack of latrines was due to the poorness of the people. The WUC estimated that a pit latrine with a concrete floor would cost 2,200 NER. The villagers wished that the Government would build the latrines for them.

FIELD REPORT

Scheme name and district	MOTIPUR, Kapilvastu
Scheme type	Lift tube well
Ward visited	7
Number of wells	12
Construction started/completed/hand over	3.93/7.93/-
Population	1075
Average population per tap	90
Ethnic composition (%)	Bahun/Chhetri 77 Magar/Gurung 5 Newar 1 Muslim 1 Tharu 13 Kami/Damai 4
Date of field visit	March 14, 1995

CONSTRUCTION MANAGEMENT

The WUC had collected 125 NER per household. 18,000 NER was required for the main fund and 900 NER for health kits. As the money collected amounted to more than required, the WUC deposited 19,000 NER for the main fund and the required 900 NER to health fund. The money that was still left over was kept by the WUC for spare parts. The fund was originally collected in Indian currency, but later changed into NERs as the Indian currency depreciated.

7-8 households said that they did not have money, but promised to pay later. So far they have not. They, as well as people who have moved in after the fund collection, are also using the wells.

Community labour was provided by men, if they were present. Otherwise women did the work. Amount of work/hh was 24 hours. 60 NER was the punishment for households that did not provide labour, if it was available. Only 2-3 households did not participate in the construction.

POST-CONSTRUCTION MANAGEMENT

There were three mass meetings during construction: to decide about fund collection, well sites and organizing voluntary work. Since the completion of construction no mass meetings had been arranged yet. According to WUC more than 150 people attend meetings. The minutes of one meeting had only 57 names, though. The villagers interviewed said that men had attended.

Water point selection, the amount of fund and reluctance to work had raised most discussions. The decisions were, however, made unanimously. Villagers had been informed about

the scheme mostly in mass meetings. As the scheme had not been handed over, the WUC said that it was owned by HMG and FINNIDA.

The WUC has 17 members, three of whom are women. 14 members are either Bahun or Chhetri. Each cluster has at least one member in the WUC. One WUC member is also a member of the VDC. All four VMWs and one CHV belong to the WUC, other CHVs are also invited to meetings. However, the two CHVs interviewed had not attended meetings. At least nine members need to be present at the meetings. Decisions are made unanimously. The WUC had met four times at the time of mass meetings. The villagers knew at least one WUC member.

The main fund is deposited on a fixed account, but the bank has asked the WUC to move it to a savings account. The capital or the interest has not been used yet. The amount of interest was not known. No fees had been collected so far. If the interest does not cover O&M costs, the next mass meeting will discuss monthly fees. Villagers knew that the money had been deposited for O&M. They had been informed about the fund at mass meetings.

No pre-construction seminar had been held according to the chairman, only 1,5 hour discussions with RWSSP about responsibilities of both sides. Post-construction seminar had not been held either.

The WUC saw no active role for women in water supply. During construction they did light work. Lift tube well O&M is mainly heavy work and not suitable for women. Only platform washing was considered women's work.

OPERATION AND MAINTENANCE

According to the WUC water is used only for drinking during dry season, other times also for bathing, washing and for cattle. According to the VMWs the amount of water had decreased since sludging period. The chairman of the WUC said that two more wells were needed for sufficient drinking water. The WUC had no plans to build up the O&M fund, since they felt that they were not responsible for rehabilitation after a possible major breakdown.

In one Tharu cluster people were using an old well instead of a lift tube well across the road, as it was giving only little water probably as a result of broken washers. The VMW of that well told that he had run out of washers. He promised to contact a WUC member soon about the problem and open the pump. Another well, it was told, did not give as much water as under construction. In one well the water level in the pipe dropped down during night, and people had to use the handle for 15-20 minutes before getting first yellow water, and only after pumping about 200 liters did they get clear water. The WUC added that one well occasionally gave muddy water.

There are four VMWs selected on a clusterwise basis by the ward leader. They are not paid for their work. Broken washers, nuts and bolts were the most common problems. In one well washer had to be changed four times during last month. The VMWs told that they immediately tried to solve problems and did not see any need for regular check-ups as people immediately told them about problems. Two villagers were needed to help them e.g. to change a washer.

The VMWs complained that they did not have tools for raiser pipe maintenance even on VDC-level and that had been given only three maintenance boxes for four VMWs. The trainer

had told them to get spare parts from India. So far no spare parts had been bought. They found their training effective but needed more knowledge about maintenance of underground parts.

HEALTH AND SANITATION

There are three CHVs in the ward, two selected by a mass meeting and trained by the RWSSP and one by DHO. Some items in the health kit box, like Cetamol, had been refilled about 20 times, others less. CHVs sold the medicine for the same price as they had bought them from Butwal. However, some money had been provided by CHVs, since some patients had promised to pay later but failed to do so. The WUC promised that the matter would be discussed in the next mass meeting.

Patients with e.g. big cut injuries, dysentery and high fever are sent to Health Post or to hospital. The Health Post provides vitamins to children twice yearly and the CHVs distribute them according to their lists. The CHVs considered their training sufficient to use the medicines in the health kit, but wanted more knowledge to be able to use medicines against cough, fever and dysentery.

The CHVs told that they did not know who would support them. They said that there had not been any communication between them and the WUC so far.

The WUC estimated that there were 40 pucca and 20 kuchha type latrines in the 184 households of the ward. 40 latrines had been built since the project started. The school toilet was just being built. 10 WUC members had pucca and two kuchha latrines as well as the CHVs. The villagers living close to a forest (about 20 interviewed) did not have latrines, as they used the forest, and did not see any reason for building them.

FIELD REPORT

Scheme name and district	BHATUKUWA, Gulmi
Scheme type	Gravity
Ward visited	7-9
Number of taps (in sub-schemes)	23 (17,3,2,1)
Construction started/completed/hand over	12.91/7.94/4.95
Population	1491
Average population per tap	65
Ethnic composition (%)	Bahun/Chhetri 77 Magar/Gurung 5 Kami/Damai 12 Others 6
Date of field visit	April 20, 1995

CONSTRUCTION MANAGEMENT

The Bhatukuwa water supply scheme has a main scheme of 17 taps and three sub-schemes with altogether six taps serving a total of 228 households. The hand over took place the day before the interviews.

1,000 NER per tap was collected for the 23 taps and 1,500 NER for the CHVs divided equally among all households, which paid little more than 100 NER each. No households had problems in paying.

Before the project was started 3-4 mass meetings were held to motivate people to provide community labour. About half of the villagers did not believe that there was going to be a water supply system and were not prepared to provide labour. In the end all households provided labour. Porterage, material collection and construction work was divided equally between men and women. When building the 17 km long main line only men went to work, since they had to stay away from home at least five days at a time.

POST CONSTRUCTION MANAGEMENT

Three mass meetings have been held since the start of the project. In the first one the WUC was elected, in the second the scheme design was approved and the fund collection was decided and the third was held to provide information about the scheme during construction. According to the WUC 95 % of the households attended, one member/hh. About 400-500 people were present at the hand over. In the mass meetings some people were not satisfied with tap sites and some people complained that there was not enough water. Minutes of the meetings are available.

The WUC consists of 18 members, eight from ward no 8 and five from ward nos 7 and 9 each. There are 15 Bahuns and one Thakuri, Magar and Bika each. In addition to the VDC chairman, who is the WUC vice-chairman, there are three VDC members in the WUC. Ten members are needed at the meetings but usually all are present. There are two female

members, and the CHVs and the VMWs attend when necessary. Altogether a total of 53 meetings have been held, seven of them after the construction. The meetings after construction have been concerned mostly with the hand over, but also fee collection and the financing of spare part purchase have been discussed. Minutes are kept. Both the WUC and most of the villagers interviewed felt that the scheme was theirs.

Five members of the WUC had attended a two-day during construction seminar and three members a post-construction seminar. They found them useful and wished that all members could have attended. The WUC also hoped to have further training about the maintenance of taps to more people and about sanitation.

22,000 NER of the O&M fund is kept on a fixed account giving 8.5 % interest, earlier the interest rate was 13 %. 1,000 NER is kept on a savings account giving now 7 % (earlier 8.5 %) interest. The health fund of 1,500 NER is kept on a current account with no interest. The bank used is Rastriya Banijya Bank. The amount of interest was not known in the interview. Interest has been used for stationery, for the travels of WUC members and to buy medicine for the CHVs in the beginning. Now medicine prices are only subsidized from the interest. The monthly fee of 5 NER per household, decided in a mass meeting, has been collected since December 1994 to the other VMW, who is responsible for the maintenance of the main pipe line and the intake.

OPERATION AND MAINTENANCE

There is usually enough water in the scheme area. On Saturdays and during the dry season there is often a shortage of water during the day, as the reservoir tank gets empty and the pressure is low in most taps. Sometimes there is no water at all. The WUC complained that the reservoir tank is too small, as there is always an overflow from it. The intake itself is giving enough of water according to them. Some people use water for kitchen gardening. Waste water is used for cattle from four taps. Villagers told that they sometimes have to wait for 30 minutes to get water from the taps, in one tap even one hour if the pressure is low. Some also told that they receive enough water for drinking only. They were mostly satisfied with the water supply anyway. One villager suspected that there may be sand and mud in the water, since the intake is not covered.

There are two VMWs in the scheme. One is responsible for the maintenance of the pipe lines and the intakes and is paid about 1,100 NER per month from the fees collected. The other one, who is not paid, only takes care of the taps together with the other VMW. The "main" VMW interviewed thought that their training was sufficient and did not feel any need for further training. Most villagers seemed to know the VMWs.

The VMW, with the help of villagers, had to repair 22 leakages in the HDPE pipe, which is often broken from the joints during winter, maybe as a result of coldness. Once a landslide had broken the G.I. pipe. The WUC suspected that the special kind of G.I. pipe used in the scheme would not be available from the market and wished that the RWSSP would provide it to them. The VMW checks the facilities at least 3-4 times a month, also the intake which is four hours away. Washers had been changed 14 times. Money for spare parts is taken from the interest and the VMW buys them from Butwal. He keeps a stock of washers. The WUC told that they were ready to use the fund in case of a major breakdown but that they would probably have to go to the DWSO as "the fund is not enough". They had no plans to build up the fund, though.

HEALTH AND SANITATION

Six CHVs had been trained first three years ago by the project (seven days) and later one year ago by the DHO (ten days). Only five CHVs had received boxes, however, since only 1,500 NER had been collected. Four CHVs were interviewed.

The CHVs selected by a mass meeting had attended WUC meetings 3-4 times. Their boxes were quite full and had been refilled about 6-7 times. Originally more medicines had been given by the RWSSP, but after the DHO training the project told them to use only the ones that they now have.

The first box of medicines was given away free by the CHVs although they were told to sell them. A mass meeting decided that the money would be taken from the interest. The WUC later decided that the medicines would have to be sold, since the interest was not big enough. The prices for the medicines, as determined by the WUC, are 1/3-1/2 lower than market prices. The WUC has used 2,500 NER for medicines so far. No medicines are given free anymore. A WUC member buys the medicine from Butwal. The CHVs keep records of the medicine, of health problems and of the money received and used.

In the beginning the CHVs went from house to house to promote latrine building together with RWSSP staff. There is a Mothers' Group consisting of 11 members in each ward. Once a month they have a meeting, where the VHW and the CHVs teach about sanitation, latrine building, nutrition, vaccination etc. Usually more than 25 people attend. The CHVs help the VHW with vaccinations once a month.

Most villagers interviewed told that they go to the Health Post in Ridi, which is not far away, because they do not believe in the CHVs ("she is not a doctor") or because they have medicines only for minor diseases. However, the CHVs were quite satisfied with their work, but felt that they should get some money for it. They found their training useful, but wanted refresher training. They thought that midwife training would also be necessary. They hoped that Mothers' Group members would receive health education as well.

They complained that they were told to weigh newborn babies at the project training, but had not received scales to do that nor a measurement tape to measure malnutrition, although taught so at DHO training.

According to the WUC there were 3-4 latrines before the project was started, now the number is about 65, all of them pucca type. The villagers met had pit latrines, though, and some of them had been filled with no new ones dug. Reasons given by villagers not having a latrine were "no time" and "no money". Slides had been shown by the RWSSP and HMG to promote latrine building. 12 WUC members and all CHVs have a latrine as well as both schools.

FIELD REPORT

Scheme name and district	DEDGAON, Nawalparasi
Scheme type	Gravity
Ward visited	3-5
Number of taps (in sub-schemes)	12 (8,4)
Construction started/completed/hand over	2.93/7.93/1.95
Population	733
Average population per tap	61
Ethnic composition (%)	Bahun/Chhetri 8 Magar/Gurung 40 Newar 21 Kami/Damai 27 Others 3
Date of field visit	March 28 and 29, 1995

CONSTRUCTION MANAGEMENT

The gravity scheme in Dedgaon ward nos 3, 4 and 5 includes 12 taps that are used by 107 households. The other sub-scheme serving ward nos 3 and 4 has eight taps and the smaller sub-scheme of ward no 5 four taps. Magars and Newars are the biggest groups in ward nos 3 and 4 while ward no 5 is totally populated by low-caste Bishwakarmas.

An O&M fund of 11,000 NER was collected (one tap is used by a Health Post) and the 1,000 NER/tap was divided equally among the users the share/household being 100-139 NER. 1,500 NER were collected for the health fund for five CHVs. All households paid their share.

Construction work was divided between households according to the number of persons in the household (including children). Labour for construction was needed for an average of three months. Portage, material collection and construction was done mostly by men, but women also participated. All households except one old man provided labour.

POST CONSTRUCTION MANAGEMENT

The WUC feels that their main responsibilities are to take care of the taps, arrange maintenance work and keep platforms clean. If there was a major breakdown, money and technical help would be needed from the DWSO and the RWSSP. They had not thought about building up the fund for a possible major breakdown. Both the WUC and the people interviewed had a feeling of ownership of the scheme. The men in ward nos 3 and 4 seemed to be fairly well aware of the scheme matters, while both women and men in ward no 5 were less informed.

Three mass meetings have been held: (1) before construction, to choose the WUC, to decide about fund collection, to motivate people and to approve the scheme design; (2) during construction, to decide how to use the funds and (3) after construction, to have the handing

over. According to the WUC there were no major controversies. Mass meetings have been attended by 35, 24 and 67 persons respectively according to the minutes. Peon invites the people to the meetings.

The WUC has 20 members including five CHVs and all taps have their own representative. One VMW (staying in Kathmandu at the moment) is a member, and the other is called to the meetings when needed. The ethnic composition of the WUC corresponds fairly well with that of the whole scheme population with 8 Magars, 6 Newars and 6 Bishwakarmas in the WUC. All members are farmers. Usually all members are present, the minimum required being 12. Altogether 22 WUC meetings have been held so far with minutes available. Items discussed have included e.g. fund collection, maintenance questions and problems of the CHVs. The WUC had a two-day seminar before the hand over and wished to receive further training on maintenance work, especially on how to get taps durable.

The WUC loans the 12,500 NER capital of the funds to its members for different purposes with an 30 % interest. Loans are paid back with the interest after one year. If a member cannot pay the loan back otherwise, the amount will be taken by selling his property. So far this has not been needed during the two years that the system has existed.

The capital has not been touched, but 3,750 NER of the interest has been used to build a collection chamber and control valves to the pipes and to buy stationary etc. to the WUC. The WUC plans to build one more collection chamber and more control valves. The WUC has decided to collect fees to pay 200 NER/month for the VMW of the bigger sub-scheme and 100 NER/month for the VMW of the smaller sub-scheme. The WUC has not been able to collect the money from the smaller scheme so far. The VMW of the bigger scheme stays in Kathmandu for long periods and is not paid for those months. The basis for the fee/household is the number of persons.

OPERATION AND MAINTENANCE

The taps seem to give enough water for most of the time, in the dry season there is less water. During the monsoon season the water has been a little muddy, less so now after concrete and plastic protection around the intake.

In the bigger sub-scheme there has been two leakages in the G.I. pipes repaired by the VMW with the help of villagers. Taps and washers have also been changed. One tap near the VMWs house had been leaking for two months.

The VMW of the smaller sub-scheme complained that users and even the WUC members of that scheme did not pay very much attention to it. Users let the water run unnecessarily in spite of his instructions. He had mended the pipe line 2-3 times and changed taps twice for one tapstand. There had also twice been a leakage in the intake wall, which the VMW had repaired with concrete. He checked the facilities monthly. He collects the money for new taps from the users of the tap and organizes their purchase from Pokhara, since they are "too expensive" if bought from the village.

In one of the taps in the smaller sub-scheme water was running constantly at the time of the field visit. As a result of that the tap next to it did not give enough water. The VMW told that people of the broken tap had refused to give him money for a new one, since the tap was giving water anyway. The chairman of the WUC was unaware of the situation before the visit, but when he saw it, he promised to stop the water running from the broken tap by closing the control valve, until the users of that tap provided money for a new one.

The VMW of the bigger sub-scheme is away for about half of the time and will not get paid for that time. The WUC takes care of repairs during that time, but they are going to send another person to VMW training. The VMW of the smaller sub-scheme told that he would be satisfied if he was paid the 100 NER/month promised. He had expected to be paid from the beginning. He felt that he had received enough training to do his work.

HEALTH AND SANITATION

All five CHVs, trained by the DHO and the RWSSP, attended WUC meetings regularly. All had quite empty health kit bags that had not been refilled, because "market is far away in Pokhara and the medicines at the nearby medical store are expensive". They sold medicine for a price that is lower than the market price. Poor people were sometimes given free medicine. None of them had received money from the WUC so far.

There is a Health Post in the scheme area, which gives treatment and medicine for a constant price of 2 NER. As a result of that the CHVs have only had 10-12 patients each (mostly when the H.P. has run out of medicine) except for one CHV living in a cluster far from the Health Post and treating about 100 patients yearly. The CHVs also had difficulties to convince people that they had to sell the medicine although they had received them free.

Co-operation with the VHW and the Health Post is close. Every month a meeting is arranged to inform people about sanitation, environmental hygiene and health questions. The VHW attends these meetings and checks what the CHVs are doing. 40-50 people attended the first meeting, now the figure is about 10. They help the VHW with vaccinations and they get refresher training from the H.P. every year.

The CHVs keep records of medicine, health problems and the funds except for one who is illiterate. They were frustrated because of the lack of patients, because people do not believe that they have to charge for the medicine, and because they are not paid for their services.

Nearly all households in ward nos 3 and 4 have latrines now after latrine promotion (information, pamphlets etc.) by the RWSSP. Households with biogas tanks have pucca latrines. Before they had only 2-3 latrines. Ward no 5 has only about three latrines. All WUC members and CHVs use a latrine. There is also a latrine at the Health Post and they were planning to build a latrine for the school.

OTHER USER COMMITTEES

There is an irrigation committee with 13 members and mass meetings of the users of irrigation. The project had received financial help from the World Bank and HMG during construction. Their fund was collected from the users of irrigation according to field area. A maintenance worker is called from outside the village when needed and the villagers help him.

FIELD REPORT

Scheme name and district	DEUCHULI, Nawalparasi	
Scheme type	Gravity	
Ward visited	1	
Number of taps (in sub-schemes)	40	
Construction started/completed/hand over	3.93/12.94/5.95	
Population	2038	
Average population per tap	51	
Ethnic composition (%)	Bahun/Chhetri	22
	Magar/Gurung	59
	Newar	4
	Tharu	1
	Kami/Damai	13
	Others	2
Date of field visit	April 2, 1995	

CONSTRUCTION MANAGEMENT

Deuchuli ward no 1 has a scheme with 40 taps and three reservoir tanks serving three clusters and originally 287 households. 42,000 NER was collected from the users, but only 39,000 NER needed to be deposited. The 3,000 NER left has been used for travels to the DWSO and for other WUC expenses. 1,500 NER of that money is still left. The 1,000 NER/tap was divided equally among the users of the tap making the fund/hh between 100-150 NER. According to villagers some poor households had difficulties to pay the money. The ten illegal households of the ward did not pay for the fund but provided labour, although less than others. They are allowed to use the taps. Only 1-2 households did not pay their share of the fund, but there were no sanctions against them. No money has been deposited for the three CHVs.

Women provided more labour for portage and material collection, but men did the construction. One member/hh was expected to work for 75 working days. 5-7 households refused to work, but there were no sanctions against them. 5-7 households that were not present at the time of construction were charged 1,400 NER, which was divided between those who worked instead of them. According to the WUC some households paid but some did not.

POST CONSTRUCTION MANAGEMENT

Three mass meetings have been held so far. In the first meeting people were told about the project and their approval to start it was received. The second was held to elect the WUC, to decide about the fund collection, and to decide the tap sites. In the third meeting the division of construction labour was discussed. According to the WUC 75 % of the households attended the meetings, 25-30 % of the attendants were women. Most discussion was raised by issues like who paid and who did not, who did not work, and what action should

be taken against non-payers and non-workers. Minutes were kept. The WUC felt that the scheme will be theirs after the hand over, which was to take place soon after the interview. Some of the villagers interviewed were not aware about the ownership though. According to the WUC some people think that the taps were brought by the Government like in the next VDC and that the WUC is misusing the money collected.

The WUC consists of seven members of whom two are Bahun, one Chhetri, one Thakuri, two Magar and one Bishwakarma. At least four members need to be present, usually attendance is six. Usually at least one VDC member is also invited to the meetings. There are no female members because "they are not interested in being in the WUC". CHVs are invited to the meetings, but usually they do not attend, the VMWs do.

"More than ten" WUC meetings have been held. The WUC discusses mainly the use of the fund, but also how to teach people to keep platforms clean, and earlier what to do to non-payers. Minutes of the WUC meetings are kept. The WUC had a one-day pre construction seminar. They hoped to receive more training about health and sanitation and about how to motivate people. They also hoped that RWSSP would give training to users about the use of taps and sanitation, since people listen to outsiders more than they do the WUC.

There are three sub-committees, one for each reservoir tank and the taps connected to it. Each sub-committee has five members elected by the WUC. They e.g. collect money for the VMWs and they are responsible for keeping the platforms clean. VMWs and CHVs attend their meetings if necessary. In addition ten group leaders have been elected by users of about four taps. They organized the community labour and they have attended WUC meetings 8-10 times. They are expected to distribute information to the users.

The 39,000 NER capital is kept on a savings account in the commercial bank with 7 % interest. The amount of interest is 5,000 NER. The capital or the interest has not been used, and the WUC has no plans to use them either. 20 NER/tap/month divided equally among the users has been collected clusterwise for VMWs. 20-25 households do not pay the fee, however, since "they do not care". The fee was determined in a joint meeting of the WUC, VDC and representatives of the clusters.

OPERATION AND MAINTENANCE

In the summer 3-4 taps do not give enough water e.g. in the evenings or during Saturdays because of low pressure. People from surrounding wards, which do not have water supply, come to fetch water. As a result of that there are often long queues to the water points. The VMW interviewed complained that they let the water run unnecessarily. The WUC wished that the RWSSP would build water supply also to them. Water is often used for cattle and waste water for kitchen gardening in some places.

The VMWs have a lot of problems with the river intake, which gets often blocked by leaves and mud during monsoon season. As a result, muddy water comes also from the taps. There is a net around the intake, which the engineers have told to change, according to one VMW. During monsoon the intake has to be cleared even twice a day.

Pipe line leakages have been repaired four times with the help from villagers. One tap and ten washers, which are made from bicycle tires, have been changed. Money for spare parts is collected from the users of the tap. The VMW interviewed did regular check-ups once in 15 days and once in 2-3 days during monsoon season.

Two VMWs receive 300 NER/month, but one's payment is given to a poor household that owns the land under one reservoir tank. The VMW told that the DWSO helps and gives advice when needed. He found his training sufficient, but was not sure whether they could handle major problems. The WUC told that in case of a major breakdown they would use the fund, but as that would probably not be enough, they would turn to the DWSO. The WUC did not plan to build up the fund.

HEALTH AND SANITATION

There are four CHVs in Deuchuli ward no 1, three of them are trained by the Project (one for each cluster) and one by the DHO. They were elected by the WUC. The two CHVs interviewed had health kit boxes that were quite full and had been refilled twice so far. They sell the medicine according to a price list given to them by the RWSSP. Price for e.g. Cetamol is lower than the current market price, so they can buy a smaller amount of it every time they refill the box. As some people also take medicine for credit and do not pay afterwards, the CHVs have to put in their own money to buy them. Medicine is bought from a half an hour's distance from Deuchuli. They would also like to have medicines for small babies.

The CHVs usually keep records of the medicine, health problems and health kit box funds, but "sometimes" they forget. They have arranged five meetings so far to women about family planning, sanitation, vaccination etc. They also sometimes go from house to house to teach women about such matters. The VHW has held one seminar to them about family planning. In addition they help her with vaccination. The CHVs found their training sufficient but wished to have refresher training. They also suggested that seminars with e.g. documentary films could be held for all women.

The CHVs told that diarrhoea and fever have decreased since the start of the project.

There were 20-25 latrines in the ward before the project. Now 75 % of the households have a latrine according to the WUC. 12-13 of the latrines are pucca type. All WUC members and the two CHVs interviewed use a latrine at home. The school of the ward had a latrine as well.

OTHER USER COMMITTEES

There are six user committees for irrigation schemes. They do not have funds at their disposal. Users of the schemes have provided community labour for them.

FIELD REPORT

Scheme name and district	DOBHAN, Palpa	
Scheme type	Gravity	
Ward visited	6	
Number of taps (in sub-schemes)	7	
Construction started/completed/hand over		
Population	350	
Average population per tap	50	
Ethnic composition (%)	Bahun/Chhetri	35
	Magar/Gurung	50
	Newar	8
	Kami/Damai	2
	Others	5
Date of field visit	March 9, 1995	

CONSTRUCTION MANAGEMENT

The WUC had collected a main fund of 7,000 NER. 1,000 NER/tap stand had been collected and the payments had been divided equally between the households using a particular tap. Fund/household thus varied between 63 and 333 NER.

Total workload per household during construction was 35 days. Men did the portering of heavy materials while women's participation was high in light portering. Women also did most of the trench digging. During the construction many men were working outside the ward at daytime. WUC had no difficulties in getting people to construct the scheme. Households that did not have any members present at the time of construction paid to some other person in the ward to do their share of the work.

POST-CONSTRUCTION MANAGEMENT

Altogether four mass meetings had been organized to decide about WUC formation, fund collection, labour contribution, and to change the way of remuneration for the VMW. According to the WUC all households attended the meetings. This was affirmed by the villagers interviewed. WUC keeps minutes of the mass meetings. The chairman of the WUC thinks that the scheme is owned by the RWSSP and FINNIDA.

WUC meetings were held when needed. Minutes had been kept of three meetings. Meetings discuss water supply matters coming from any household. There were no women in the WUC. VMW is usually present at the meetings but the CHVs are not, since they are not working yet.

Main fund is kept on a savings account which pays an interest of 9 %. Interest is used for the purchase of spare parts. No capital has been used. Users have been informed about financial matters at mass meetings.

OPERATION AND MAINTENANCE

There is usually enough water for everyone in the scheme area. At the time of the field visit one of the taps was not giving water continuously, probably as a result of a hole in the storage tank above. The VMW had tried to repair the tank from inside with concrete without success. Next he planned to dig away the ground around the tank to find the place of the leakage. One of the villagers also complained that there had been low pressure at the tap at the lower end of the pipeline since the construction. At the time of the field visit the tap seemed to give enough water, however. The VMW had informed the WUC about the problems. He checked the condition of the taps every now and then as he passed them. Tap water was used for inside house purposes only. The villagers interviewed had not experienced any major problems with the water supply.

Of spare parts the VMW had only needed taps and their parts. They are bought from Butwal with money provided by the WUC. Two of the original taps had been changed into a cheaper type after the original taps had been broken. The VMW complained that he did not have tools to adjust the control valve behind the tap stand. So far he had not needed help from others. The VMW did not feel that further training was necessary.

The VMW was paid 5 NER/hh/month until the end of 1994. From the beginning of 1995 the way of payment had been changed to 12 kg rice/hh/year upon the request of the VMW.

There were no plans to build up the main fund for a major rehabilitation after a possible breakdown. If a major breakdown occurred, the WUC would ask FINNIDA for help.

HEALTH AND SANITATION

The WUC had selected two CHVs, collected 600 NER for health kits (10 NER/hh) and deposited them on a bank account two years ago, but so far the RWSSP had not given training to the CHVs and they were not working. The ward had one CHV trained by the HMG. There were no Health Posts nor schools in the scheme area.

According to the WUC there were two pucca latrines and almost all the rest of the households had pit latrines. The villagers interviewed all had a pit latrine.

OTHER USER COMMITTEES

In addition to WUC there is an irrigation committee and a non-formal education committee in the ward. For the irrigation project the landowners, who form the irrigation committee, had collectively borrowed 300,000 NER from a bank against their land ownership certificates. The landowners pay back 65 % of the loan with no interest, the rest being paid by the ILO. If the irrigation committee uses a lot of voluntary labour, they may need only e.g. 100,000 NER for the construction, the irrigation thus costing nothing to the people.

FIELD REPORT

Scheme name and district	KEULI, Rupandehi
Scheme type	Gravity
Ward visited	3
Number of taps (in sub-schemes)	8
Construction started/completed/hand over	11.93/12.94/12.94
Population	325
Average population per tap	41
Ethnic composition (%) (of the whole ward, not the scheme area)	Bahun/Chhetri 36 Magar/Gurung 47 Newar 6 Tharu 1 Kami/Damai 8 Others 1
Date of field visit	March 23, 1995

CONSTRUCTION MANAGEMENT

The Devdaha VDC ward no 3 gravity scheme area Keuli has 8 taps serving 37 households, most of whom are Magar. In addition there are 15 illegal settlers outside the scheme. The WUC collected a total O&M fund of 8,000 NER, which was divided equally between users of a tap making the fund/hh 100-300 NER. According to the WUC the households had no difficulties in paying their share of the fund, but some villagers told that some of the poorer households had to sell property to get the money.

The construction work was done mostly by men, only 4-5 women participated daily. The total number of working days/hh was 110. The WUC had no major difficulties to get the work force.

POST CONSTRUCTION MANAGEMENT

Two mass meetings have been held so far. Matters decided at the meetings have included formation of the WUC, opening of the bank account and collecting a monthly fee. Minutes showed that mass meetings were attended by 44 and 38 persons respectively. The participants have been mostly men; there were two women in the first meeting and no women in the second. Mass meetings are not held regularly but only when needed. There was no discussion about the scheme at the handing over ceremony.

The WUC consists of nine members who are all Magars. Two members are female, but other one of them has moved to Butwal. One member is a teacher, the rest are farmers. The WUC meetings have been held only when needed, but the WUC told that they would have regular meetings. Four WUC meetings have been held with minutes available. Eight members are always present and the minimum required is five. The VMWs have not been called to the meetings, since they received their training only after the last meeting. The WUC told that he would be called to the next meeting, though. The WUC members interviewed did not

know of any pre or post construction training. The WUC and most villagers felt that the scheme was theirs, although some women interviewed thought that it belonged to the Government.

The capital of 8,000 NER, which is on a savings account giving an 8 % interest, has not been used. A fee of 2 NER/hh/month has been collected since February 1994, and it was raised to 5 NER/hh/month (total of 185 NER/month) in September 1994. The fee was first decided in a mass meeting, but the increase was decided by the WUC. Some villagers told that it would be difficult for poor households to pay more than 5 NER/month. Total amount of fees collected including January 1995 was 2,246 NER according to the WUC. 1,325 NER of the interest and fees were used last year to repair the intake. Altogether the fund was 9,651 NER at the time of the field visit. The WUC planned to use the fund for maintenance only. In case of a further major breakdown the WUC would use the existing amount of fees and interest and collect more fees if that was not enough. Male villagers seemed to have fairly good knowledge of the financial arrangements, but women seemed to be quite ignorant, even ones living in the same household with one WUC member..

OPERATION AND MAINTENANCE

The scheme seems to give enough water to the area. People have to wait for 5-10 minutes to receive water from the taps.

The scheme has two VMWs chosen by the WUC. They have had to join HDPE pipes four times with the help of villagers. Originally the water points had taps, but most of them had been taken away after they had been filled up with sand during last monsoon season. Money for the repairs is provided by the WUC from its account. The VMWs found their training useful.

The intake was the major worry of the users and the WUC. It was broken as a result of heavy water flow in the stream during the previous monsoon season. The VMWs and villagers repaired it with technical help provided by DWSO overseer and technician. The material was paid by the WUC and transported by the DWSO. Part of the concrete construction of the intake still needs to be rebuilt after the breakdown, and the VMW interviewed told that they could use 4,000-5,000 NER from the fund and the fees for that purpose. Only technical support was needed from the DWSO, although some users felt that the DWSO should repair it, since the VMWs can only make minor repairs.

HEALTH AND SANITATION

There were no trained CHVs in the scheme area and no money has been collected for any health kit boxes.

Out of the 37 households 30 had built a latrine after the project started. The school in Keuli also had a latrine as well as all the members of the WUC.

OTHER USER COMMITTEES

There was an forest protection committee which worked in co-operation with the Forest Office of the District.

FIELD REPORT

Scheme name and district	KHALIBAN, Palpa
Scheme type	Gravity
Ward visited	8
Number of taps (in sub-schemes)	12 (10,2)
Construction started/completed/hand over	5.92/7.93/94
Population	460
Average population per tap	38
Ethnic composition (%)	Bahun/Chhetri 68 Magar/Gurung 26 Newar 3 Kami/Damai 3
Date of field visit	April 6 and 7, 1995

CONSTRUCTION MANAGEMENT

Khaliban ward no 8 gravity scheme has two sub-schemes, one with ten and the other with two taps. The scheme serves 80 households according to the WUC.

An O&M fund of 12,000 NER and a health fund of 1,200 NER had been collected from the users, the fund/household varying between 100-150 NER. The only illegal settler household of the ward did not pay, but was allowed to use the tap. Portering was done mostly by women, material collection by both men and women, and construction by men only. One member/household participated for about three months. All households provided labour.

POST CONSTRUCTION MANAGEMENT

Five mass meetings had been held, where in addition to scheme matters also sanitation and health questions have been discussed. 50-60 people had attended the meetings. The hand over took place at a meeting for several wards of Khaliban, and 60-70 people from ward no 8 were present. Minutes had been kept of only some meetings. Only tap siting had aroused conflicts at meetings. Some households had also complained that they do not get water from the tap, although they had paid as much as others. The WUC felt that the scheme was theirs, but the women of the ward could not tell very much about the scheme.

The WUC of ward no 8 has 12 members including four CHVs and the VMW. Seven members are needed in meetings and usually eight attend. Usually only one of the CHVs is present and the VMW does not attend regularly. Each tap has its representative. Eight members are Bahun, two Magar and one Newar and Giri each reflecting fairly well the population of the ward. Meetings are held every six months, so far six times. Matters discussed have included maintenance and how to inform people about the proper use of taps. Minutes are kept.

The main responsibilities of the WUC were defined as looking after the taps, calling meetings, and managing the fund. The WUC had a two-day during construction seminar, but wanted to know more about sanitation and how to repair taps, since "if more people know about it, it will be easier".

The total capital of 13,200 NER had been moved one year ago from a savings account giving an interest of 7 % onto a fixed account with a 12 % interest. Neither the capital nor the interest had been used, but the WUC told it would use it in case there was a major breakdown. No fees had been collected.

OPERATION AND MAINTENANCE

There is enough water for everyone in the scheme except from one tap that is not giving water unless all other taps are closed. Tap water is used for drinking, washing and bathing, but not for cattle or kitchen gardening, except by households on whose land the taps are. Waste water is not used. Sometimes children or people passing by from other wards let the water run unnecessarily.

There have been five leakages in the pipe line, which the VMWs have repaired with the help of the villagers. It takes about 4-5 hours to repair a leakage, sometimes the whole day, if it does not succeed the first time. Washers have been changed 2-3 times to four taps. Some people, e.g. the chairman of the WUC, know how to change the washer themselves. Washers are made from bicycle tubes, since washers can only be bought as far as from Butwal. They last between two months and one year. One villager had changed the brass tap into a steel one, which he sells in his store. He had not told the VMW about it. Both men and women claimed that they cleaned the platforms.

Since two months after the hand over one tap had not given water, unless other taps were closed. Other three taps also had low pressure. The WUC told that the reservoir tank now got only half full during dry season instead of an overflow earlier. The DWSO had not been informed about it. Otherwise the WUC had received suggestions from the DWSO when they had asked.

Ward no 8 has one VMW, who has worked outside the village for one year. He told that he does the repairs on Saturdays, but according to the WUC he has not done anything after the hand over. Some villagers also complained that it was difficult to reach him. The VMW had told the WUC that he got the impression that he would be paid for his work. The WUC planned to pay him 1,800 NER/year, if he continued working, but was also thinking about sending another person to VMW training. Instead of their own VMW, the ward had been served by a VMW living nearby in ward no 9. The VMWs found their training useful, but wished to receive further training on how to repair major breakdowns.

The WUC told that they would first use the fund in case of a major breakdown and after that go to the RWSSP. They told that they do not know how much money would be needed to repair a major breakdown. The VMW thought that people would not be prepared to pay fees for such a situation, since they do not think that it is their responsibility.

HEALTH AND SANITATION

There are four CHVs in the ward trained by the DHO, who received their medicines from the RWSSP. They were selected in a mass meeting. Only one CHV attends WUC meetings regularly.

Of the three CHVs interviewed two had bought medicine from Tansen and had health kits with all the necessary medicines. They sold the medicine according to a price list given at their training. They gave the medicine free to poor people and had to compensate the lack of funds by putting in some of their own money. The other one of them kept records of medicine, health problems and funds, and the other one only sometimes, when her literate children helped. They had treated 60 and 40 patients respectively.

One Magar CHV had not refilled the kit and had only little of the medicines needed. She had given most of the medicine free, because "people do not pay and I do not ask". She is illiterate and can not keep records. She had received 20 patients earlier, but none lately.

Medicines needed by the villagers but not in the box include ones for tooth and stomach aches. People also often go to a medical store nearby to buy medicine. Once monthly there is a Mothers' Group meeting, where the CHVs and sometimes the VHW tell about sanitation, nutrition and vaccination. 15-50 women attend the meetings. CHVs also help the VHW to vaccinate children. The CHVs thought that their training was good, but wished refresher training on how to solve their problems e.g. stomach aches/worms and what to say to people, who want aid to build a pucca latrine.

The number of latrines in ward no 8 is now about 65, most of them pit latrines. Before the project there were only 3-4 latrines. One CHV told that people complain that there are more mosquitos after building a pit latrine. All WUC members and the three CHVs interviewed had a latrine. The primary school latrine was under construction.

MAIN COMMITTEE

After the WUCs of the eight schemes in Khaliban had been elected, a main committee consisting of WUC chairmen plus a secretary was formed as suggested by an overseer. It had no funds and held 12 meetings. The main committee co-ordinated the construction of the schemes by informing schemewise WUCs about the labour needed and about construction schedules, by delivering material etc.

Main committee members told that it was difficult to get labour force, because people were busy working in the fields or outside the village, and it was difficult to convince them of the need of community labour. Some households are still not using the taps since they did not provide labour.

The main committee members told that construction was easier with the main committee, and that people were able to work in the fields between different construction periods, since the construction progressed wardwise. After the hand over there has not been any need for the main committee and it has become passive.

FIELD REPORT

Scheme name and district	PATAUTI, Arghakhanchi
Scheme type	Gravity
Ward visited	1-3 and 9
Number of taps (in sub-schemes)	30 (six sub-schemes)
Construction started/completed/hand over	6.92/7.93/3.94
Population	809
Average population per tap	27
Ethnic composition (%)	Bahun/Chhetri 85 Magar/Gurung 5 Kami/Damai 10
Date of field visit	April 11, 1995

CONSTRUCTION MANAGEMENT

Patauti ward nos 1-3 and 9 have a water supply scheme with six sub-schemes (including three point sources) serving 145 households. 72 households in ward nos 1-3 are not served by the project. The number of taps is 30 with three school taps. There is only a school tap in ward no 9.

An O&M fund of 27,000 NER and a health fund of 1,800 NER (2 CHVs/ward originally planned) was collected from households. The 1,000 NER/tap was divided equally according to the number of households using the tap. The fund per household varied between 100-150 NER. Two poor households did not pay, but provided labour as others.

One household, which was close to the intake and far from the taps, was given a private connection by the decision of the WUC, although they did not pay any money. The household provided labour to build a collection chamber. They used the source already before the project.

Both men and women participated in portage and material collection, but men did the construction work. Each household worked for 90 days. Two households refused to provide labour, but they are allowed to use the taps anyway.

POST CONSTRUCTION MANAGEMENT

Three mass meetings of all three wards have been held. In the first two the WUC was elected, people were made aware of the scheme, and the last one was the hand over ceremony. The two households that did not provide labour raised most discussion in the meetings, but there were no controversies according to the WUC.

Mass meetings have also been held on an intakewise basis to approve the scheme design, to distribute wages after construction work, to teach people to use water properly, and to keep platforms clean. No intakewise meetings have been held after the completion of con-

struction. According to the WUC 75 % of the villagers have been present, about half of them women. However, the villagers told that most often the men go to the meetings. No minutes of the mass meetings have been kept.

The WUC has 11 members, five from ward no 1 and three from 2 and 3 each. Two of them are VDC members. The VMWs usually attend the meetings but the CHVs do not. There are no female members, since they "could not find any woman interested". Six members are needed in the meetings and usually 8-9 attend. For construction purposes there were three sub-committees that became passive afterwards. They organized the community labour and looked after the construction in general. During construction the main committee received and distributed the construction material.

Eight WUC meetings have been held so far, with minutes available. The WUC has been occupied by people who are not included in the scheme. They complain and send requests to get water supply. The WUC has also discussed platform cleaning and maintenance questions.

The WUC felt that its main responsibilities were to manage the fund and maintain the taps and the intakes. Three members had attended a two-day during construction seminar. They did not find it very useful, because it was too short and they did not learn about other things than sanitation. The WUC wished to receive further training about major breakdowns. They also hoped that more people would receive VMW training in case the VMW was not present when needed. The WUC and most villagers felt that the scheme belonged to them, although a group of women thought that it was owned by the Government.

The total fund of 28,800 NER is kept on a fixed account in the Commercial Bank giving an 9 % interest. The exact amount of the interest was known only by the chairman, who could not be present at the interview. The WUC had not used the capital nor the interest. 2 NER/hh/month has been collected by one person per tap to the VMW responsible for ward nos 1 and 2. Beginning this month was money also going to be collected to the VMW of ward no 3. Before that he was paid 8 NER/hour for the work he did. The fee was determined by the WUC.

OPERATION AND MAINTENANCE

Generally there seemed to be enough water in the scheme. Besides for household purposes some people also use it for cattle. Waste water is not used since the drainage is poor. The WUC told that it needed concrete to build waste water collection ponds, so that waste water could be used for irrigation.

There are two VMWs in the scheme area, as one VMW went to India a year ago right after his training. The WUC had not contacted the RWSSP to have someone trained to replace him. One VMW is responsible for ward nos 1, 2 and 9 and he also works in the schemes under construction elsewhere in the VDC. The other VMW is responsible for the sub-schemes in ward no 3. They were satisfied with their training and did not feel any need for further training. The other one did not have many contacts with the DWSO, but the other one told that they get suggestions when needed.

Two taps in ward no 1 had low pressure and they did not give enough water on Saturdays when people use a lot of it. One tap was leaking from the control valve that had been broken by "children". The VMW told that control valves were not available from the market. In ward no 3 users of a broken tap, that was running constantly, had refused to pay for a

new tap to replace it. As a result of that, people above them were getting less water from their tap. The VMW had closed the control valve of the broken tap somewhat to give them less water until they pay the 25 NER/hh that was needed. The tap above gives more water now.

Washers had been changed to most taps and taps changed to three tapstands (in ward nos 1 and 2). The other VMW has bought a stock of them with his own money and he sells them to the users of the taps. The VMW of ward no 3 told that people had refused to give him money for the washers as well. He had paid for them from his own money and planned to continue to do so "for 2-3 years until people feel ashamed". The washers and taps are bought from Butwal. People in ward no 3 help the VMW to clean up the intake and the reservoir tanks 3-4 times a year.

The WUC told that in case of a major breakdown they would use the fund and maybe collect some ("but not much") extra fees "only if they can not get money from the DWSO or RWSSP". They had no plan to build up the fund for such a case beforehand.

HEALTH AND SANITATION

Each of the three wards has a CHV selected by the WUC. The CHV interviewed did not have any Cetamol nor bandages. She had bought only once Cetamol and bandages since she was trained two years ago. She sold most of the medicine but gave them free to the poor people. The prices were market prices told to her at the training. She had to put in her own money as well to buy medicine. The WUC had promised to provide money to CHVs from the interest, but so far she had not received any. She bought the medicine from Pokharathok Sub-Health Post, which can be reached by walking two hours from the scheme area. She wished that she would have medicine against worms and for small children.

The CHV interviewed complained that instead of coming to her, people usually go to the Sub-Health Post, where treatment including medicine costs 3 NER. She had treated 30-40 patients in two years. This was also confirmed by the villagers, some of whom told that they do not trust CHVs. In the beginning the CHV went from house to house and they had Mothers' Group meetings. They do not have them in ward no 3 anymore, since people stopped coming to them. The CHV was a little frustrated because of that. There is no co-operation between the VHW and the CHVs. The CHV did not keep any records although she was literate. She found her training good but wished to have midwife training.

Before the project there were only a few pit latrines in the area. Now almost all households use a latrine according to the WUC. About 20 of them are of pucca type and people are interested to have more of them. All WUC members and the CHV interviewed had a latrine. Of the three schools two have latrines, and latrine building for the third one was beginning.

OTHER USER COMMITTEES

In Patauti and two nearby VDCs there is a road construction project financed by the EU. They have a Road Construction Committee with 19 members, 11 of them from Patauti. Villagers provide labour and get paid for it. The Committee decides about the use of the labour. 5 % of the money, 300,000 NER in two years so far, is used for maintenance.

FIELD REPORT

Scheme name and district	PHEK, Palpa	
Scheme type	Gravity	
Ward visited	2	
Number of taps (in sub-schemes)	4	
Construction started/completed/hand over	5.93/12.93/94	
Population	34 households	
Average population per tap	8.5 households	
Ethnic composition (%)	Magar/Gurung	88
	Kami/Damai	12
Date of field visit	April 14 and 15, 1995	

CONSTRUCTION MANAGEMENT

The gravity scheme in Phek ward no 2 has four taps constructed by the project and two additional taps constructed by the villagers themselves. 115 NER was collected from 31 households and half the amount from two households that live in the village for only half a year. They also worked half as much as others. Altogether an O&M fund of 3.680 NER was collected. According to the WUC 3-4 households had to borrow the money from other villagers. The villagers, however, told that "many" or "most" households borrowed. Both men and women provided labour for portorage and material collection, although men more than women. Men did the construction. Households worked for 66 days and the households using the additional taps seven days extra. One household was busy and paid 600 NER instead of working. That money was not deposited, but is used to provide food for visiting RWSSP staff, according to the WUC. 100 NER was added to the money received from the RWSSP for portorage.

The additional two taps were made because there would have been 18 households using the last tap, some of them quite far downhill from the tap. People had complained about the distance and the overseer and technician had told the WUC that they could construct the additional taps by themselves after the hand over. Pipes for the extra taps were taken from an old Helvetas scheme in the area, which was not working anymore. The taps (the other a 90 NER brass tap the other a cheap steel tap) were paid by the users. Construction for the additional taps was finished about eight months before the field visit.

POST CONSTRUCTION MANAGEMENT

Four mass meetings have been held. In the first one people discussed whether to ask for help to rehabilitate an old water supply scheme constructed by Helvetas 19 years ago or to start a new scheme. In the second mass meeting the present WUC was elected and the fund collection was decided. The third was the hand over in May 1994 and the last one was held to divide money to households for the portorage done. The scheme design was approved by the WUC. 25-30 people have attended the meetings, 50-60 people the hand over.

Minutes were kept only in the second meeting. A Peon has been used to inform people e.g. about labour division. The WUC and all villagers felt that the scheme belonged to them.

The WUC consists of nine members who are all Magar farmers. One of them has gone to India. The chairman is responsible for the funds and he is also the only VMW of the scheme. One of the members is also a member of the VDC. There is one female member. The WUC has never had a meeting. The WUC told that there had been no need for meetings, since matters had been decided at mass meetings.

The O&M fund was 3,300 NER at the time of the visit, deposited on a savings account of the Commercial Bank and giving an 8.5 % interest. In addition to the 100 NER for portorage, 260 NER had been used for the transportation of people. The interest had not been used. The WUC planned to use them only in the case of a major breakdown. Fees had not been collected so far, but the WUC was thinking about collecting 2 NER/hh/month beginning this month to build up the fund. One member had attended a post construction seminar almost by chance 15 days before the visit and he had been advised to collect fees. A mass meeting was going to decide about the fee. The WUC felt that it had no need nor the time to attend any further training.

OPERATION AND MAINTENANCE

The VMW was trained by Helvetas to maintain the old scheme and did not feel any need for further training. He had a certificate of his training which was accepted by the project. He told that children were letting the water run unnecessarily. There were two pools for cattle next to two taps.

The WUC told that there was not enough water in the highest tap when all other taps were being used and in the evenings. When we visited the scheme the first tap did not give water at 9. a.m. in the morning any more. The users told that it had not given enough water even for drinking since the construction and that they had to use the next tap, which is close to the chairman's house. The users of one of the additional taps told that it gave enough water for drinking only after they wait for 30 minutes. During the day three other taps stopped giving water as well, so that when we left the scheme only two taps out of six were working.

On the way back from the village a WUC member walking with us criticized the WUC chairman and his two relatives heavily for using tap water for irrigation during night time and for filling a cattle pond directly from the tap. He told that he had seen the chairman do that and told him to stop without success. He also accused the chairman-VMW for using his tools to adjust the control valves so that the two taps close to him and his relatives would have a better pressure and give more water. He told that the other WUC members were going to have a meeting later that month to discuss the situation with or without the chairman. According to the WUC member people did not expect the chairman to act this way when they elected him.

Some villagers were critical towards the WUC as well. They were accused for not listening to the people and the chairman-VMW for taking care of his own tap only and not doing regular check-ups. One villager told that they contact a nearby VDC member instead of the VMW, if they have problems with the water supply. They had also given him money for spare parts and he had repaired their tap.

The other one of the additional taps had been broken for one month even after the washer had been changed. At the time of the visit it leaked quite a lot. One additional reason for the shortage of water during the field visit might have been that many villagers were making dokos (baskets) and they had blocked the drainage to get enough water to wet the raw materials in the platforms. Some platforms were overflowing because of that.

The VMW had once repaired a leakage in the pipe line with the help of the villagers. The highest tap had been changed to a steel one. Besides that no other maintenance had been done. The users of the tap collect the money and buy the spare parts themselves from Tansen or Butwal.

Four bags of cement left over from the construction had been left to the WUC to be used for platforms of the additional taps. So far they had not been constructed. The WUC promised that the platforms were going to be made "soon". The villagers told that at least one man in the area knew how to make a platform. The VMW is responsible for the maintenance of these taps as well.

HEALTH AND SANITATION

The only CHV in the ward was trained by the UNM in Tansen three months before the field visit. At the time of construction the WUC could not find a suitable for CHV training by the project. The CHV did not attend WUC meetings. She was only given Jeevan Jal and condoms from the training and she gives them free. She did not know where she would get money to buy new medicine. She measures the arms of children to see if they suffer from malnutrition and helps the VHW with vaccinations. The day before the visit she held a meeting to teach people how to make latrines. 12 people attended.

According to the WUC there was only one latrine in the scheme area before the project, now there are 11 pit latrines. WUC members told that they encourage people to build latrines. Only five of them had latrines themselves. Reasons given by villagers include "no time, "no money" and "not interested". The school latrine was under construction.

FIELD REPORT

Scheme name and district	PHEK, Palpa	
Scheme type	Gravity	
Ward visited	1	
Number of taps (in sub-schemes)	6 (4,1,1)	
Construction started/completed/hand over	5.93/12.93/94	
Ethnic composition (%)	Bahun/Chhetri	33
	Magar/Gurung	51
	Kami/Damai	16
Date of field visit	April 15, 1995	

On the way back from Phek ward no 2 the study group decided to use the opportunity to stop briefly and interview the acting WUC chairman in ward no 1. Some of the taps were also inspected on the way. The schedule did not allow for longer visit of the scheme. The following report is based solely on the WUC chairman interview.

CONSTRUCTION MANAGEMENT

The Phek VDC ward no 1 has two handed over water supply schemes with four tap each. In addition there are two one-tap schemes that had not been handed over. The WUC, whose chairman we interviewed, was responsible for the other four-tap scheme, serving 18 households, and for the small sub-schemes.

An O&M fund of 5,000 NER had been collected, 1,000 NER/tap for four taps and 500 NER/tap for the two point sources. The users of the first taps paid 175 NER/hh and the latter 100 NER/hh. 300 NER had been collected for two CHVs each. Seven households had to sell animals, provide extra labour or borrow money in order to pay their share.

Men and women provided labour equally during construction. Number of working days/hh was 100 excluding portorage. Five households that did not provide labour hired someone to do it for them. During construction this WUC was responsible for receiving and distributing construction material also to the other WUC of the ward.

POST CONSTRUCTION MANAGEMENT

3-4 mass meetings have been held together with the other scheme of the ward, and they are planning to do so in the future as well. Mass meetings have e.g. elected the WUC and decided about fund collection without any major controversies. About 20-22 people have attended. The hand over was also a mass meeting with 100 attendants. No minutes had been kept.

The chairman told that maintenance and management of funds are the main responsibilities of the WUC. The WUC has five members, who are all Chhetris. Besides Chhetris there are six Magar households in the scheme area. One WUC member belonged to the VDC. Three

members were required to be present at the meetings. The VMW attends meetings. So far only one WUC meeting had been held to decide the tap sites according to project suggestion. No minutes were kept of this meeting either. There had been a two-day post construction seminar, which the chairman found good and felt no need for further training. He felt that the scheme was theirs.

The O&M fund is kept on a savings account in the Rastriya Banijya Bank giving an 8 % interest. Neither capital nor interest had been used. Fees had not been collected, but the WUC was thinking of starting to collect 2-5 NER/hh/month. A mass meeting scheduled for May was going to decide about it.

OPERATION AND MAINTENANCE

There was enough water for everyone in the schme area according to the chairman. One leakage from a reservoir tank had been repaired. No other maintenance besides that and tank cleaning had been needed. The chairman had not heard of any complaints from the users. Women kept the platforms clean. The WUC would decide where to get money for spare parts when they were needed. The fees were going to be collected to build up the O&M fund. In case there was a major breakdown, the WUC would use the O&M fund and collect more fees if necessary. They would ask the DWSO for financial help only if that was not enough.

HEALTH AND SANITATION

There is one CHV in the scheme area trained by the project. The chairman was satisfied with her, but told that only some villagers used her services. Instead most people go to the Chhahara Health Post. They do not seem to trust the CHV, "because she is not a doctor or something".

According to the chairman only 10 % of the households had a latrine before the project. Now only 2-4 households do not have one. Most of them are pit latrines. All WUC members have a latrine.

FIELD REPORT

Scheme name and district	POKHARATHOK, Palpa
Scheme type	Gravity
Ward visited	8 and 9
Number of taps (in sub-schemes)	18 (6 sub-schemes)
Construction started/completed/hand over	6.92/7.93/3.94
Population	689
Average population per tap	38
Ethnic composition (%)	Bahun/Chhetri 10 Magar/Gurung 80 Kami/Damai 10
Date of field visit	April 12 and 13, 1995

CONSTRUCTION MANAGEMENT

The water supply scheme of Pokharathok ward nos 8 and 9 have six handed over sub-schemes with 18 taps. In Pokharathok VDC ward nos 2-4 and 7-9 there is also another A-scheme under construction, and the sub-schemes in ward nos 7-9 are also under the management of the same WUC.

The total O&M fund collected for both the handed over schemes and those under construction is 37,000 NER, although the WUC was not sure about the exact amount of money collected. 1,800 NER had been collected for six health kit boxes. The 1,000 NER/tap was collected equally among the users of the tap, the fund per household varied between 75-330 NER. According to the WUC all households paid their share, but some do not use the taps, because they live too far away. Villagers told that poor households had to sell animals or work for other households during construction, who paid the poor people's share. Only 1 or 2 households did not pay at all.

Both men and women participated in portering and material collection, while men did the construction. All households provided labour, but bigger households worked more than households with only a few members. One villager accused the WUC that some households had to work more than others. Another villager was also not satisfied, because he did not know when he would be paid for the portering.

POST CONSTRUCTION MANAGEMENT

Mass meetings had been held 4-5 times to elect the WUC, to decide about fund collection, about division of labour, and for the hand over, which was held together with the Patauti scheme. No mass meetings have been held since the hand over. About 50-60 people have attended, in the hand over there were 100-200 people, about 50 of them from Pokharathok. Minutes had been kept of only 2-3 meetings. There was most conflict about the division of labour, because some households worked more and some less, but also about tap sites. A few households complained that their tap was too far away from them, about 15 minutes

one way according to the WUC. The WUC and most villagers thought that the scheme belonged to them, although some villagers thought that the Government owned it.

The WUC consists of 13 members, seven members from ward no 9, four from no 8 and two from no 7. A minimum of seven members need to be present, usually 11-12 members attend. The WUC was aware of the recommendation to have two female members, but had not asked any women, because "women are too busy". VMWs attend meetings when necessary. According to the WUC, CHVs are present sometimes, but the ones interviewed had not attended any meetings. The WUC has two VDC members including the WUC chairman, who is the vice-chairman of the VDC. 11 members are Magars, one is Chhetri and one Bika. Two members have gone to India, and the WUC did not know when they would return. 10-12 WUC meetings have been held with minutes available "of most of the meetings". Matters discussed include division of labour and sanitation. The WUC had received a two-day during construction training, some of which they had understood and some not. They wished to receive further training on sanitation and on how to motivate people to use drinking water properly.

Some of the villagers interviewed were very critical towards the WUC and especially towards the chairman. One villager said that the WUC should be changed. He said that the WUC was not interested in the cleanliness of the platforms, that some people had to work more than others, that the WUC did not take care of the CHVs, and did not care about people not getting enough water below a school tap (see O&M chapter). He also thought that people did not get enough information about the scheme e.g. material distribution. The vice-chairman interviewed separately criticized the chairman: the chairman has a monopoly and does what he wants, meetings are not held regularly and there is no co-ordination among the WUC members. One villager, who admitted to be a communist supporter, accused the chairman, a Nepali Congress supporter, for changing the secretary of the WUC elected by the mass meeting (Yama Bahadur Reshmi Magar) under some pretext to a secretary that he preferred (Santa Singh Gharti Magar).

The WUC told that DWSO people had advised them not to use the fund until also the other sub-schemes of wards no 7-9 now under construction have been completed. The WUC had received 6,000 NER to pay villagers for portage, but had decided to distribute the money only after completion of all schemes. The vice-chairman had not even understood what the money was for.

The 38,800 NER capital was kept on a fixed account in the Commercial Bank giving 8 % interest. The 8,000 NER interest is on a savings account. Neither the capital nor the interest has been used. The WUC planned to use the interest for spare parts if necessary. No fees had been collected.

OPERATION AND MAINTENANCE

Some people let the water run unnecessarily, and the WUC and the VMWs have told people not to do it without much result. Waste water is not used.

According to the WUC there was only little water in the summer in a 4-tap sub-scheme in ward no 9 and in two highest taps of a sub-scheme in ward no 8. They blamed that the intakes are too small and the reservoir tanks get only half full. However, it seemed that the reason for the shortage in ward no 9 sub-scheme was that 28 households, not included in the design of that scheme, used a school tap close to them. They had a written permission for that from the WUC, since they had given their own source to be used as an intake for

another sub-scheme under construction. There were going to be two taps to serve them after that scheme was completed in about one month's time.

The technician of the DWSO working in the area told that people of the ward no 8 sub-scheme use water for irrigation at night, and that there is not enough water for 15-20 days in a year, when the need for irrigation is greatest. One villager confirmed that information, and we also noticed that at least some kitchen gardens had been irrigated lately as they were still wet. The WUC, however, denied that any people used water for irrigation. When we visited the sub-scheme, we were told that one tap had not given water for three days after early morning. In the last tap of that scheme water was running constantly. The VMW told that the tap had been blocked "probably by the washer", and that he had dug the pipe line connected to the tap, so that people would get water. He said that the tools to open the tap were with the VMW of ward no 9. Only one set of tools had been provided to the whole scheme. After the running of water was stopped, the tap above, that did not give water earlier, started to give water again. One villager told that the reservoir tank of that sub-scheme often gave an overflow, and it was nearly full when we inspected it.

In case there was a major breakdown the WUC would first use the fund, then ask the DWSO, and then collect extra money in that order. One VMW did not know where to get money for spare parts. According to him people think that interest should be used and no extra money should be collected from them. Another VMW also thought that interest would be used to get spare parts, which would be bought from Butwal.

Washers or taps have not been changed, at least not by the VMWs. One tap was leaking, and the VMW had tried to put paper inside it without success. The tap is broken and should be changed. The WUC told that VMWs have not done much, because the technician living in the area at the moment have done the maintenance. The technician repaired the pipe line once with the help of the villagers, because the VMW was in the jungle for that day. One VMW has repaired a leakage once.

There had originally been three VMWs for the 18 taps handed over so far. One VMW had moved to India and another had been trained to replace him one month ago. The VMWs found their training sufficient, although one of them did not understand why they were taught how to make a distribution chamber, since they did not have any. They did not feel any need for further training.

HEALTH AND SANITATION

There are six CHVs in ward nos 8 and 9, three in both wards. Four of them were interviewed. They were trained at Pokharathok Health Post one year ago. Two of them had also received midwife training.

The CHVs had been selected by the WUC, but they had never attended WUC meetings. Three CHVs interviewed had health kit bags that were quite empty, and other two not present at the interview had not refilled their bags either. They had sold medicine for a price determined at the training. Most poor people had been given free medicine and many also for credit without any payment afterwards. They had all received about 50 NER each from selling, which was not enough to buy more medicine from Tansen or Butwal. The WUC promised a year ago to buy them medicines, but has not done that yet because "they do not have the permission to use the fund". These CHVs had received about 30-40 patients each.

One CHV, on the other hand, had bought medicines with her own money worth 3,000 NER and was selling them for a market price, which is higher than the original price told at the training. She had treated more than 100 patients, and most people of ward no 9 came to her nowadays. She also used medicines that were not included in the original bag e.g. medicines for worms, skin diseases and burns, which she told she knew how to treat. Other CHVs also wished to have medicines for worms and for cough.

If people did not come to the CHVs they went to Tansen, some to Pokharathok H.P. and some to a medical store in Deurali. CHVs help the VHW to give vaccination once a month. Once the H.P. staff had also taught them how to motivate people to build latrines. The CHVs go from house to house every now and then to tell villagers about sanitation, cleanliness and latrine building. In the beginning there were also five Mothers' Group meetings e.g. about sanitation.

None of the CHVs kept any records since they were all illiterate (only six men had gone through 10 grades in wards 7-9). They were satisfied with their training and wished to receive refresher training. Two of the CHVs interviewed said it was hard to find the time to work as a CHV, but the other two were satisfied. We were told that diarrhoea, dysentery and cholera had decreased since the project started, but some people still had digestive problems.

According to the WUC 10 % of households had a pit latrine before the project started and now 90 %. Talking with villagers gave a picture, that many people had indeed build latrines in the beginning of the project, perhaps as a result of latrine promotion and health education by the RWSSP. Now many of the original pit latrines have been filled up, and not all households have build new ones. Some people complained that rats had caused problems in the latrines. All WUC members and CHVs told that they have a latrine. One school had a latrine and the latrine for the other school was under construction.

FIELD REPORT

Scheme name and district	RAKUWA, Nawalparasi
Scheme type	Gravity
Ward visited	1 and 4-9
Number of taps (in sub-schemes)	32 (including five point sources)
Construction started/completed/hand over	2:93/12.94/95
Population	200 households
Average population per tap	6.3 households
Ethnic composition (%)	Bahun/Chhetri 27 Magar/Gurung 49 Newar 1 Kami/Damai 23 Others 0
Date of field visit	March 30, 1995

CONSTRUCTION MANAGEMENT

The water supply scheme in Rakuwa has 32 taps for 200 households in a main scheme of 27 taps and in five point sources. An O&M fund of 30,000 NER was collected (excluding two school taps). 1,000 NER/tap was divided equally between the 6-16 users of the tap. At least two poor households did not have to pay. Many people would not believe that they would actually get a water supply system in the beginning and one ward had refused to pay. Later they paid, however. 2,700 NER has been collected for the nine CHVs.

Porterage and material collection was done mostly by men, women participated if there were not any men in the household. Both women and men provided labour for construction. At least two poor households per tap did not have to provide labour, since they were too busy to earn their living. Two disabled households were also excluded.

POST CONSTRUCTION MANAGEMENT

Two mass meetings have been held together with VDC meetings (the WUC chairman is also VDC chairman). In the first one the WUC was elected and decisions about the fund collection and tap sites were made. Besides paying to the fund, there were also discussions about tap sites. The second mass meeting was the hand over, which was held together with people from other schemes as well. According to the WUC 300 people (at least one person/hh) have attended the meetings. Minutes are kept.

The WUC has eight members, one member per ward. Five are Magars, two Bahuns and one Bishwakarma. In addition to the chairman, who is also the VDC chairman, four other WUC members are members of the VDC. The WUC has held "many" meetings, all of them together with VDC meetings. Minutes have been kept only after the hand over. The WUC has discussed e.g. maintenance questions and the allowances to VMWs and CHVs. According

to the WUC usually all members are present and no minimum requirement has been even thought of. There are no women in the committee, and the WUC told that they had not heard of a recommendation of two female members. The CHVs and VMWs are not invited to the meetings. Two WUC members told that they would like to resign from membership, because "the area is big and people do not listen to what they say".

The WUC felt that it was mainly responsible for the fund, for maintenance and for collecting fees if necessary. The WUC had received only a one-day post construction training and wanted more training on maintenance. The WUC and most villagers interviewed felt that the scheme was theirs, but some villagers did not know who owns it. Most villagers interviewed did not seem to know much about other aspects of the scheme either.

The WUC had 31,700 NER on a fixed account in National Commercial Bank. 1,000 NER paid later from ward no 5 was still with the chairman. The interest was 9,000 NER and the interest rate 9 %. The secretary keeps records of the funds. Neither the capital nor the interest has been used so far. No fees had been collected yet, but the WUC was planning to collect 50 paisa/person/month to pay to the VMWs. The decision to collect the fee would be made by the WUC, and people of the wards would decide whether it would be collected also from poor households.

OPERATION AND MAINTENANCE

According to the WUC, since the construction of the scheme, the last tap of the main scheme has given water only when there is enough pressure in the pipe line. They also complained that there was not enough water even for drinking from a point source in ward no 7. The VMWs and villagers interviewed, however, felt that there was enough water for everyone, even for kitchen gardening. Waste water was used for cattle in some places. The school tap was used also by people who had not paid to the fund nor provided labour. The WUC told that they had closed the control valve of the tap, but it was of no use, since the people knew how to open it themselves.

There are two VMWs in the whole scheme area and the WUC felt that at least 2-3 more would be needed. The VMWs and the villagers had once repaired the G.I. pipe, which had broken down above the ground "because of water pressure". They wanted two more break pressure tanks to the scheme and the WUC wanted a wash out. Other than that, the VMWs had only tightened one tap. They did not do regular check-ups. The VMWs had not needed spare parts yet, but felt that the RWSSP should have given them. The WUC told that the money for them would be collected from the users of the tap. The users told that they would contact WUC members in case they had problems with water supply.

The VMWs told that they would not be very interested about working unless they received some remuneration from the users. According to the WUC 50 paisa/person/month was going to be collected. The VMWs said that their training had been good, but that it should have been given before the construction. They also hoped to receive some kind of refresher training.

In case of a major breakdown the WUC would provide "at least some money", but felt that the DWSO had the main responsibility in such a case.

HEALTH AND SANITATION

There are altogether nine CHVs in the scheme area WUC, four of whom were interviewed. They were suggested by wardwise meetings and nominated by the WUC.

Of the four CHVs two did not have any medicines, one had only little and only one, who had bought them five times, had enough. They had been selling the medicine to a price told to them at their training, but at least one CHV had just kept the money herself. She admitted that she did not do anything as a CHV anymore. Medicines were bought by a VHW, who was given the money needed. The most active CHV said that medicines for high fever and for child diseases, as well as benzine, would also be useful.

The CHVs had a meeting with the VHW once a month where they discussed family planning, sanitation and health care issues. Only some of the CHVs kept records of the medicine, health problems and of the money received. They were satisfied with their training, but some of them wished to have more training on sanitation and vaccination, and on how to motivate people.

Most of the villagers interviewed told that they usually go to Dedgaon Health Post. The WUC admitted that it was responsible for the CHVs and that it should motivate people, who "do not trust the CHVs", to use their services.

Most of the households in the area do not have a latrine, since "they are not interested", according to the WUC. The villagers that did not have a latrine complained, that they were too expensive for them to build. All WUC members and three out of the four CHVs told that they had a latrine. The two schools of the area did not have a latrine, but "they are going to be built soon", the WUC told.

FIELD REPORT

Scheme name and district	RUCHANG, Nawalparasi
Scheme type	Gravity
Ward visited	6-8
Number of taps (in sub-schemes)	18
Construction started/completed/hand over	2.93/7.94/-
Population	120 households
Average population per tap	6.7 households
Ethnic composition (%)	Magar/Gurung 77 Kami/Damai 23
Date of field visit	March 31 and April 1, 1995

CONSTRUCTION MANAGEMENT

Ruchang ward nos 6-8 have a scheme of 18 taps for 120 households. 17,000 NER was collected for the O&M fund plus 1,200 NER for the four CHVs. The fund per household was between 85-200 NER. Three households were too poor to pay, and five households, that were absent at the time of construction, did not work either. They are all allowed to use the taps.

There are eight households in ward no 6 that did not pay nor provide labour apparently because of party political controversies between them and the WUC. So far they have not been allowed to use the taps. The WUC told that the users of the particular taps of those households would have to decide how much they should pay in order to compensate for the labour that they did not provide. When the WUC was asked whether the non-users could build the missing school toilets as part of the compensation, they replied that "it would not be accepted by the people of ward no 6". Their study group tried to arrange a conversation between the non-users and the WUC chairman, but the end result was a mostly a lot of yelling, as many of the villagers were already under the influence of raksi in the late afternoon.

Each household worked for 108 days. The portering, material collection and construction was done mostly by men. Women participated mostly in portering and provided other labour, if there were no men in the household.

POST CONSTRUCTION MANAGEMENT

Three mass meetings have been arranged for Ruchang ward nos 1, 3 and 5-9, which belong to the same A-scheme. First one was held to decide to start the project, the second one to elect the WUC, and the third one to decide about fund collection. The scheme design approval did not take place at a mass meeting. Altogether 400 people attended the meetings according to the WUC, about 50 of them from ward nos 6-8. There has been no controver-

sies, the WUC told. Minutes had been kept. The WUC and the villagers had a feeling of ownership of the scheme, although it had not been handed over yet.

The WUC has nine members, eight Magars and one Bishwakarma. Five members are from ward no 6 and two from ward nos 7 and 8 each, all clusters are represented. The WUC chairman is also VDC chairman, and in addition there are three VDC members in the WUC. All members are farmers. At least six members need to be present, usually the attendance is eight members. There is only one female member and even she does not attend meetings. The WUC was aware of the recommendation of two female members, but replied that "women would not come to meetings". The only VMW is called to the meetings and he attends them regularly.

The WUC felt that it was responsible mainly for maintenance and the management of the fund, earlier for the construction as well. "About twelve" meetings have been held, but no minutes had been kept. Discussions concerned mainly maintenance, earlier also scheme design and tap siting. There had been a two-day pre-construction seminar and the WUC was satisfied with it.

The fund of 18,200 NER was kept on a fixed account in the Nepal Bank Ltd. The 10 % interest rate had given an interest of 1,800 NER, which had been transferred onto a savings account. Capital and interest had not been used and fees had not been collected. The WUC did not have any plans to use the fund nor to build it up, because "people are poor". Wardwise records of the funds collected had been kept. Users had not been informed about the total fund nor about the interest.

OPERATION AND MAINTENANCE

According to the WUC there is low pressure in all taps. The VMW told that three taps in ward no 6 and two taps in ward no 8 do not give water between 10 a.m. and 4 p.m. and after 7 p.m. and have low pressure the rest of the time. The control valves of the taps that we saw were covered by concrete because of the "carelessness of the technician", as the WUC said. Some people use the water for cattle and some let the water run unnecessarily. Some platforms were quite dirty. The WUC and the VMW complained that the people do not care and do not follow their advice. The WUC has also written on the platforms that they should be cleaned. Waste water is used for kitchen gardening.

The VMW has repaired one leakage in the main pipe line caused by a flood and a landslide. The villagers helped him. In one tap washer had been changed 16 times (last one has lasted 6 months) and in others at least once. No taps has been changed. The VMW does 2-3 check-ups of the facilities in a month. He complained that he did not have tools, since the technician took the tool box away with him. He makes the washers out of old slippers and has not purchased any, since he would have to walk two days to buy them. He thought that the WUC would give him the money, if he needed to buy spare parts. He found his training good, but wanted training on how to fix the five taps with low pressure. Most villagers would contact a WUC member, if they had problems with water supply.

The WUC did not plan to build up the fund for a possible major rehabilitation. They saw that they have responsibility to repair only minor problems, "major problems are the responsibility of the DWSO and the RWSSP", the WUC told. The VMW, however, said that they would ask for money only after using the fund.

HEALTH AND SANITATION

The three wards have four CHVs, who do not attend WUC meetings. They did not even know what the WUC was. The first CHV interviewed told that she was selected in a mass meeting, but the other by the WUC. She also told that she had been forced to become a CHV, but that she was now happy despite of that.

The first CHV did not have medicines and did not know where to buy them. She gave people only suggestions about where to go for help. The other CHV had a full box refilled twice, but had received only 15 patients in one year. She bought the medicine from a medical store in Dedgaon even if they were expensive there. Money was received by selling medicine to a price determined at the training, and some medicine was given free. Both thought that the medicines in their health kits were sufficient. The first CHV did not keep any records but the other one did. They were satisfied with their training, and the first CHV wanted further training on vaccination and how to cure cuts.

The WUC confirmed that some CHVs are doing well but some not, because "they use the money they get for their own purposes". The WUC said that they have tried to correct them but without success.

In the whole scheme area only a few households in ward no 6 had latrines. Reasons given by villagers ranged from not having enough space, time or money to latrines simply not being important. None of the WUC members had a latrine and only the other of the CHVs interviewed. There was no latrine in the school, although material had been collected. The WUC was waiting for technical help.

FIELD REPORT

Scheme name and district	SALJHANDI, Rupandehi												
Scheme type	Gravity												
Ward visited	7												
Number of taps (in sub-schemes)	11												
Construction started/completed/hand over	2.91/11.92/9.94												
Population	115 households (+ 100 hhs illegal settlers)												
Average population per tap	10.5 households												
Ethnic composition (%)	<table> <tr> <td>Bahun/Chhetri</td> <td>58</td> </tr> <tr> <td>Magar/Gurung</td> <td>10</td> </tr> <tr> <td>Newar</td> <td>1</td> </tr> <tr> <td>Tharu</td> <td>3</td> </tr> <tr> <td>Kami/Damai</td> <td>25</td> </tr> <tr> <td>Others</td> <td>3</td> </tr> </table>	Bahun/Chhetri	58	Magar/Gurung	10	Newar	1	Tharu	3	Kami/Damai	25	Others	3
Bahun/Chhetri	58												
Magar/Gurung	10												
Newar	1												
Tharu	3												
Kami/Damai	25												
Others	3												
Date of field visit	March 22, 1995												

CONSTRUCTION MANAGEMENT

Saljhandi ward nos 1, 2 and 7 have a gravity scheme with 34 taps. Ward no 7 has 11 taps including one for the school. There are 215 households of which 100 are illegal settlers. 500 NER/tap had been collected from the users, who had divided the payments equally among themselves (15-75 NER/hh) except for one tap, whose users paid according to the distance from the tap (5-75 NER/hh).

Construction work lasted for 40 working days. Half of the construction was done by women, whose husbands worked in Butwal or who did not have men present at the time of the construction. The WUC threatened households with a 50 NER/day fine, if they did not provide labour and could not find a substitute worker. No households had to pay the fine. Illegal settlers provided labour, but most of them do not use the taps, because they live too far from them.

POST CONSTRUCTION MANAGEMENT

The scheme has many different kinds of user meetings and committees to manage the water supply system. On the scheme level there was a mass meeting of all the three wards, which about 300-400 people attended (minutes were kept). That meeting elected a General Meeting of 75 people (25 people from each ward), which has had a meeting twice. The General Meeting has e.g. divided the work needed for pipe lines. The General Meeting again elected among themselves a 9-member WUC for the whole scheme, three members from each ward. Six CHVs were later added to the WUC after their training. The scheme-level WUC has had 14 meetings before the handing over and two meetings after. It has half of the total fund collected, altogether 8,500 NER for the three wards. It has not used its capital nor the interest. It has the responsibility for the O&M of the main pipe line, it handles major O&M problems and gives suggestions to wardwise WUCs.

Ward-level mass meetings have been held 3-4 times. They have decided about the number of taps/cluster on the basis of the time needed to fetch the water, about the division of pipe line on the ward level and about the division of labour for platform construction. They have also publicized how much labour was provided by each household. Wardwise mass meetings elected 9-member wardwise WUCs. One member of the ward-level WUC is from the scheme-level WUC. 6 out of the 9 members have to be present at meetings. Ward-level WUCs received the other half of the O&M fund (2,500 NER in ward no 7). The ward-level WUC has the responsibility for O&M of the pipeline in the ward area and for minor O&M problems.

Of the all-male WUC of ward no 7 five members are Bahun, two Kami, one Chhetri and one Magar. Villagers complained that most of the literate women move away from the village, so there are no active women left for the WUC. One WUC member is also member of the VDC and one is the VMW. All three clusters are represented. WUC members found their pre and post construction seminars useful, but wished to receive further training on drainage. Both the WUC and the users had a strong feeling of ownership of the scheme.

In addition there have been clusterwise user meetings to decide e.g. where to site the taps, this with the help of an overseer and a technician. Users of a tap have elected among themselves a tapwise committee of 4-5 members which, with the help of the VMWs, has the responsibility for O&M of the tap and of the pipeline connecting the tap to ward-level pipe. Tapwise committees collect 5 NER/hh/month to buy spare parts. That money is not deposited on a bank account. The money collected has covered the O&M costs, according to the WUC of ward no 7.

The capital of ward no 7 WUC has been moved from a fixed account onto a savings account. Last July the interest was 813 NER. Neither the capital nor the interest has been used, and the WUC plans to use them only in case of a major breakdown. In addition to the tapwise fee for the tap-level committees, also the WUC of ward no 7 plans to collect a tapwise fee for its use. Users are informed about the use and collection of funds through WUC members, and they are shown the records if they so wish. Users felt that they had enough information about the scheme.

OPERATION AND MAINTENANCE

The users seemed to be mostly satisfied with the new water supply system, although they had to wait 15-20 minutes in the mornings to get water from the tap. An old man complained that his tap was too far away from his house. Some tap water is also used for irrigation. Waste water is used for kitchen gardening. At least some taps had a principle of collecting a 50 NER fine from anyone letting the water run unnecessarily.

The O&M responsibility is divided between WUCs of the scheme, ward and tap-level as mentioned above. There is one VMW for the whole scheme, who had received his training only one month before the field visit and had not done any maintenance work. Taps have been changed 3-4 times and they are not the original brass taps. Users have usually changed the washers and taps and done other necessary maintenance themselves. They have also repaired the pipe line. The WUC of ward no 7 saw no role for women in O&M.

The pipe line was badly broken by a landslide during construction. There was a conflict between the WUC and the DWSO about the responsibility to repair it. Finally the DWSO agreed to provide repair material worth of 21,000 NER. In addition to that, leakages in the main line have been repaired twice. There was some leakage from the pipe line even at the

time of the field visit. The scheme-level WUC told that they would ask the DDC and then perhaps the DWSO for financial and material help to repair the main line. If they would not get anything they would collect the money themselves.

HEALTH AND SANITATION

There are three CHVs in the ward no 7 chosen by the WUC. The CHV interviewed had a full health kit box, which she had filled once. She sells the medicine for a market price, as determined by the Health Post. She complained that people do not understand that she needs to sell the medicine. First 2 NER and then 5 NER per household has also been collected by the WUC to refill the box. The villagers told that by their unanimous decision only the poor people use the services of the CHVs, and the rest buy their medicines from the nearby medical store. They were satisfied with the work of the CHVs.

The CHV interviewed wished that she would have tincture iodine and medicines for high fever and headache in addition to the medicines in the box. She helps the VHW to vaccinate children and provides her with population data. She keeps records of the medicine, health problems and health funds. She was satisfied with her training, but wished to receive further training on how to solve health problems of small babies. She hoped to be able to open her own drug store, and wished that she would be paid for her services as they take much of her time.

There are 60 latrines in the ward, 40 of which were already built before the project. Small Farmers' Group had assisted in latrine building. Villagers told that latrines were too expensive for poor and low-caste people. All WUC members had pucca latrines. There is also a latrine at the school.

FIELD REPORT

Scheme name and district	SIMICHOOR, Gulmi	
Scheme type	Gravity	
Ward visited	1-8	
Number of taps (in sub-schemes)	16	
Construction started/completed/hand over	4.91/7.92/-	
Population	1527	
Average population per tap	95	
Ethnic composition (%)	Bahun/Chhetri	63
	Magar/Gurung	14
	Newar	1
	Muslim	0
	Kami/Damai	10
	Others	13
Date of field visit	April 17 and 18, 1995	

CONSTRUCTION MANAGEMENT

The Simichour II scheme has 16 taps, three of which are school taps, serving 214 households. The construction was completed three years ago, but the scheme has not been handed over yet. Only 500 NER/tap was collected equally from the users of the tap totalling 6,500 NER. Each household paid between 15-50 NER. Some poor households worked for other households during construction and were paid by them.

Porterage and material collection was done mostly by women and construction by men with women helping. The work for main pipe line was divided equally among households (14 days/hh), the rest of the work required depending on the length of the pipe line to the particular tap. School tap construction was done by households using them. Altogether households provided labour for 50-92 days. Four households, not present at the time of construction, later paid their share of the fund, and in addition paid 800-1,200 NER depending on the number of working days that would have required from them.

POST CONSTRUCTION MANAGEMENT

Mass meetings had been held three times. First to approve the scheme design, to elect the WUC and to decide about fund collection. The second and third meetings decided about matters related to the division of labour. According to the WUC about 200 people have attended the meetings of which minutes have been kept. In the mass meetings people wanted to have more taps, discussed about tap sites and asked whether they would be paid for their labour. The main VMW has acted as a peon and informed people about scheme matters even 5-7 times/ month during construction.

In addition to the chairman, vice chairman and secretary, each of the 13 taps has its representative in the WUC. Seven members are Bahun, five Chhetri and two Magar and Giri each.

One member is the VDC chairman and one a VDC member. When the WUC was formed five years ago, they did not know that two women should be included in the Committee. We were told that the other A-schemes under construction in Simichour have two female members in their WUCs. Minimum number of members required in a meeting is nine, usually 12-13 members attend. The VMW attend the WUC meetings regularly. Altogether 54 WUC meetings have been held, 8-10 of them after the completion of construction. Recent discussions have centered around e.g. cleaning of the chambers, taps problems and repair of a landslide damage. Minutes of the meetings are kept.

The construction of another A-scheme, Simichour III with seven sub-schemes, is being completed around this time. Each sub-scheme has its own 3-7 member WUC, which is basically independent from the older WUC. The WUC of Simichour II received and distributed construction material for those sub-schemes and decides in controversies (e.g. about tap sites) in the newer schemes. It also gives suggestions and promised to organize labour in case there was a major breakdown in one of the schemes, but it would not provide any financial help.

The O&M fund is kept on a savings account in Rastriya Banijya Bank giving an 7.5 % interest. The exact amount of interest was not known at the time of the interview. Neither the capital nor the interest has been used. A fee of 75 NER/tap has been collected since the completion of the construction from 13 taps to remunerate the "main" VMW. The fee, totalling to 975 NER/month was decided by the WUC and it is divided equally between the users of the tap.

The WUC seemed to be satisfied both with the DWSO, which gives them advice, and with the RWSSP. The whole WUC had attended a three-day pre construction seminar and they hoped to receive more training on how to motivate people. They also wished that users would be trained to increase their feeling of ownership.

OPERATION AND MAINTENANCE

One VMW was trained for the scheme three years ago. He is more or less responsible for the maintenance of the whole scheme, but he gets help when needed from three other VMWs, who use the taps of that scheme. They were trained four months ago together with three other VMWs to maintain the newer schemes. There is no hard and fast division of labour between the VMWs, however. The "main" VMW is paid 975 NER/month. He does monthly check-ups of the facilities. He found his training good as far as water supply was concerned, but wished to receive training on how to build pucca latrines. He thought that the allowance during training was not big enough.

There are not enough water in the last four taps of the scheme during the dry season. The WUC had given permission to make connections from six taps to about 40-50 households living in "about 10 minutes walking distance downhill from the taps". About 20-30 of these households were included in the design population of the scheme. The remaining 20 households, who did not pay nor provided community labour, would be covered by two schemes that the WUC hoped would be constructed by the project. The WUC estimated that there would be enough water in the scheme if the two schemes were constructed.

During dry season water is given from the tanks only between 6 a.m. and 10 a.m., with the exception of school taps. The collection chamber gets only little more than half full during the daytime in the dry season. The rationing of water causes long queues to water points in the mornings.

Teachers using a school tap that was one before the last said that they had not received water for 1,5 months before the field visit and that even before that the pressure had not been sufficient. They told that people around the last tap had used water for irrigation at the same time. The teachers accused that one VMW from the other schemes, who was a user of the last tap, had done "something" in the pipe line close to the school tap about 8-9 months ago to get more water to the last tap instead of the school tap. The "main" VMW repaired the pipe line and water had come the next day, but not after that anymore. The teachers had sent a letter to the VDC about the situation, "because WUC chairman is also the WUC chairman", but the WUC member present at the inspection of the school tap denied that the WUC knew anything about it. The pipe line to the school tap was cut at the time of the field visit as well. The users of the last tap told that they had not received water every day during last few days either.

There had not been any tap in the tapstand before the school tap for one year before the field visit. The WUC member of that tap accused the VMW for breaking the tap while trying to repair it and said that the users refuse to pay for it. The WUC had told the WUC member to collect the money but nothing had happened. Two Giri women using the tap told us that the VMW should pay for the tap "since he is paid every month". Another Brahmin household told that children had broken the tap and accused the WUC representative of their tap for not caring about it. Otherwise they were satisfied with the WUC and the VMW. They were willing to pay for a new tap. Both households said that the tap had not given enough water even for drinking for the last two months.

Villagers had helped the VMW to do 2-3 pipe line repairs caused by road construction. Sometimes there are leaves in the distribution chambers because they do not have strainers. Eight taps have been changed and washers made of slippers had been changed to most of the taps. The WUC member collects the money for spare parts from the users and buys them from Tamghas. In case there was a major breakdown the WUC would first use the fund which they thought would be sufficient for minor repairs, though. After that they would ask the DWSO for financial help. They had no plans to build up the fund. The VMW felt he knew how to repair even major breakdowns.

According to the VMW some women let the water run unnecessarily and do not care about advice saying that "we have paid for it". It seemed that at least from some of the six outside connections water was running all the time either from the tap or to through the connection pipe. Waste water was used for cattle and kitchen gardening in 12 taps.

HEALTH AND SANITATION

There are 16 CHVs in the scheme area of whom 6-8 took part in the interview. They were first trained by the RWSSP. They were told not to sell the medicine and the refilling was supposed to be financed from the health fund. A lot of patients used the free services given by the CHVs at that time. The health fund was not collected, however, and the health kit boxes were taken away from the CHVs. About 1,5 years ago the CHVs received training and health kit bags from the DHO. Now they are selling their medicines, but do not receive as many patients, because people got used to receiving medicine free of charge. They do not understand that the CHVs now have to take money for the medicines. The number of patients/CHV was between 60-150 since the DHO training, though.

The CHVs were elected by the WUC, but they never attend WUC meetings. Their bags have been refilled about 2-3 times after the DHO training. They buy the medicine from Tamghas Red Cross medical store. They sell the medicine for a market price as determined at their

training. The CHVs also give medicine for credit and some people never pay afterwards. They were irritated that they had to put in their own money to buy medicine. They had told that the WUC, which had done nothing about it. The WUC admitted that it was responsible for the poor working of the CHV system.

The CHVs wished that they would have medicine for scabies (one CHV had bought medicine herself) and for worms and that they would have more Cetamol. The Health Post staff had taught them twice about nutrition, sanitation and vaccination, but there is no other co-operation. They had attended Mothers' Group meetings only 2-3 times, since they existed in only a few wards. They told that wherever they are, they give informal education to women. The CHVs kept necessary records. They found their training good, although they had difficulties to understand what they were expected to do after training. The training was mostly about latrine building although half of the population already had one. They wished to have refresher training in 1-2 years intervals. Midwife training was also deemed useful as well as thermometers together with training to use them.

There were 8-10 latrines before the project, and now about the same amount of households do not have one, according to the WUC. Most are pit latrines with only 6-7 of pucca type. The WUC told that latrine promotion by the RWSSP one year ago gave good results. All WUC member and all CHVs had a latrine. Latrine construction was underway in all three schools of the area.

FIELD REPORT

Scheme name and district	SUNWAL, Nawalparasi
Scheme type	Gravity
Ward visited	6
Number of taps (in sub-schemes)	7
Construction started/completed/hand over	12.92/7.93/3.94
Population	346
Average population per tap	49
Date of field visit	March 26, 1995

CONSTRUCTION MANAGEMENT

Sunwal ward no 6 gravity scheme has 7 taps, one of which is used by a school. There are altogether 220 households in the ward, according to the WUC, including 85-100 illegal settler households.

6,000 NER was collected for the fund, household shares varying between 20 NER and 250 NER. Illegal settlers, who use one tap together with 4-5 legal settler households, paid 20 NER.

Porterage was done mostly by women, material collection by both sexes and construction mostly by men. All households provided labour and if men were not present, women participated. Illegal settlers also provided labour during construction.

POST CONSTRUCTION MANAGEMENT

The WUC felt that its main responsibilities are the maintenance of the taps and the management of the fund. Intake and pipe line they saw as the responsibility of the VMW. They felt that the scheme was theirs.

Five mass meetings have been held, first to choose the WUC and to decide about fund collection and then to approve the scheme design and to decide the tap sites. The third mass meeting was arranged for the handing over one year ago. After handing over, two meetings have been held about financial matters and to inform users about sanitation and health questions. Mass meeting decides on major questions, and the WUC decides on other matters after hearing the mass. According to the WUC, at least one member/household have attended. Women attend meetings only if men cannot come. Illegal settlers attend as well. A chaukidar is used to call people to meetings. Minutes of the meetings were kept.

The WUC has 11 members of whom 10 are Bahun and one is Lama. Each of the eight clusters has a member in the Committee. All members are farmers and the chairman is also a VDC member. There are no women in the WUC, and they had not heard of the recommendation of two females in the WUC. Usually all members are present, the minimum required is seven. According to the WUC, the CHV and the VMW are called if necessary, the VMW

had not attended any meetings, however. Two WUC meetings were held before and two after the handing over. Minutes were kept. The WUC had only attended a one-day post construction seminar, and wished to receive training in the maintenance of taps for cases when the VMW is absent.

The fund is kept on a fixed account with 13 % interest in Rastriya Banijya Bank in Sunwal. Neither the capital nor the 1,936 NER interest has been used. The WUC had no plans to use the fund and told that a mass meeting in May would decide whether to use it.

OPERATION AND MAINTENANCE

There seemed to be enough water for the legal settlers, but the tap used also by illegal settlers is very crowded in the mornings. Tap water is not used for irrigation, and not much of the waste water is used either.

The tap used by illegal settlers has been changed trice, others only once. The original brass taps have been changed into steel ones because the WUC thinks that they are better. The users of the tap collect the money for the tap among themselves, buy it from Butwal and also do the change. Washers have not been changed. Some taps seemed to be leaking although the WUC assured that "they are not leaking much".

Muddy water comes to the intake and through the taps as a result of flood from a nearby stream during monsoon season. A simple wall to prevent the muddy water from reaching the intake pipe might be sufficient. The WUC felt that the DWSO and the RWSSP have the responsibility for major maintenance, and the DWSO should provide the money for that. They had not thought about building up the fund for a possible major rehabilitation.

The scheme has one VMW who has twice repaired the pipe line with help from villagers. He does regular check-ups of the facilities "when he is free". He thought that his training had been sufficient and felt no need for further training. He is paid 40 NER/day when repairing the pipes, but he is not satisfied with that. In the beginning of the project he thought that he would be paid more.

HEALTH AND SANITATION

The ward has one Government CHV, who was not available for an interview. The WUC supports the CHV by informing villagers about vaccinations, family planning etc.

The WUC estimated that 20 % of the households had a latrine, of them 2-3 were pucca type. Only 2-3 latrines existed before the project. The biggest problem for the latrines of the area seemed to be caused by rats, not by high water tables. All WUC members have a pit latrine. The school latrine and urinal were almost finished.

OTHER USER COMMITTEE

There is a Women Development Committee (WDC), which has five members chosen by a mass meeting of women. The WDC recommends women for whom the Rastriya Bank gives individual loans for farming, live stock etc. Loans are guaranteed by the WDC and they should be paid back in 30 months.

The RWSSP shallow tube schemes in schemes in Sunwal have wardwise WUCs with clusterwise representation. There is no VDC-level WUC, but during construction members from all WUCs were gathered for communication, seminars etc. together with VDC members.

The VDC receives 15,000 NER every year from the DDC to use for water supply. With that money 7-8 wells/year are sludged. These wells have wellwise WUCs.



