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ALTERNATIVE SANITATION

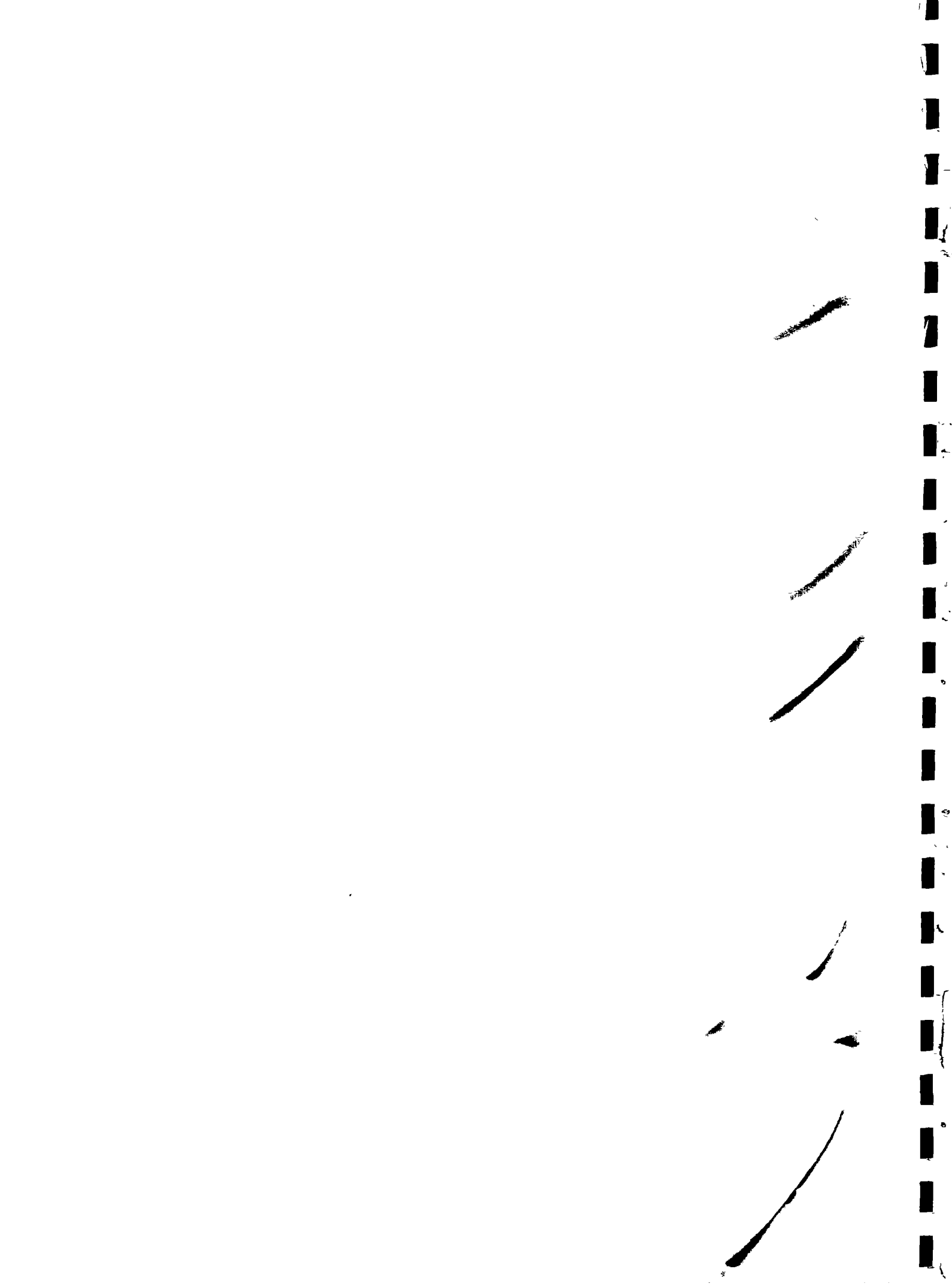


INTERNATIONAL REFERENCE CENTRE
FOR COMMUNITY WATER SUPPLY AND
SANITATION

IN BHAKTAPUR, NEPAL



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ALTERNATIVE SANITATION IN BHAKTAPUR, NEPAL

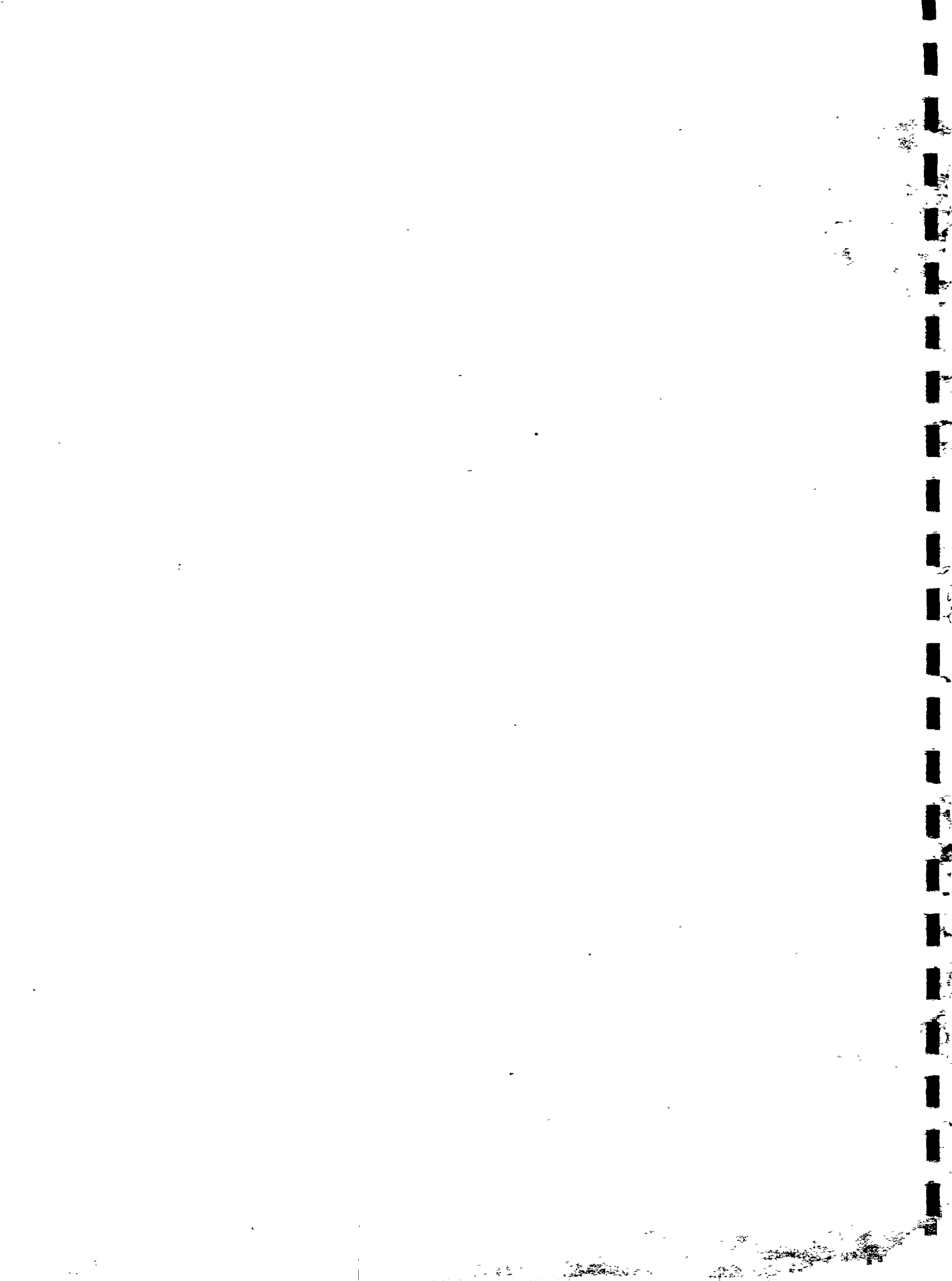
AN EXERCISE IN COMMUNITY PARTICIPATION

DURING THE FINAL PHASE OF THE BHAKTAPUR DEVELOPMENT PROJECT (BDP)

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NOTES COMPILED

BY THE


**COMMUNITY DEVELOPMENT
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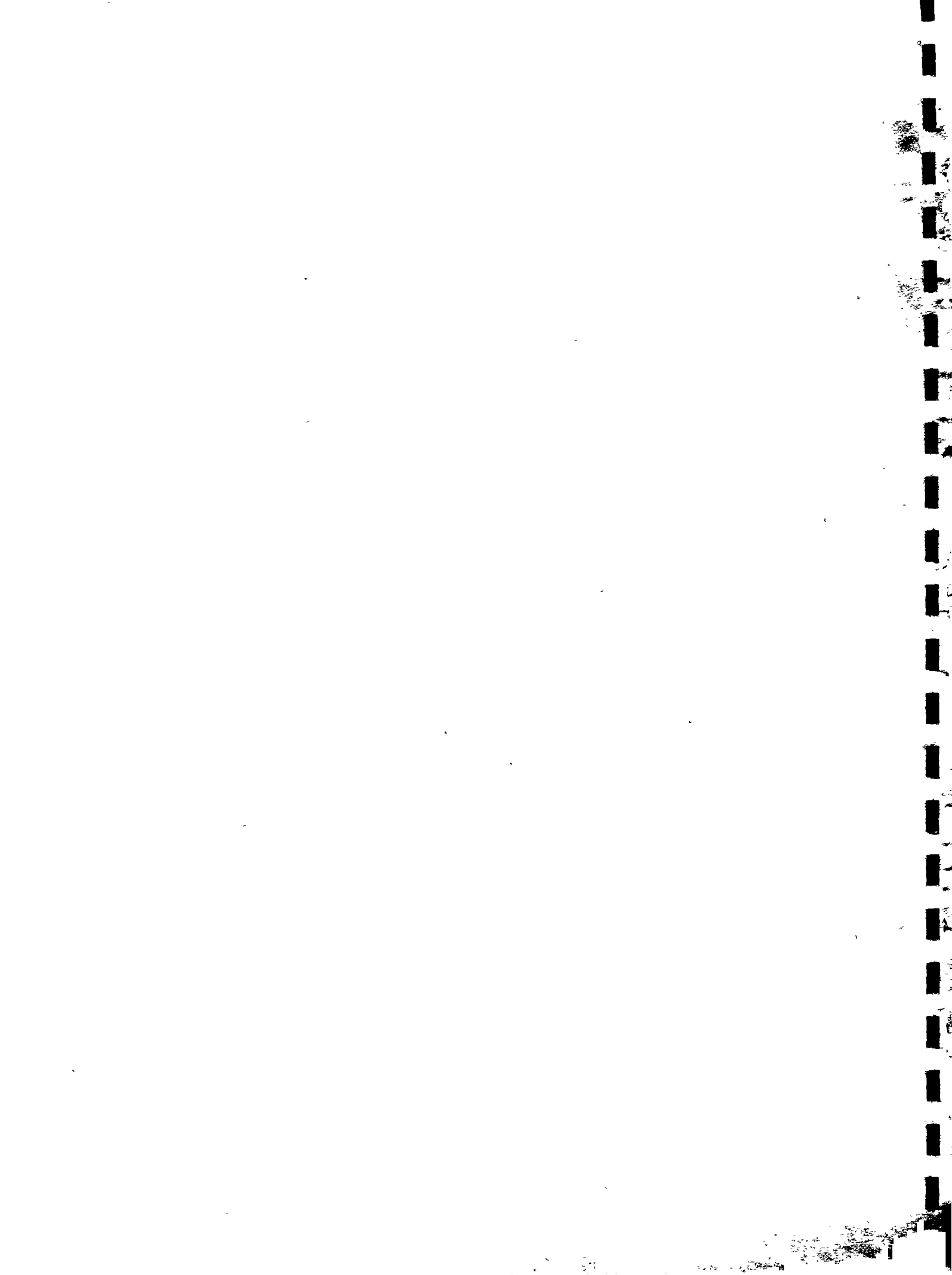
KUMAR LOHANI INGO GUHR

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PEOPLE HAVE HEARD OF THE PROGRESS MADE IN THE "SWEEPERS' AREA" IN BHAKTAPUR. MORE AND MORE VISITORS COME TO BHELUKHEL TO SEE IF THEY CAN GRASP SOME SIGNS OF WHAT HAS TAKEN PLACE. THIS REPORT IS TO SHOW THE DIFFERENT STEPS, PLANNED AND UNPLANNED, WHICH HAVE BEEN TAKEN. THIS REPORT ALSO WILL SHOW THAT THE DEVELOPMENT IN BHELUKHEL HAS TO BE SEEN IN THE CONTEXT OF BHAKTAPUR AND THE BHAKTAPUR DEVELOPMENT PROJECT (BDP). IT WILL NOT BE POSSIBLE TO REPEAT THE ENTIRE SCHEME ANYWHERE ELSE IN NEPAL. THAT MANY HUMAN AND FINANCIAL RESOURCES MADE AVAILABLE BY BDP WERE JUSTIFIED FOR A PILOT PROJECT ONLY. HOWEVER, MANY COMPONENTS OF THIS SCHEME CAN EASILY BE DUPLICATED. THEREFORE, THIS REPORT WANTS TO MAKE THESE EXPERIENCES, GOOD AND BAD, AVAILABLE TO OTHERS. LASTLY, THIS REPORT IS TO SHOW THAT THE DEVELOPMENT OF THE PEOPLE IS MUCH MORE IMPORTANT THAN ANY PHYSICAL IMPROVEMENT.

GROUND RULES FOR COMMUNITY PARTICIPATION

The following suggestions refer to project components which became important during the implementation of the Alternative Sanitation Scheme:

NO. 1 EXISTING EXPERIENCE

BEFORE YOU START PLANNING, LOOK AT SIMILAR PROJECTS IN THE COUNTRY. THERE ARE ALWAYS PROJECTS FROM WHICH YOU CAN LEARN. UTILIZE THAT EXPERIENCE AND, MORE IMPORTANT, THE MISTAKES MADE, FOR YOUR OWN PLANNING. (Page 88)

NO. 2 IDENTIFYING INDIVIDUAL LOCAL CONSULTANTS

IF YOUR OWN PROJECT MANPOWER DOES NOT HAVE THE EXPERTISE REQUIRED, EMPLOY LOCAL CONSULTANTS. HOWEVER, LOCAL CONSULTANT FIRMS OFTEN DO PROVIDE ONE OR TWO EXCELLENT KEY PERSONS, WHEREAS SOME OF THE EXPERTISE AREAS WHICH YOU NEED MIGHT NOT BE COVERED SATISFACTORILY. THEREFORE, IDENTIFYING INDIVIDUAL PERSONS FOR EACH OF THE EXPERTISE AREAS WILL HELP TO ENSURE THAT ALL COMPONENTS OF YOUR PROGRAM ARE DEALT WITH APPROPRIATELY. (Page 103)

NO. 3 INTEGRATION OF LOCAL PEOPLE

IN THE EYES OF THE PEOPLE, LOCAL PROJECT PERSONNEL CAN APPEAR AS ALIEN AS FOREIGN EXPERTS. BOTH MIGHT HAVE DIFFICULTIES TO IDENTIFY THE ACTUAL NEEDS OF THE PEOPLE. THE FOREIGN AND LOCAL EXPERTS, THEREFORE, OFTEN APPEAR AS INTRUDERS IN THE COMMUNITY THEY WANT TO ASSIST, AND THEY LITERALLY RULE IT WHEN IT COMES TO PLANNING AND IMPLEMENTING THE PROJECT. INSTEAD, TO EMPLOY ONE OR TWO WELL ACCEPTED KEY PERSONS OF THE COMMUNITY AND INTEGRATE THEM FULLY INTO THE PLANNING AND IMPLEMENTING PROCESS WILL NOT ONLY ENSURE THAT THE REAL NEEDS ARE IDENTIFIED BUT IT ALSO WILL MAKE AVAILABLE MANY OTHERWISE UNTAPPED RESOURCES OF THE COMMUNITY. (Page 175 - 179)

NO. 4 PROJECT PUBLICITY

IN THE BEGINNING THE MAJORITY OF THE PEOPLE MAY NOT COOPERATE, ALTHOUGH THEY PRETEND TO. THEY EITHER THINK THEY DO NOT NEED WHAT YOUR PROJECT HAS TO OFFER OR THEY HAVE ALREADY GONE THROUGH A SERIES OF DISAPPOINTMENTS AFTER PROMISES HAD BEEN MADE TO THEM. THEY NEED TO BE INFORMED, AND THIS CAN START WITH MASS MEETINGS AND END WITH HOUSE-TO-HOUSE VISITS. IF YOU HAVE THE MAJORITY BEHIND YOUR PROJECT, THEN THOSE FEW WHO WILL ALWAYS OPPOSE THE PROJECT FOR DIFFERENT REASONS WILL NOT BE ABLE TO EFFECTIVELY HINDER THE DEVELOPMENT AS PLANNED. (Page 124)

NO. 5 CONVINCING THE PEOPLE

INFORMATION ON ITS OWN IS NOT ENOUGH. THERE HAS TO BE CONVINCING EVIDENCE FOR THE MAJORITY OF THE PEOPLE TO UNDERSTAND THAT THE PLANNED DEVELOPMENT IS WHAT THEY NEED. THOSE COMMUNITY LEADERS ALREADY COOPERATING WITH YOUR PROJECT ARE THE ONES WHO WILL BE ABLE TO BEST IDENTIFY AND PRESENT THE AIMS OF THE PROJECT TO THE PEOPLE. (Page 143 - 146)

NO. 6 TRAINING OF MOTIVATORS

YOU WILL NEED LOCAL PEOPLE FOR HOUSE-TO-HOUSE VISITS AND FOR THE REGULAR CONTACT WITH THE COMMUNITY. THEY WILL NEED SOME TRAINING ON WHAT THEY ARE EXPECTED TO DO. A SHORT TRAINING PACKAGE PER MONTH COVERING ONLY THE ACTIVITIES PLANNED FOR THAT MONTH CAN BE MORE EFFECTIVE THAN LONG TRAINING PROGRAMS. EACH OF THOSE TRAINING PACKAGES SHOULD END WITH TESTS, AND FROM THE SECOND PACKAGE ONWARDS, EACH SHOULD START WITH AN EVALUATION OF THE LAST TRAINING PACKAGE. YOU WILL GET THE MOST OUT OF THIS TYPE OF TRAINING IF LECTURING IS REPLACED BY GROUP WORK PLANNING AND ORGANIZING THE MOTIVATION WORK FOR THE FOLLOWING MONTH. (Page 126 -142)

NO. 7 PLANNING BY THE PEOPLE

THE PEOPLE KNOW THEIR SITUATION MUCH BETTER THAN ANY OF THE PROJECT PERSONNEL EVER WILL. IF THEY ARE ALLOWED TO SELECT THE DEVELOPMENT TO BE BROUGHT ABOUT BY THEMSELVES, THEY WILL CONSIDER IT AS THEIR OWN. THEIR CHOICE ALSO WILL BETTER REFLECT THEIR ABILITY FOR MAINTAINING THE NEW DEVELOPMENT. (Pages 134, 181-182)

NO. 8 IMPLEMENTATION BY THE PEOPLE

AS MUCH CONSTRUCTION WORK AS POSSIBLE SHOULD BE DONE BY THE PEOPLE THEMSELVES AND NOT BY THE PROJECT. THE ORGANIZATION OF MOST INFRASTRUCTURE WORKS AS WELL AS THE WORK ITSELF CAN BE CARRIED OUT BY THE PEOPLE PROVIDED CONTINUOUS TECHNICAL SUPERVISION IS DONE BY THE PROJECT. WHATEVER THE PEOPLE DO THEMSELVES, HAS A BETTER CHANCE OF BEING MAINTAINED BY THEM IN THE FUTURE.

NO. 9 MATERIAL PROCUREMENT BY THE PEOPLE

THE PROPER PROCUREMENT OF (BUILDING) MATERIALS IS ONE OF THE MOST CRUCIAL COMPONENTS FOR SUCCESSFUL COMMUNITY PARTICIPATION. IF THERE IS A SHORTAGE OF MATERIALS OR IF THERE ARE TRANSPORT PROBLEMS, THE PEOPLE MAY USE THEIR CONTACTS, FRIENDS AND RELATIONS PROVIDED THE PROJECT IS THEIR OWN. IF, HOWEVER, MATERIAL PROCUREMENT IS LEFT TO THE PROJECT, WITH SLOW ADMINISTRATIVE PROCEDURES AND RESTRICTIVE REGULATIONS, YOU CAN BE SURE THAT MOST OF THE TRUST AND COOPERATION OF THE LOCAL PEOPLE WILL AGAIN DISAPPEAR. (Page 188)

NO. 10 SUPPORT BY YOUNGSTERS

IN THE LONG RUN THE YOUNG PEOPLE IN A COMMUNITY WILL BE THOSE WHO BENEFIT MOST FROM THE NEW DEVELOPMENT. IF THEIR SUPPORT CAN BE WON EARLY ENOUGH, THEIR ACTUAL COOPERATION WILL BE THE BEST PUBLICITY WITHIN THE FAMILIES OF THAT COMMUNITY. THEIR VOLUNTARY CONTRIBUTION NEEDS ACKNOWLEDGEMENT AND ENCOURAGEMENT TO CONTINUE. INCENTIVE PROGRAMS FOR YOUNGSTERS ARE NOT COSTLY, BUT ARE OFTEN NEGLECTED BECAUSE THE LONG RUN BENEFITS TO THE PROJECT ARE RARELY SEEN. (Pages 176 - 178)

IF YOU USE THE ABOVE LISTED
10 GROUND RULES, COMMUNITY
PARTICIPATION WILL BE MADE
EASY, AND, IN THE LONG RUN,
RESOURCES WILL BE MORE ECO-
NOMICALLY UTILIZED.

**TO
THE
PEOPLE
OF
BHELUKHEL**

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(O) BACKGROUND:

The Bhaktapur Development Project (BDP) has improved Bhaktapur's sanitary conditions by the following measures:

- repairing and extending the water supply system
- building a modern sewerage system
- paving streets, courtyards and open spaces
- constructing more than 30 public and 1300 private latrines (by 1982).

In order for those physical improvements to be fully utilized by the towns' people, additional efforts in health education had to be made. The population not only needed to understand the connection between disease and unsanitary conditions, but also what positive effects those new sanitary facilities might have on their health if properly used.

Therefore, BDP in its Final Phase has started the following health education programme which is implemented by the Community Development Unit:

- COMPONENT 1: ALTERNATIVE SANITATION
Health education combined with latrine construction and creating a sanitary environment in one neighbourhood of Bhaktapur.
- COMPONENT 2: HEALTH EDUCATION IN SCHOOLS
Reactivating health education classes and improving the sanitary facilities of Bhaktapur schools followed by literacy classes for women.
- COMPONENT 3: BDP FINAL PHASE CAMPAIGN
A series of local leader meetings followed by mass gatherings in all wards of Bhaktapur, with the objective of creating awareness on transmission of diseases, on the functioning of those new sanitary facilities and on the departure of BDP.

This report only refers to COMPONENT 1, ALTERNATIVE SANITATION. The household latrines built under this scheme are not connected to the Project's water borne sewerage system. They are individual composting latrines. The process of building them was not just a technical solution of constructing latrines for

(O) BACKGROUND

the sweepers' community of Bhaktapur. Rather, an active users' committee was formed, community workers were trained, and de-worming and cleanign campaigns were carried out. The beneficiaries of the scheme were briefed on the costs and functions of different toilet types, and selected those systems most suitable to their needs and organized the construction works themselves. A safer composting campaign was then conducted. Presently, during this second phase of the scheme, further sanitary improvements of the neighbourhood are being made and health education is continuing. Thus, the alternative sanitation scheme has become a comprehensive health improvement programme.

This report has been divided into two different parts. The first one, with photos, gives the general understanding of what has happened, detailing all stages of the scheme. In the second part, detailed information, working papers, and all which may be useful to people who are doing similar work, have been compiled.

This is not to be understood as a manual for sanitation schemes. Local conditions, project budgets and project set-ups always differ too much to allow a simple repetition. However, we hope that some of the materials reproduced here, might be of use to those who are planning similar schemes.

*** ABBREVIATIONS**

BDP	Bhaktapur Development Project
CDU	Community Development Unit
EASTAP	East Sulabh Toilet Action Programme
FPPCP	Family Planning and Parasite Control Project
LDC	Local Development Committee
MPLD	Ministry of Panchayat and Local Developemnt
NP	Nagar Panchayat, elected town council
Rs	Nepalese Rupees on 11-2-84 1 US Dollar = Rs.15.65 on 4-4-85 1 US Dollar = Rs.18.20
VIP	ventilated improved pit latrine
WHO	World Health Organization
WSSB	Water Supply and Sewerage Board

Photos No. 83, 84, and 126 - 133 are courtesy of EASTAP.

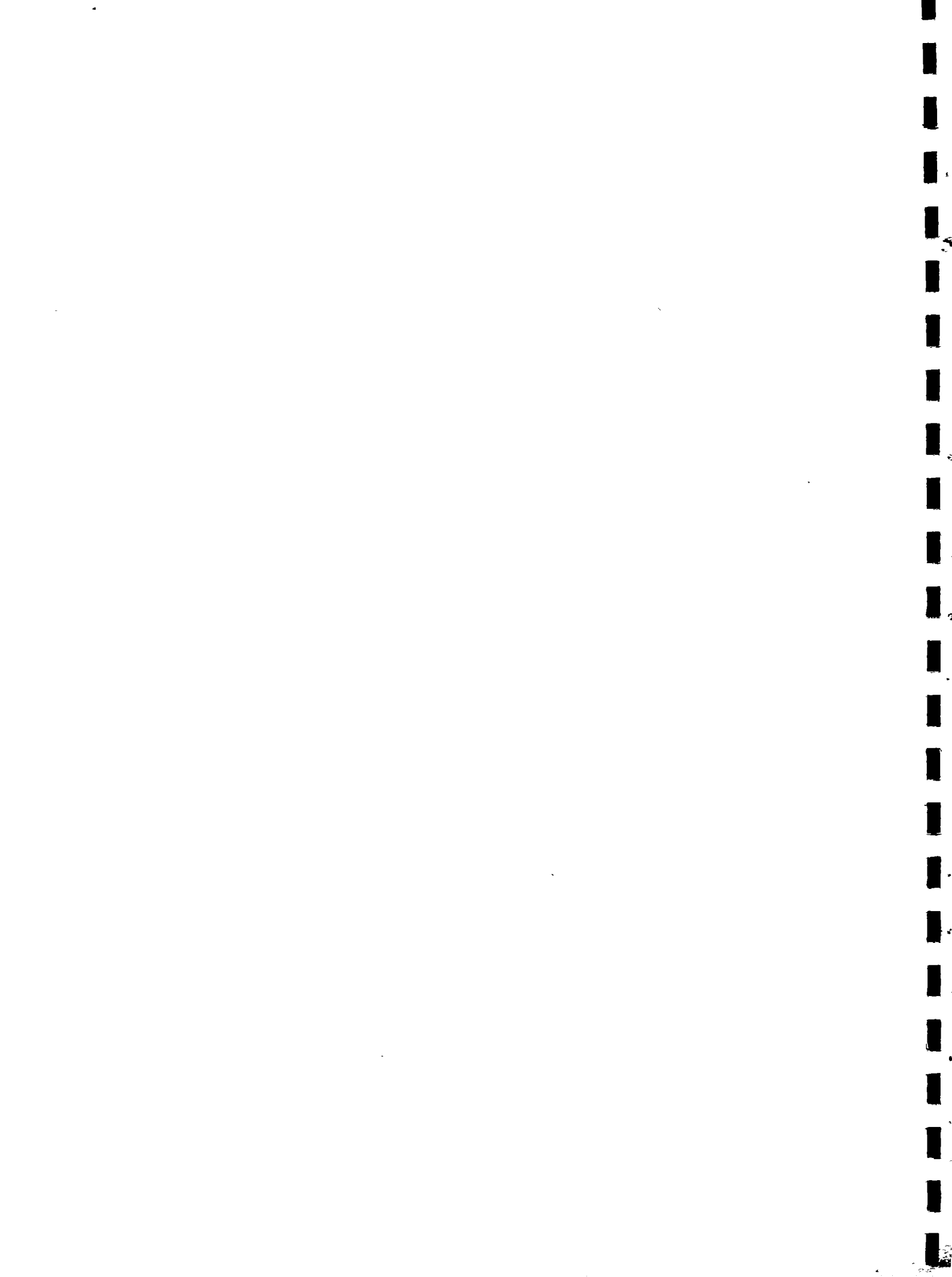
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These lines indicate subject matter which has been taken from working papers such as minutes of meetings, check-lists, etc.

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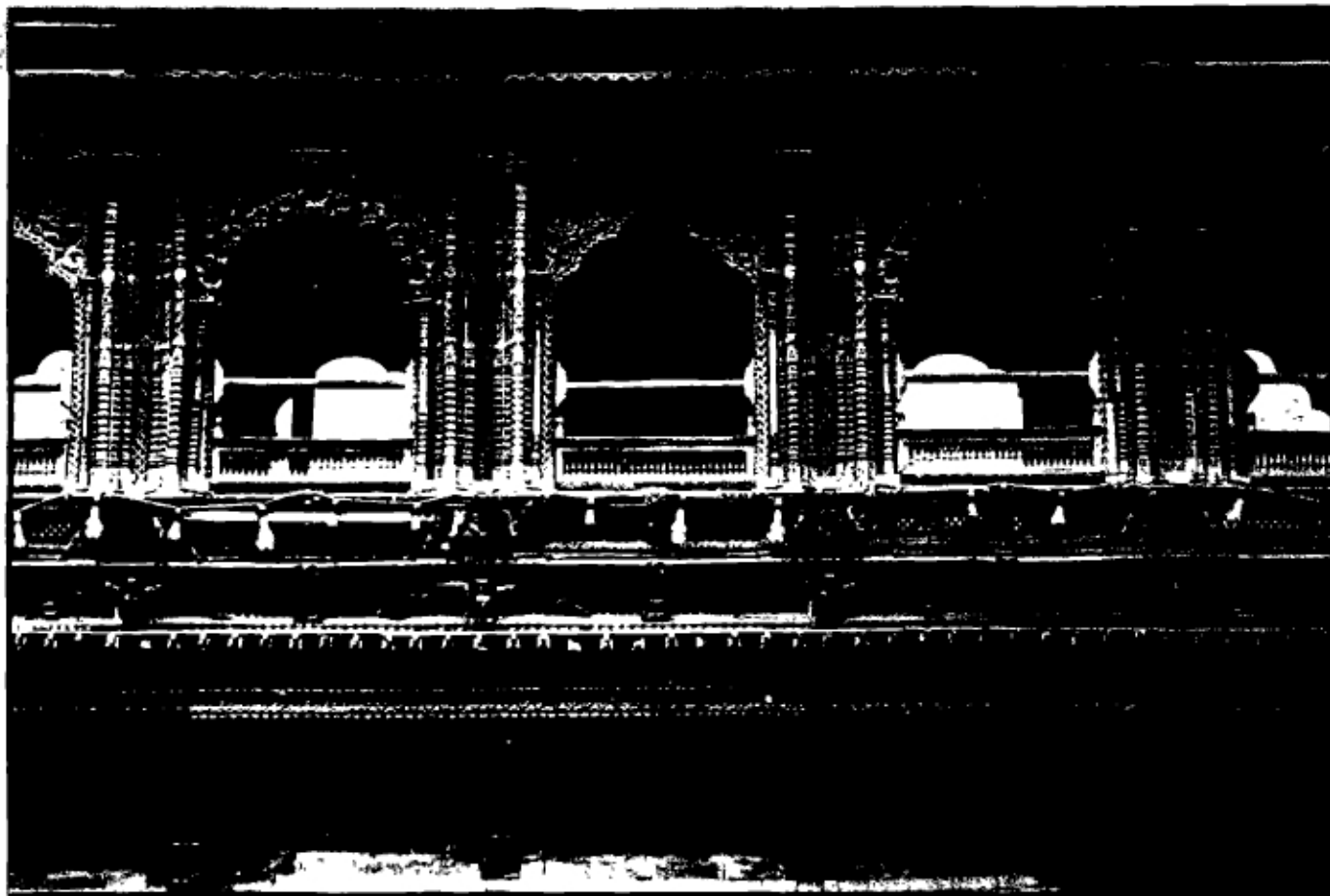
PART 1

PICTORIAL REVIEW

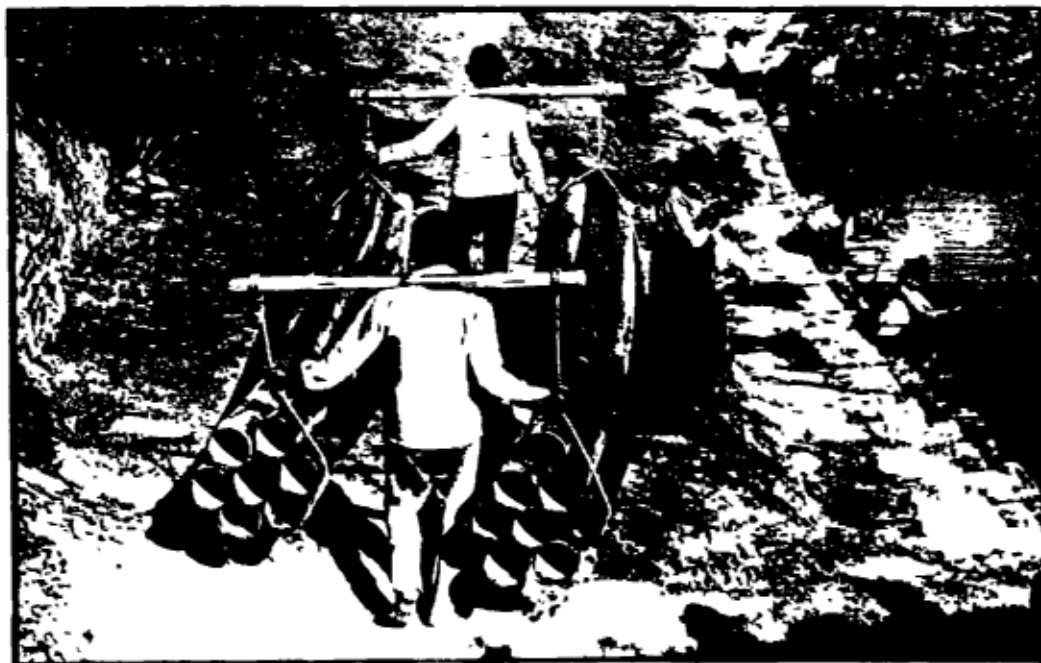


(1)BDP IN BHAKTAPUR

(1) BDP IN BHAKTAPUR



1. The Project started with restoration works.



2. In 1974, the repair and extension of the water supply system followed.

(1) BDP IN BHAKTAFUR



3.4.
And a modern sewerage system,
to be completed in 1986. By
then the Project will have
spent more than Rs.40 million
for the sewerage system alone.



(1) BDP IN BHAKTAPUR

5.6. The sewerage treatment plant is being built on the outskirts of the town.

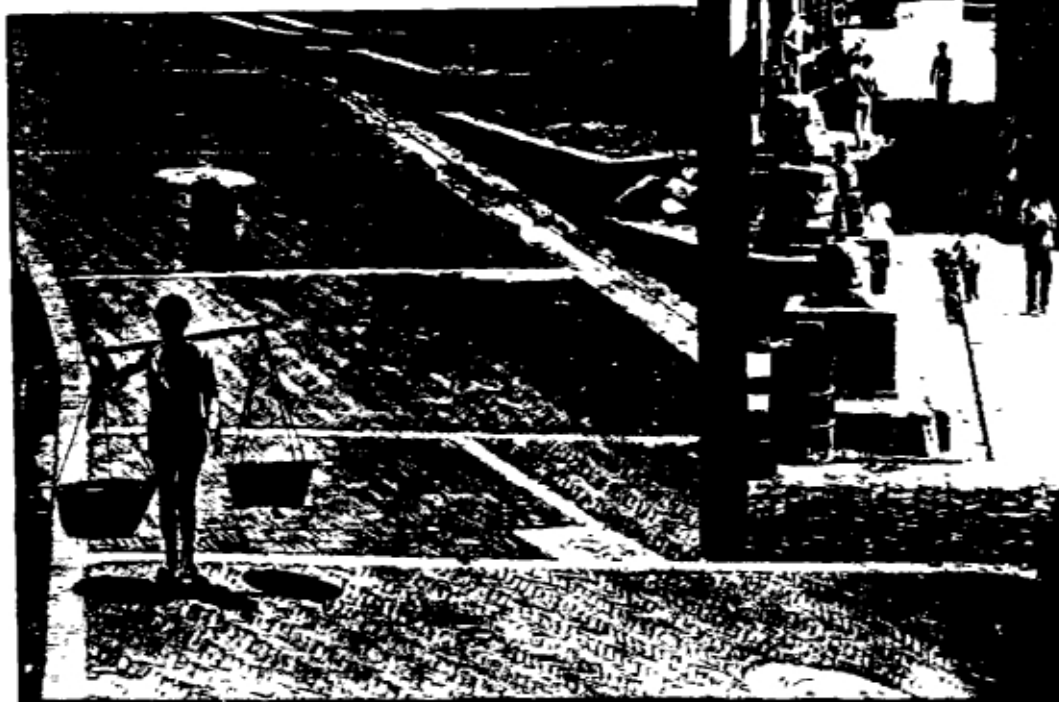


खाने पानी तथा ढल निकास संस्थान
स्वेरेज ट्रीटमेण्ट प्लाण्टको
निर्माण स्थल
WATER SUPPLY AND SEWERAGE CORPORATION
**SITE FOR CONSTRUCTION OF
SEWERAGE TREATMENT PLANT**

7. During the Final Phase (1983 to 1986) most sections of the Project have been reintegrated into local institutions. The former Water Supply and Sewerage Section is now an integral part of the Water Supply and Sewerage Corporation.

(1) BDP IN BHAKTAPUR

8. 9. After sewerage and water pipes have been laid, streets and open spaces are paved. Most construction works are carried out by Local Development Committees acting as labour contractors for the Project.



10. People rehabilitate their own courtyards, while the Project is providing the building materials.

(1) BDP IN BHAKTAPUR

11.12. So far, 30 public and more than 1300 household latrines have been built.



13. New schools were planned and others improved.

(1) BDP IN BHAKTAPUR



14. The Small Industrial Area (SIA) and Economic Promotion Services have been started.



15. On the SIA premises, UNICEF established the first

15. On the SIA premises, UNICEF established the first greeting card production in a developing country.

(1) BDP IN BHAKTAPUR



16.17. The Project had grown large, but health education, in its early stage, had not yet reached many people.



**(2)GETTING THE
MANPOWER TOGETHER**

(2) GETTING THE MANPOWER TOGETHER



18. 19. The Community Development Unit (CDU) was established in January, 1981.



20. The new CDU office is located at the end of the mini-bus park in Bhaktapur.

(2) GETTING THE MANPOWER TOGETHER

Construction
Supervisor

Curriculum
Specialist

Artist

Sulabh
Latrine
Promoter

Sanitary
Engineer



21. Due to limited manpower at CDU, individuals with specific expertise were hired and formed into a consultancy group.



22. Two Bhaktapur residents became CDU's training and campaign organizers.

**(3) THE PEOPLE
OF BHELUKHEL**

(3) THE PEOPLE OF BHELUKHEL



23. 24.

At the time of the de-worming campaign, 522 persons were living in Bhelukhel. All of them are members of the Pote caste, holding the lowest position in the caste system. Most of them are working as sweepers, either for the Bhaktapur town council or for the Solid Waste Management Project in Kathmandu.



(3) THE PEOPLE OF BHELUKHEL



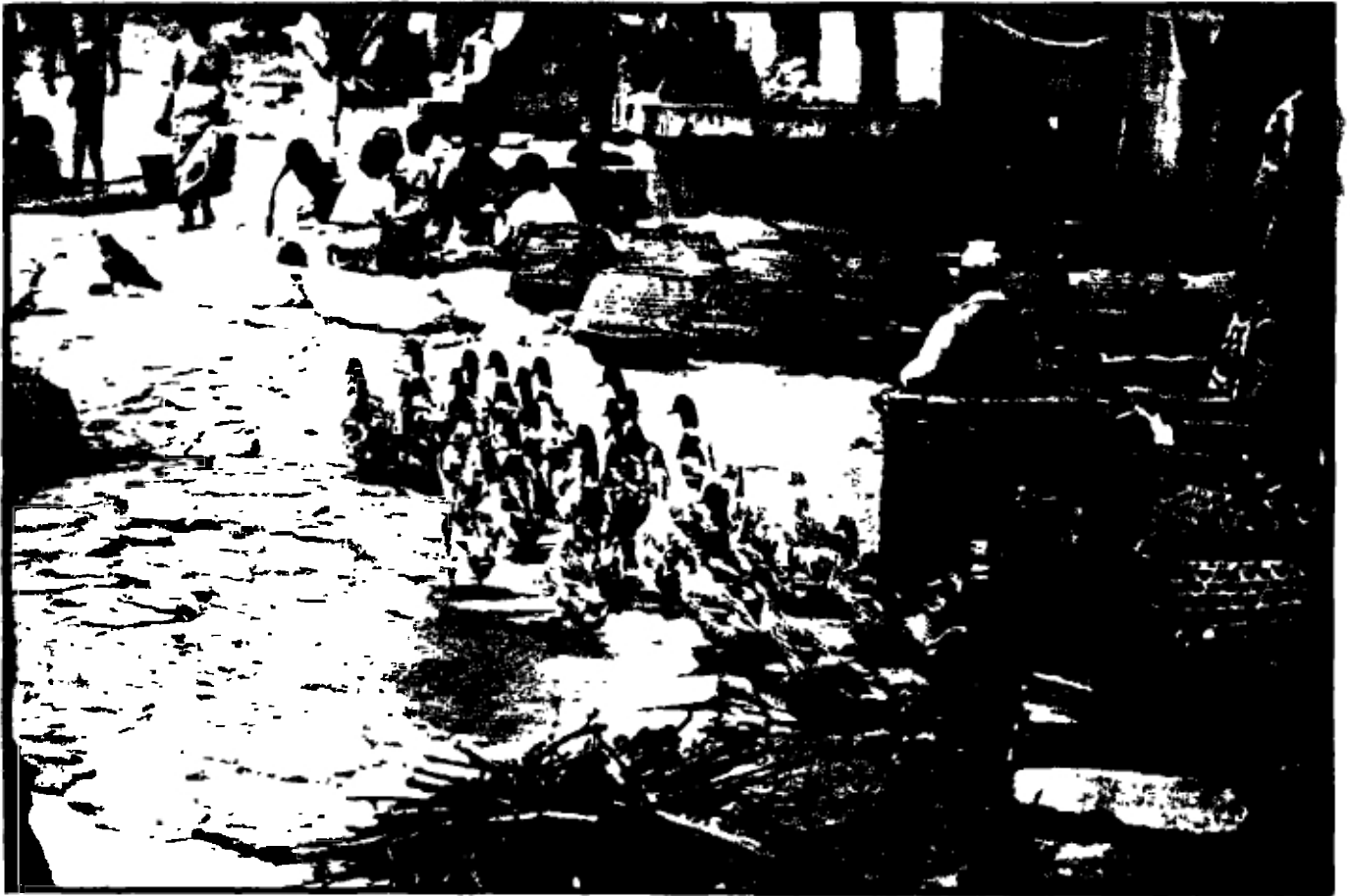
25. When working for private households, they are allowed to collect food remainders which they feed to dogs and pigs.

26. Traditionally, they are also allowed to collect leftover grains in the fields after the harvest.



27. Bones are collected and sold for fertilizer production.

(3) THE PEOPLE OF BHELUKHEL



28. 29. Ducks are fed with maggots from compost production and are sold for Rs. 100 each at religious festivals.



(3) THE PEOPLE OF BHELUKHEL



30. 31. Another traditional source of income is basket making.

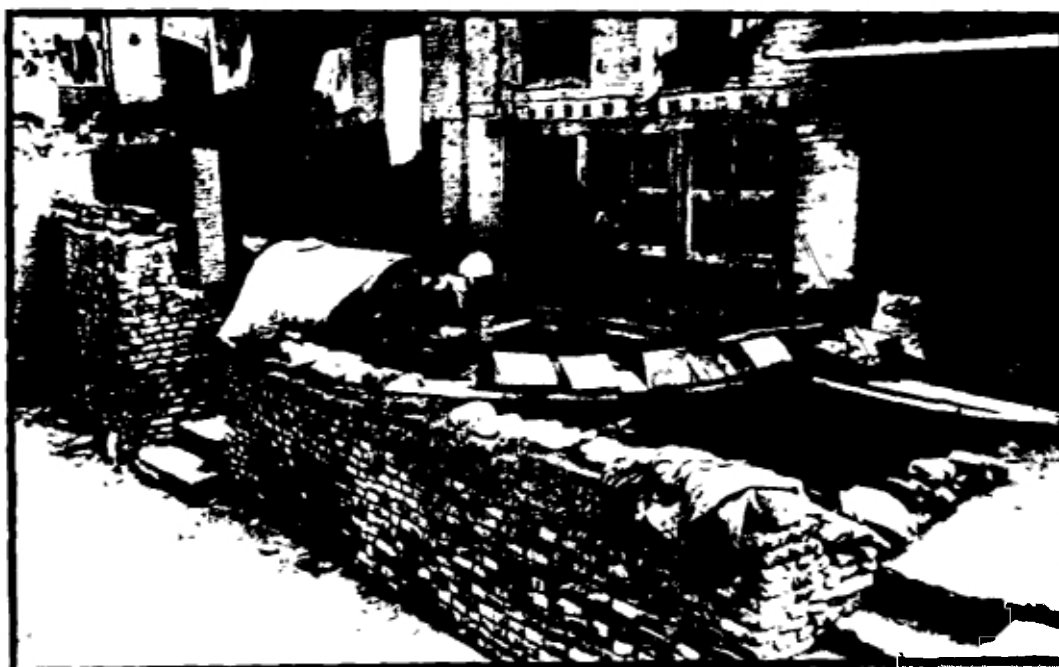


**(4) THEIR NEIGHBOURHOOD-
THE PROJECT AREA**

(4) THEIR NEIGHBOURHOOD - THE PROJECT AREA



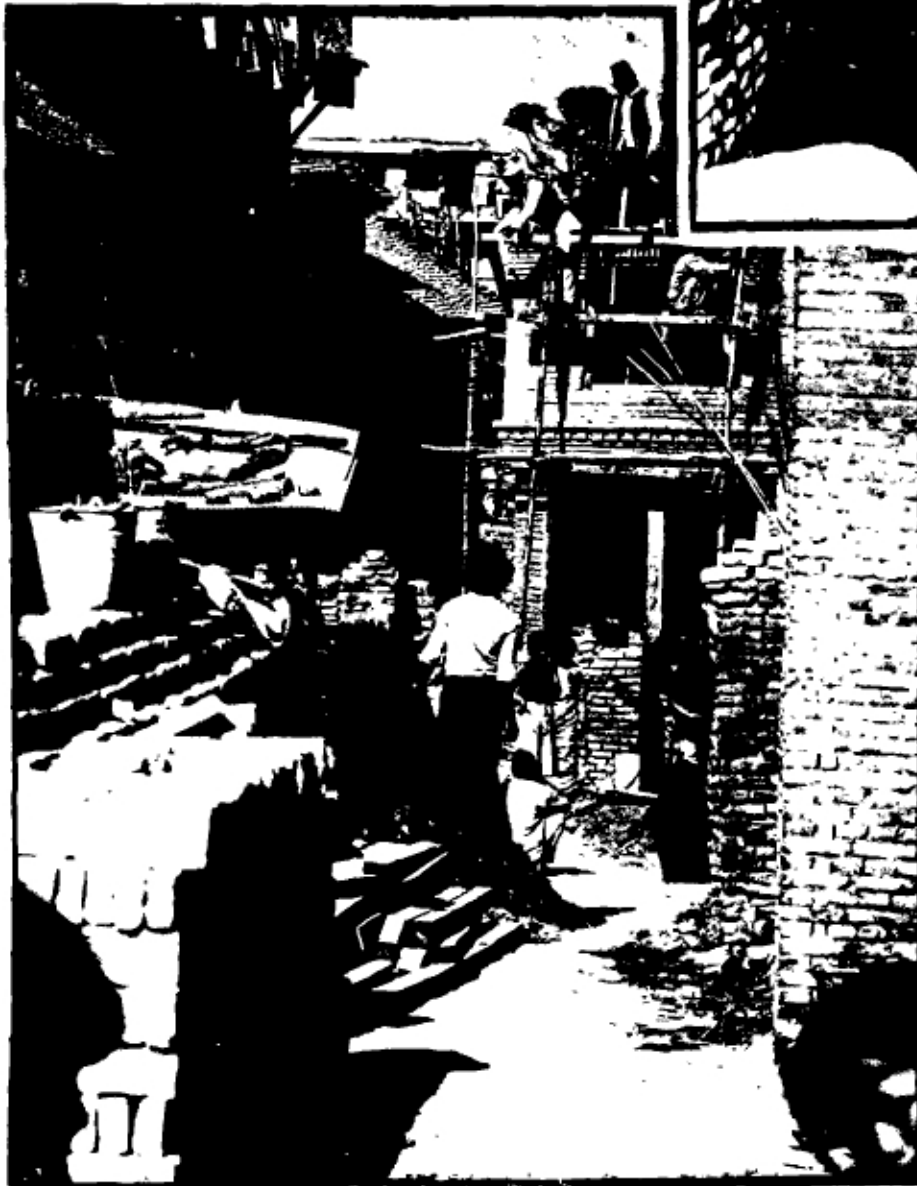
32. Ten years ago, most of the houses had only one storey.



33. The typical Poda house has got the pigsty in front.

(4) THEIR NEIGHBOURHOOD, THE PROJECT AREA

34. During the night the pigs are kept underneath the living room.



35. Many new houses are being constructed due to the increased cash income of the sweepers. During the last year, seven old houses have been replaced by new ones and one additional house has been built. There are now 93 houses.

(4) THEIR NEIGHBOURHOOD, THE PROJECT AREA



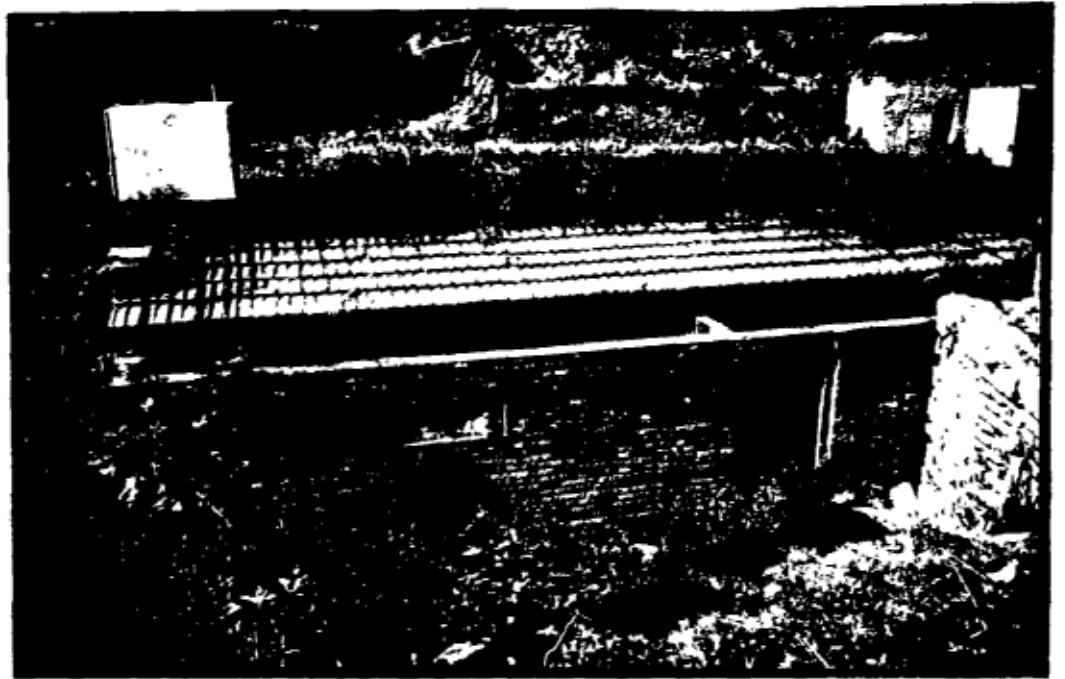
36. 37. Sanitary conditions were not good at the outset of the scheme.



38. There were 3 public taps for more than 500 people.

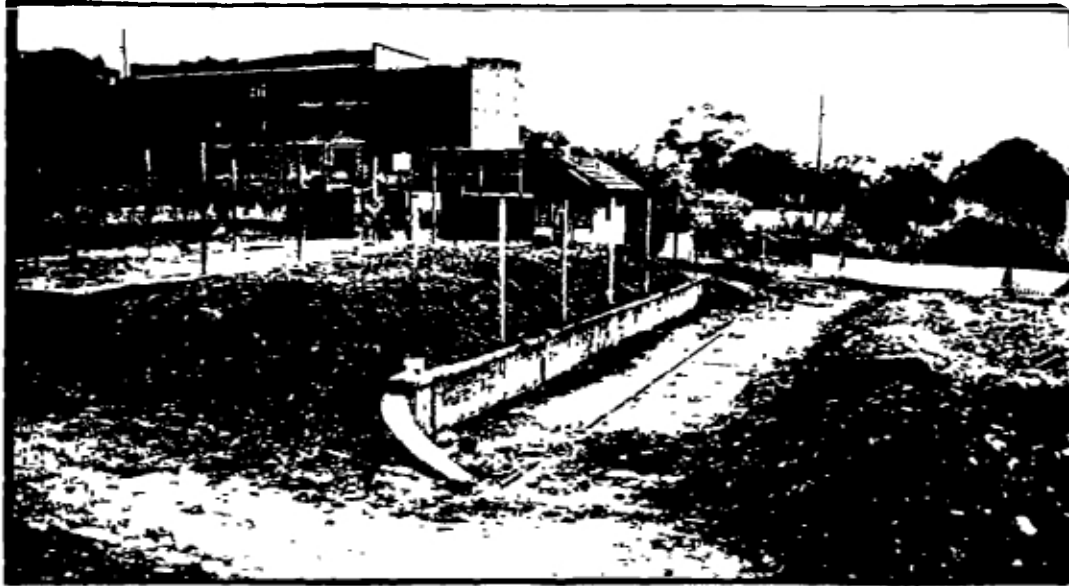
(4) THEIR NEIGHBOURHOOD, THE PROJECT AREA

39. This is the only functioning public latrine in the neighbourhood. The second one has been closed down.



40. Women were doing their laundry at the latrine, since it was an additional source of water.

(4) THEIR NEIGHBOURHOOD, THE PROJECT AREA



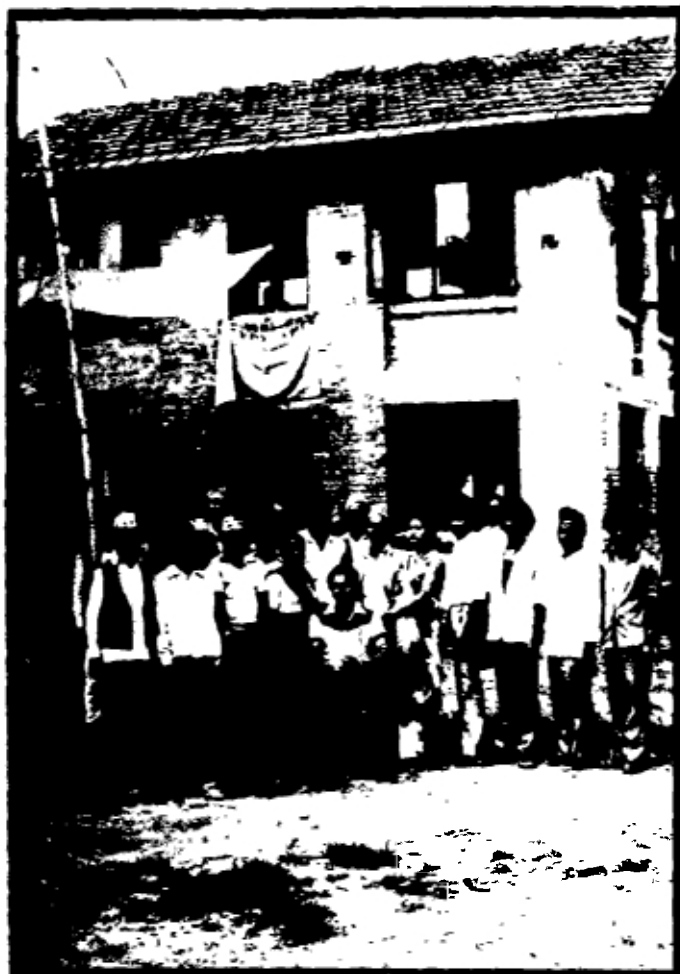
41. On the Eastern side of the area, the town council is operating a compost plant.



42. 43. The sacred and now polluted Hanumante River and the adjacent religious festival grounds do not allow extension of the neighbourhood to the South.

(5) INVOLVING THE PEOPLE

(5) INVOLVING THE PEOPLE



44. All residents of Bhelukhe were invited to a mass meeting, during which the programme was explained.

45. Within a week, a users' committee was formed.

(5) INVOLVING THE PEOPLE



46. The first task of the users' committee was to select volunteers for community worker training. The oldest community worker was 51 the youngest one 18 years old.



47. The programme banner was placed on the outside of the local youth club.

(5) INVOLVING THE PEOPLE



48. - 50. The community workers became the main force for motivation. They either visited the individual families or gave health education to groups as in the above photograph or called meetings in which each family had to be represented by one person.



**(6) TRAINING OF COMMUNITY
WORKERS**

(6) TRAINING OF COMMUNITY WORKERS



51. A curriculum was prepared by the consultant. Then the training was coordinated by the local training organizer.



52. Introduction to different toilet types.

(6) TRAINING OF COMMUNITY WORKERS



53. Use of different visual aids.

54. Flash cards were produced on conjunctivitis, from which this girl is suffering. Some medicine and good hygiene can prevent her from becoming blind. Those flash cards are now used by the "Nepal Prevention of Blindness Project".



55. At the end of the training, certificates were given to the community workers.

(7)DE-WORMING CAMPAIGN

(7) DE-WORMING CAMPAIGN

People, when asked, always replied that they were healthy.



56.57. Indoor and outdoor film shows were organized, with the main film, THE FILM ON ROUND WORMS, sandwiched between other entertainment.



People were then requested to bring their stools for testing to the Kumar Club.

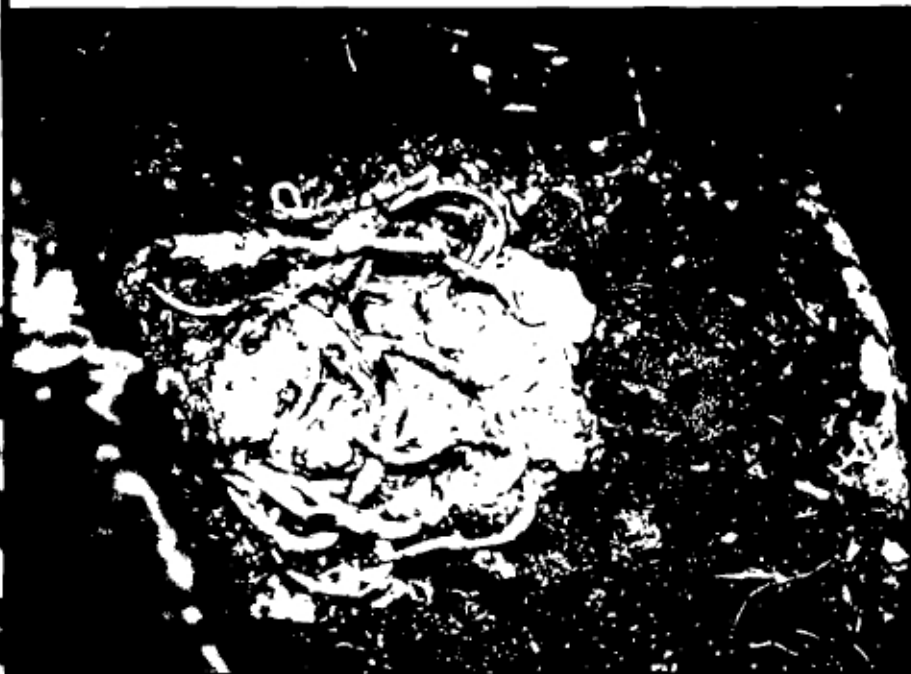
(7) DE-WORMING CAMPAIGN



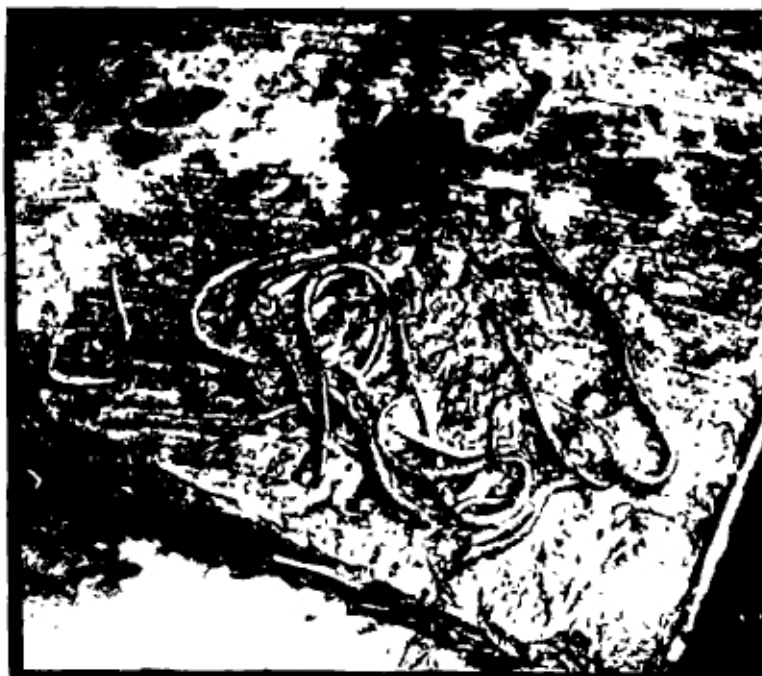
58. Out of 522 Bhelukhel residents, 467 brought their samples to the Club.



59. The Family Planning and Parasite Control Project assisted by doing the stool tests. Only 22 persons out of 467 did not have any parasites.



60.- 63. Worm medicine was distributed. Among the boys, these two produced the most round worms after taking the medicine.



(7) DE-WORMING CAMPAIGN

There was a need for communication on the problem. Since only round worms can be seen with the naked eye, a round worm competition was organized.

64. This seven year old girl, after taking the worm medicine, produced 64 round worms in 3 sittings. She won the first prize. Now people were convinced that there was something wrong with their health.

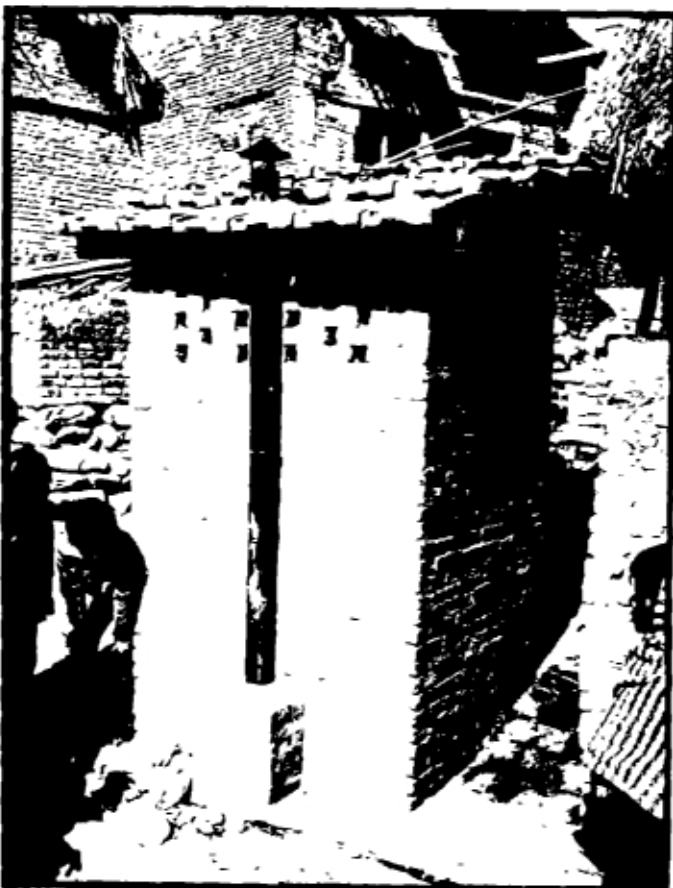


65. The same girl
some month later.

(8)CLEANING CAMPAIGN

(8) CLEANING CAMPAIGN

After the de-worming campaign, the people of Bhelukhel were told that if they want the situation to improve they would have to do it themselves. The community workers then left the area.



66. 67.

Within four days, they started their own cleaning campaign with the construction of five demonstration latrines, the first one at their youth club. Materials for the latrine house and labour came from the people. The building materials for the latrine itself were provided by the Project. Four of the demonstration latrines were "double pit composting latrines". After one pit has been filled, the faeces are directed into the second pit and composting starts at the first pit. WHO is promoting this type of latrine in 90 different countries. The fifth demonstration latrine was a "ventilated improved pit latrine"; no water seal; direct discharge into the pit; bad smells are drawn away by the hot air current in the dark pipe; flies are caught by the mosquito netting at the top of the pipe which in this case is missing.

(B) CLEANING CAMPAIGN



68. The whole neighbourhood was cleaned up.



69. Temporary ditches were made, since surface water drainage would come only in the second phase of the programme.

(8) CLEANING CAMPAIGN



70. Regular cleaning took place.

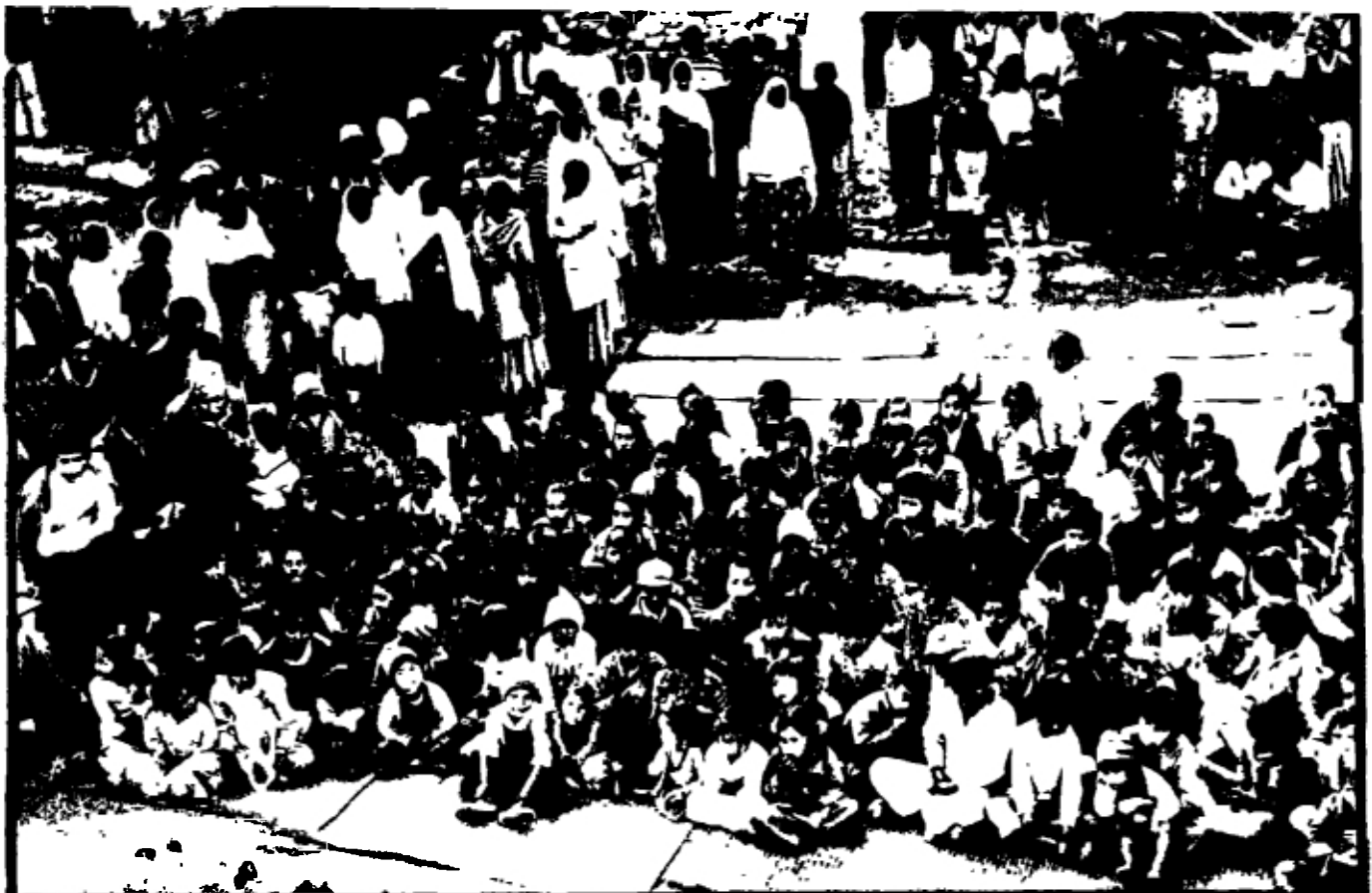
71. In a 6-week cleaning competition, each family daily received points for personal cleanliness, cleaning the house, using the public latrine instead of open places, taking the garbage away, etc.



(8) CLEANING CAMPAIGN

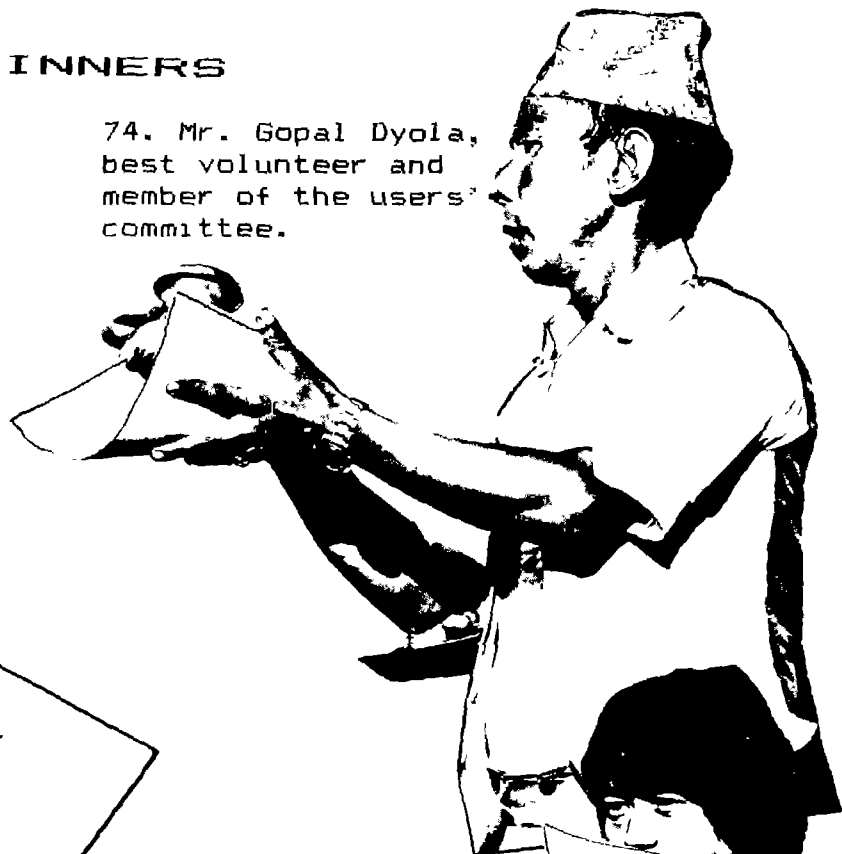


72. 73. The cleaning competition ended with a ceremony opened by Mr. Tej Prasad Upadyaya, Additional Secretary of the Ministry of Panchayat and Local Development.

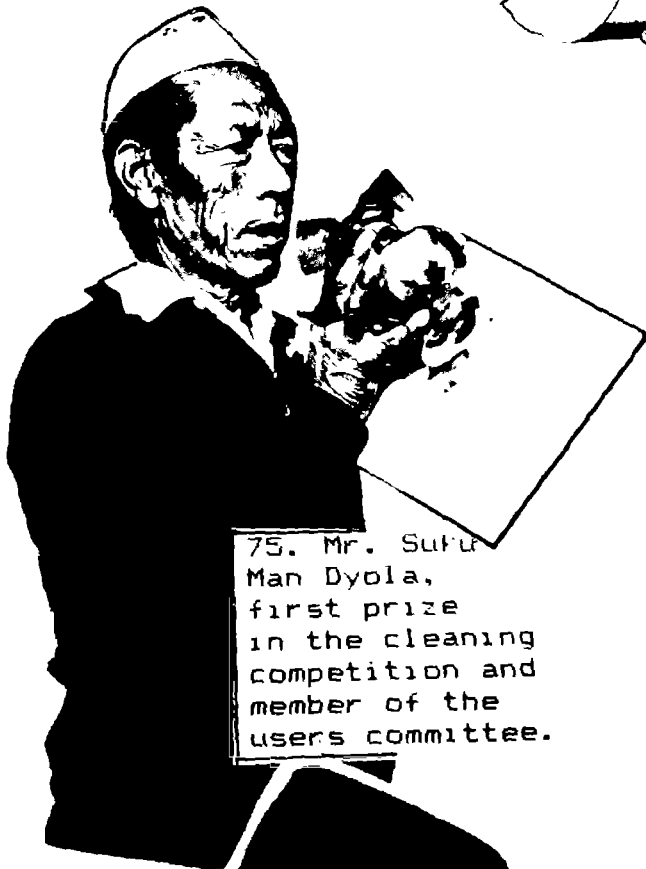


THE AWARD WINNERS

74. Mr. Gopal Dyola,
best volunteer and
member of the users'
committee.



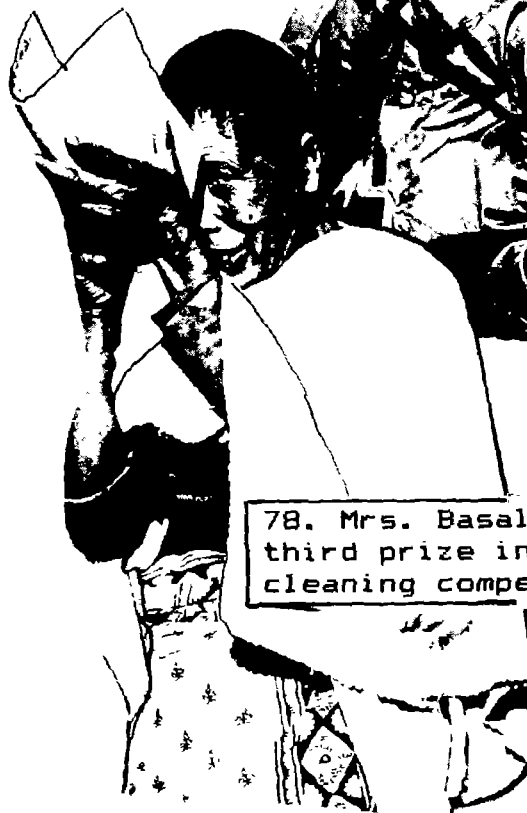
75. Mr. Sufu
Man Dyola,
first prize
in the cleaning
competition and
member of the
users committee.



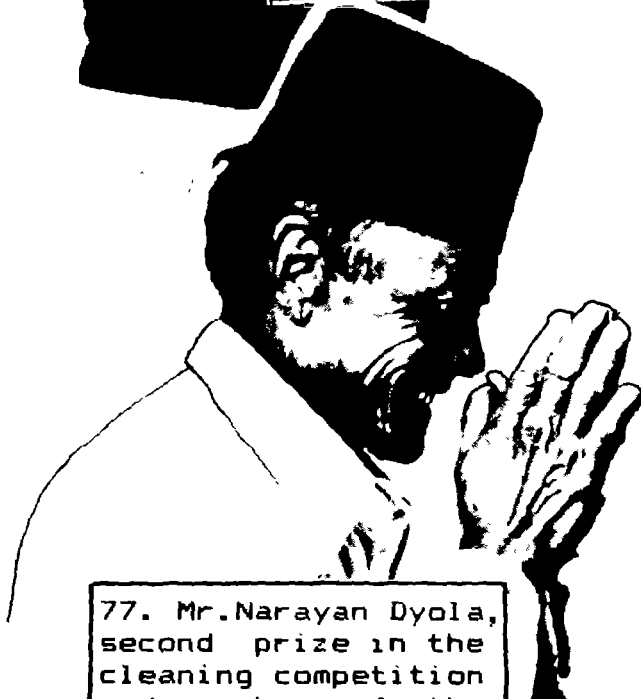
76. Mr. Santa Lal
Dyola, second best
volunteer and mem-
ber of the users
committee.



78. Mrs. Basala Dyola,
third prize in the
cleaning competition.



77. Mr. Narayan Dyola,
second prize in the
cleaning competition
and member of the
users' committee.



(8) CLEANING CAMPAIGN



79. During the cleaning competition, people were asked which type of prize the cleanest families should get. They wanted to have a certificate to hang on the wall and a flag to hang in front of the house.



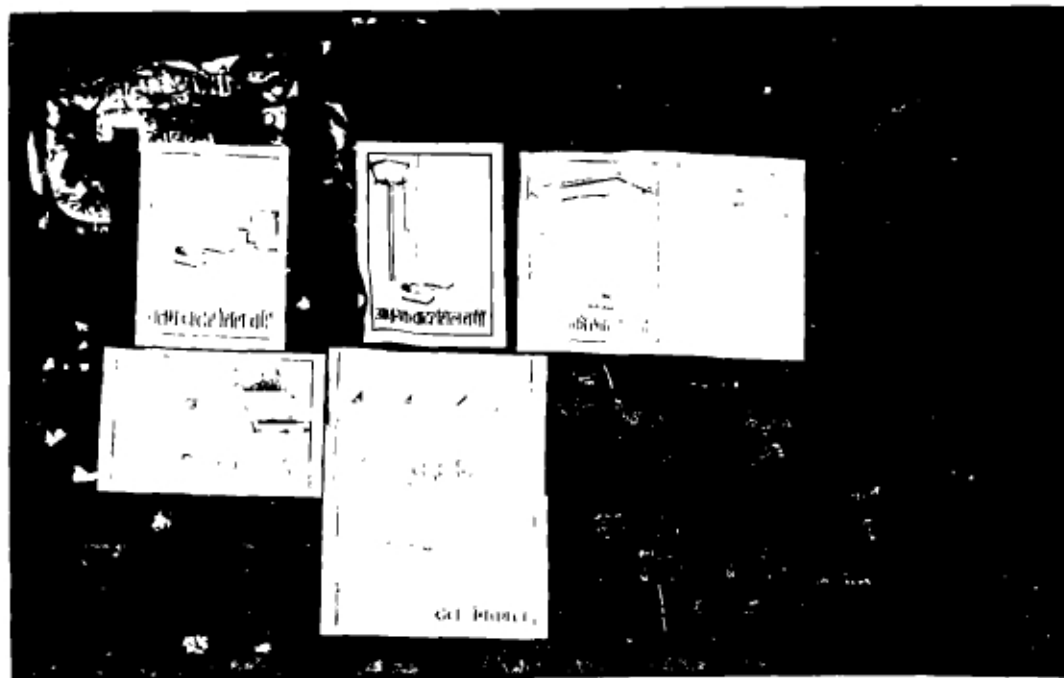
80. At the end of the ceremony, Mr. Dil Bahadur Dyola distributed the application forms for household latrines.

**(9) HOUSEHOLD LATRINE
CONSTRUCTION**

(9) HOUSEHOLD LATRINE CONSTRUCTION

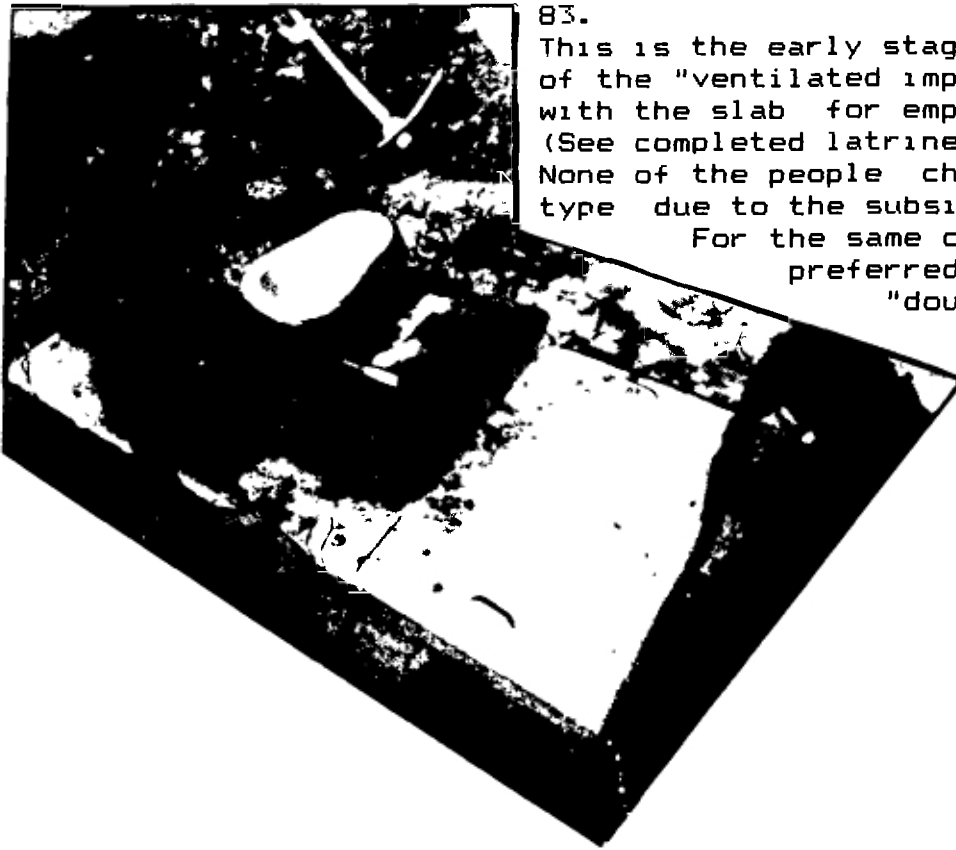


81. The "Land Resource Mapping Project" (CIDA) assisted by making soil tests in Bheukhel.



82. The community workers pasted mini-posters on house walls and explained the different toilet types and excreta disposal systems to the people. Thus informed, all families but three chose the "double pit composting latrine" as their future latrine type (See photo No.66).

(9) HOUSEHOLD LATRINE CONSTRUCTION



83.

This is the early stage of construction of the "ventilated improved pit latrine", with the slab for emptying at the side. (See completed latrine on photo No. 67) None of the people chose this latrine type due to the subsidy system applied. For the same contribution, people preferred the more advanced "double pit composting latrine".



84.

These low-cost pans and water seals with low water consumption are produced by EASTAP, the main promoter in Nepal of "double pit composting latrines".

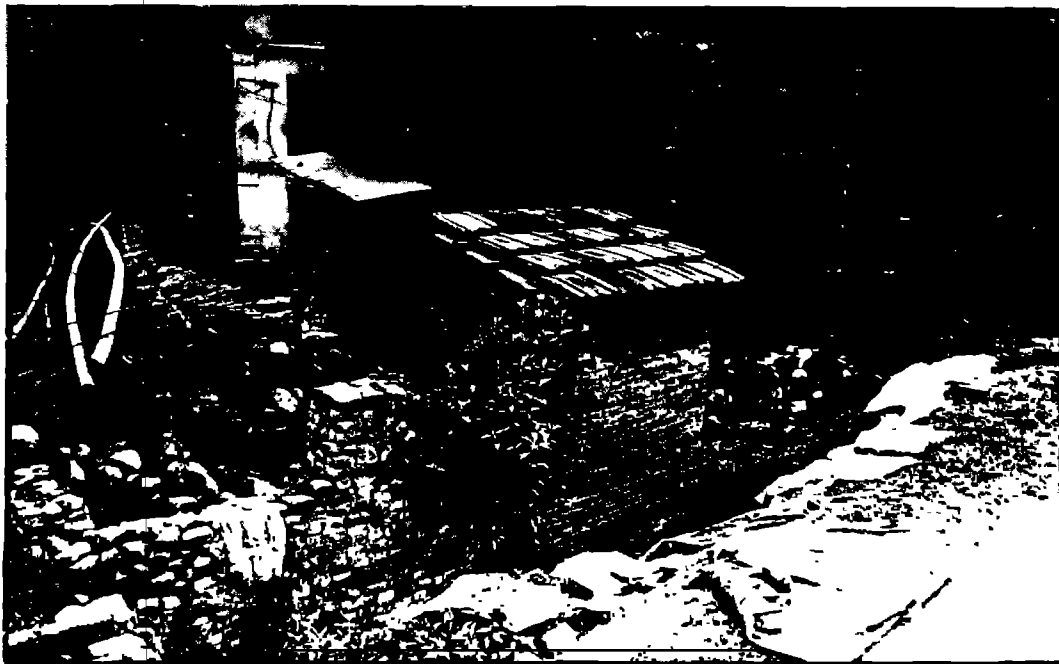
(9) HOUSEHOLD LATRINE CONSTRUCTION

85.

For 92 families, 71 'double pit composting latrines' and 1 'ventilated improved pit latrine' have been built. The others did not get a household latrine because they did not have enough space or land-ownership was not clear.



86. The first 20 latrines were built under supervision during which four masons were trained. The rest were built by the people themselves.



(9) HOUSEHOLD LATRINE CONSTRUCTION

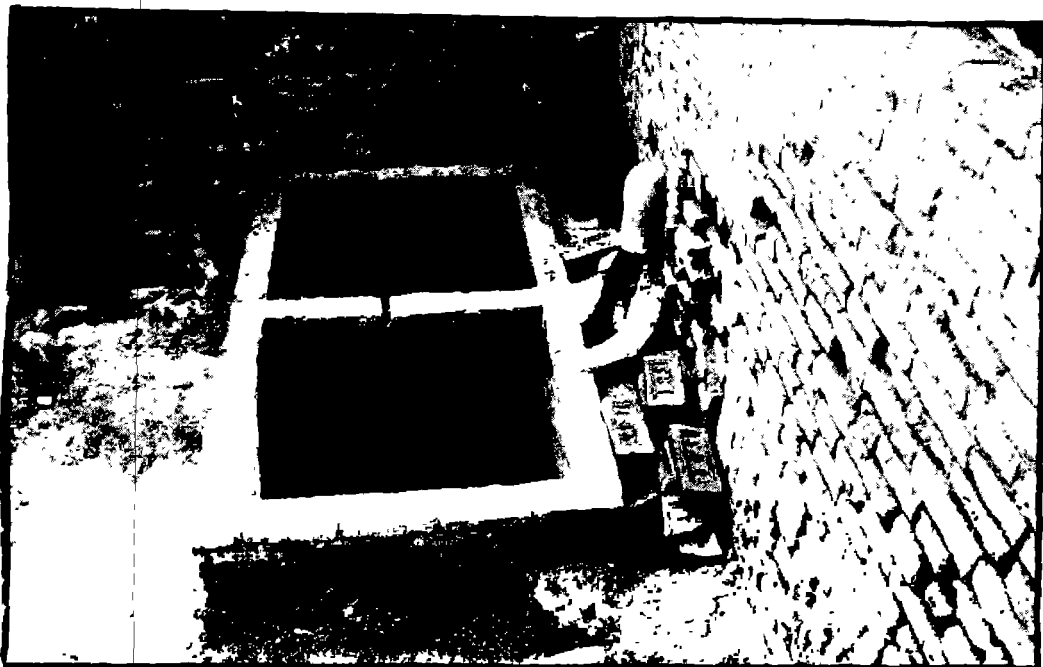


87.- 89. Slabs for all of the programme's latrines were made by the sweepers on a contract basis.



(9) HOUSEHOLD LATRINE CONSTRUCTION

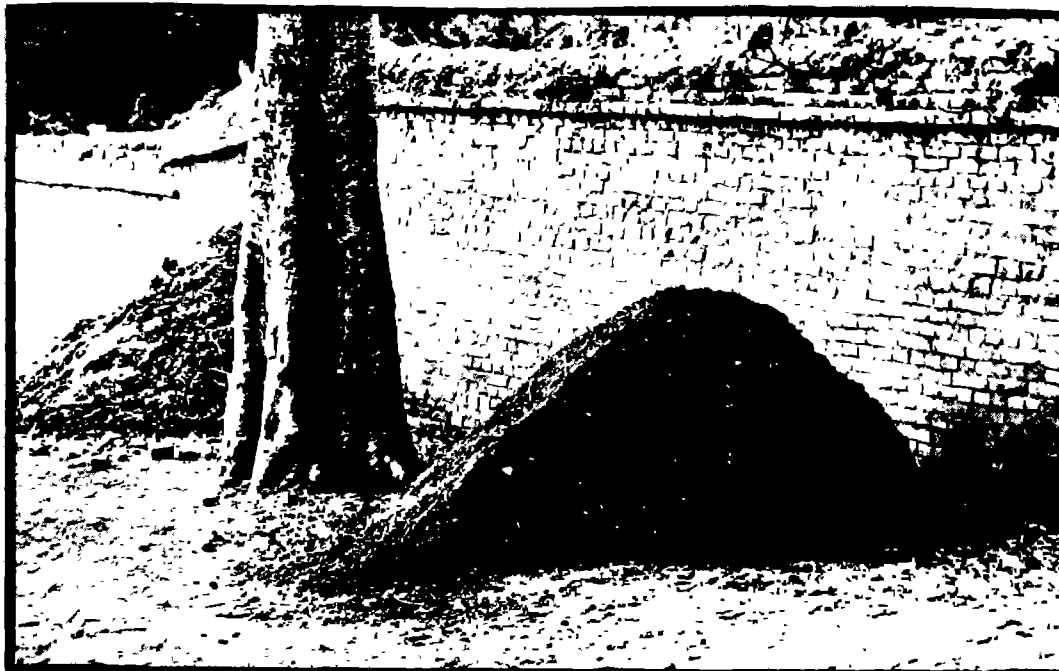
90. This "double pit composting latrine" was built inside the pig pen because this was the only space available. Instead of going down to the river bank, the owners conveniently step into the latrine from their living room.



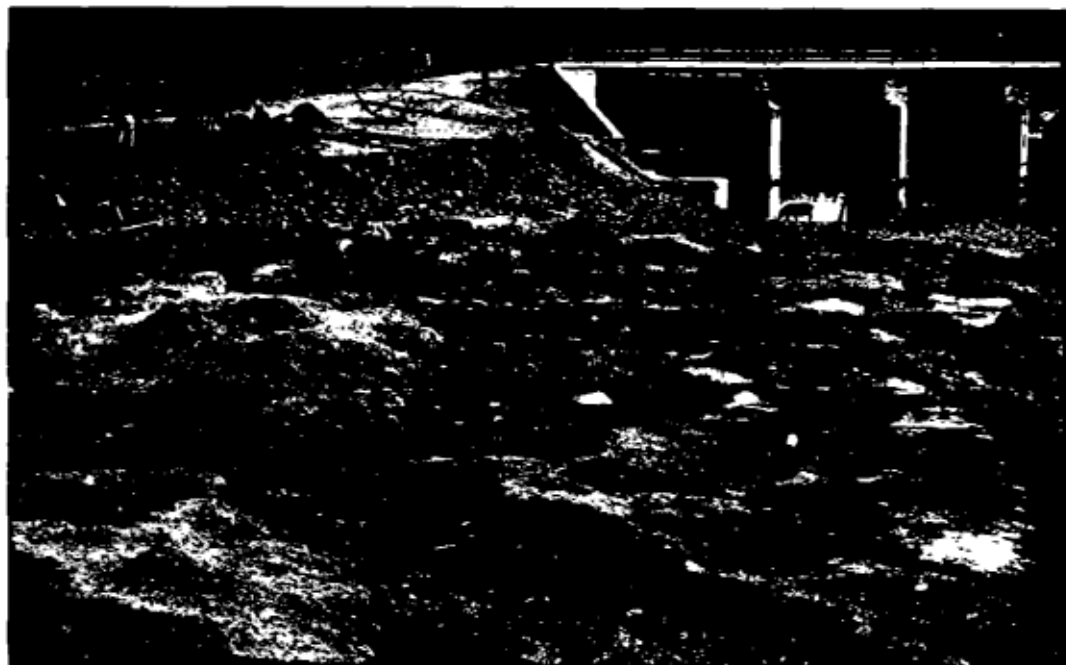
91. Here, the latrine is inside the house and the two composting pits are in front of it.

**(10) SAFER COMPOSTING
CAMPAIGN**

(10) SAFER COMPOSTING CAMPAIGN



92. Despite the heavy inflow of chemical fertilizers, composting is still being done everywhere in Bhaktapur.

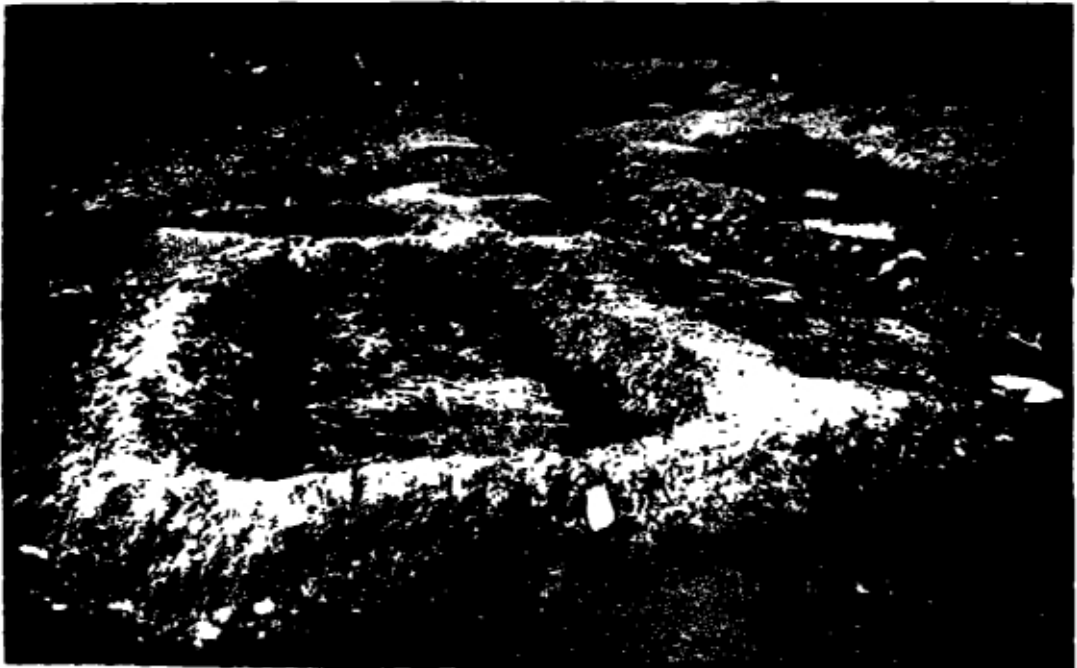


93. Close to the sweepers' area, raw sewage is being used for composting.

(10) SAFER COMPOSTING CAMPAIGN



94. 95. Working bare foot in raw sewage is dangerous to your health. A 'safer composting' campaign was needed. Before it was started, a survey on composting practices revealed that not the sweepers, but the farmers living close to the sweepers' area, were practicing this unhealthy method of composting.



(11) PUBLIC LATRINES

(1) PUBLIC LATRINES



96.97. In the course of the cleaning campaign, one of the existing public latrines (See photo No.40) was rehabilitated into a cleanliness centre. Two showers were installed at the entrance of the latrine and one large laundry platform was built.

(11) PUBLIC LATRINES



98.
Traditional
latrine
for women.



Alternative sanitation also means that the Project was looking into choices for public latrines other than the conventional ones. Public latrines built by the Project had proved to be too small for the early morning "rush hour" demand in the farmers' community.

99.
The above public latrine built by the people turned out to be the best functioning traditional public latrine in Bhaktapur.

100.
The first public latrine built by the Project following a similar pattern, is this one designed by the women of Jenla Tole. A trench on four sides of a partly open latrine building and with a water tank in the centre, allows for a maximum number of users.



101.102.

The Bhaktapur town council, following the recommendations of a joint-venture evaluation of existing public latrines, started the construction of two new 'trench latrines'. Five more are presently being designed. A water tank allows flushing of the trench in the mornings and evenings. This solution must be considered more hygienic than the commonly practiced open space defecation. It will become obsolete after more household latrines have been built.

**(12) ACTIONS STARTED
BY THE PEOPLE**

(12) ACTIONS STARTED BY THE PEOPLE

A few weeks after the end of the cleaning campaign, the whole neighbourhood was dirty again. Then two things happened:



103. First, a group of boys started cleaning again. They had been active during the cleaning campaign and did not like, that despite their earlier efforts, their neighbourhood was as dirty as before.



104. And a group of girls followed suit. Both now are cleaning their area whenever they feel it is too dirty.

(12) ACTIONS STARTED BY THE PEOPLE

Secondly, the women of Bhelukhel felt disappointed because the "new cleanliness" disappeared so fast. So, together with the female community workers, they started a programme for clean children.



105. Every four weeks a surprise check was made and all those children who were found clean got a free visit to the circus and then a trip to the zoo or a visit to a video show.

106. Finally, no child was left out, all children were found clean, when the check was made.



(12) ACTIONS STARTED BY THE PEOPLE



107. 108. UNICEF followed, starting a day-care centre at the youth club. Two community workers were trained for that.

(12) ACTIONS STARTED BY THE PEOPLE



Then action followed
action and all had
to do with training.

109. Knitting
classes started.



110.111. English
lessons,
together
with the
learning
of songs,
followed.
Most of
this type
of informal
training
was done by
volunteers.

(12) ACTIONS STARTED BY THE PEOPLE

112. The two competing groups of boys and girls kept cleaning their neighbourhood whenever it was dirty.



113. However, it became obvious that the people, who had started to change their attitude, needed more encouragement to keep going in daily life.

114. Once a month, an "incentive day" was organized for those youth groups. On that day, quiz competitions were held, races were organized and a picnic in the botanical garden arranged.





115. 116. Then girl scout and boy scout groups were formed. The Project provided scarves and badges. The uniforms were paid for by the parents.



117. Martial arts classes for boys and girls were conducted by volunteers.



(12) ACTIONS STARTED BY THE PEOPLE

At the outset of the scheme, three children of Bhelukhel went to a local school. Many more had tried it before. Their caste is still an obstacle.

Presently, seventeen children attend normal local schools; a further ten boys take classes at the UCEP School and eight boys and one girl have joined evening classes to obtain school leaving certificates. Last year, one student of Bhelukhel received his SLC, and this year a second one has taken his examination.



118.119. Recently, two classes have been started under the HMG/UNICEF sponsored "Informal Girls' Education Programme". One class with 21 girls is held in the youth club. Another class is run in the private home of one of the community workers. In a five-month course, the children are learning how to read and write with two hours of training per day.

**13) PLANNING OF BHELUKHEL
PHASE II**

(13) PLANNING OF BHELUKHEL PHASE II



120. An evaluation of Bhelukhel Phase I was carried out in interviews with residents of Bhelukhel and employees of BDP, and discussions with the users' committee. A number of individuals made the same comment: "We have realized that we too, can learn. We, the sweepers, can also get an education."

Planning of Bhelukhel Phase II was to be done by the people themselves:

Step 1: Each family was asked by the community workers how they wanted to have their neighbourhood further improved.

Step 2: All proposals were listed, and those beyond the scope of BDP were cancelled.

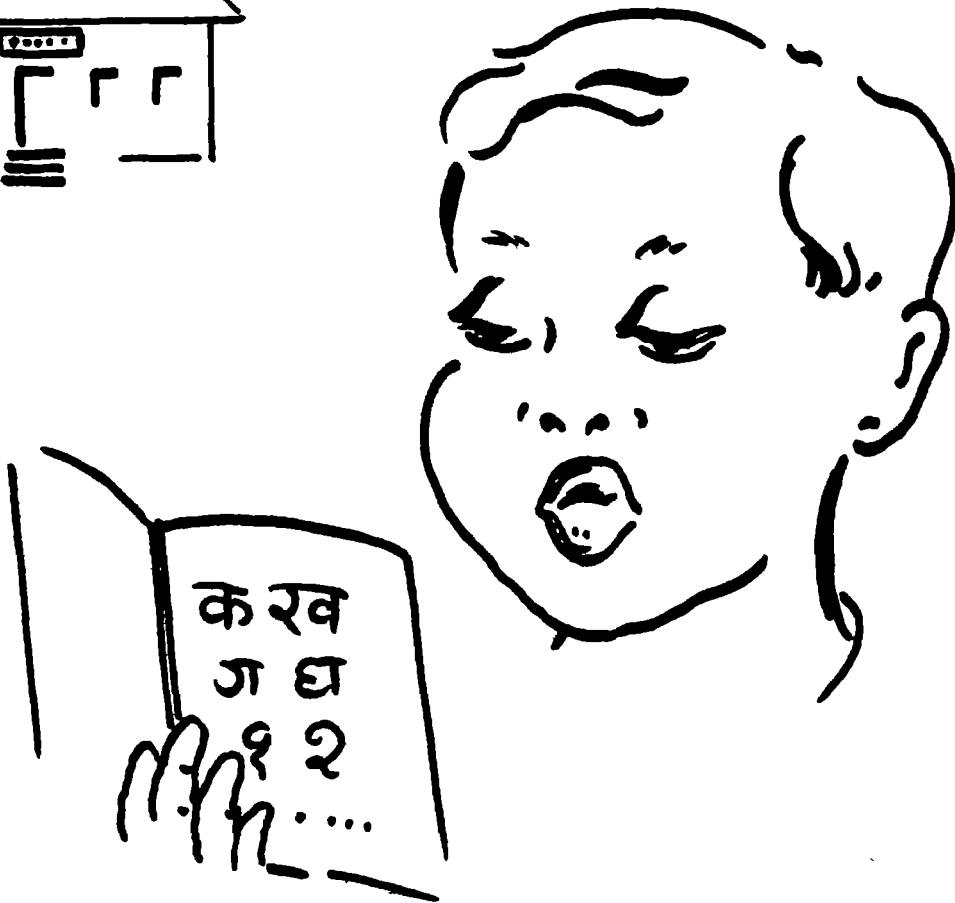
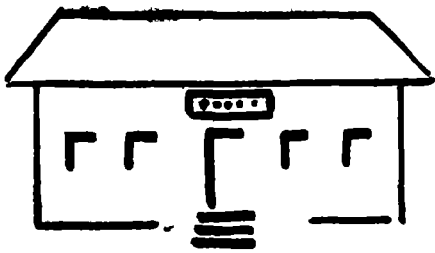
Step 3: Each of the remaining 18 improvement proposals was shown in a picture, like the one on page 60. A heading was given and a rough cost estimate made.

Step 4: Then the users' committee, within the framework of the budget available, selected those proposals which would benefit the most people and which could be implemented by the people themselves.



121.
The water main was put in as the first component of the Second Phase.

प्राथमिक विद्यालय



अ.ला.रु. ६००००/-

5-84 CDU/BRP
CDU/BRP

(13) PLANNING OF BHELUKHEL PHASE II

PLANNING OF BHELUKHEL PHASE II BY THE USERS' COMMITTEE ENDED WITH GIVING PRIORITY TO WATER SUPPLY, STREET PAVEMENT AND SURFACE WATER DRAINAGE.

BUILDING THEIR OWN SCHOOL WAS ONE OF THE PROPOSALS MADE EARLIER. (SEE PAGE 73). IT WAS ESTIMATED TO COST RS. 90 000 FOR FOUR CLASSROOMS INCLUDING THE RUNNING COST FOR THE FIRST YEAR.

FINALLY, IT WAS DECIDED NOT TO HAVE A NEW SCHOOL BUILDING. RATHER, THE SECOND EXISTING AND UNUSED PUBLIC LATRINE WAS TO BE CONVERTED INTO A CLASSROOM. MATERIALS ARE TO BE PROVIDED BY THE PROJECT. RENOVATION IS TO BE DONE BY THE PEOPLE THEMSELVES.

THUS, APART FROM THOSE EARLIER DESCRIBED SHORT-TERM AND INFORMAL TRAINING ACTIVITIES, REGULAR SCHOOLING WILL START FOR THE CHILDREN OF THE SWEEPERS.

THERE ARE SIGNS THAT THEY MIGHT BE GETTING MORE OUTSIDE HELP IN THE FORM OF SCHOOL FURNITURE, SCHOLARSHIPS AND BUILDING MATERIALS. THUS, A PROCESS HAS STARTED WHICH THE COMMUNITY CAN CONTROL AND WHICH, AT THE END, WILL RESULT IN A SCHOOL DEVELOPED BY THE PEOPLE THEMSELVES.

PART 2

WORKING MATERIALS



(1)BDP IN BHAKTAPUR

- * BDP, THE BHAKTAPUR DEVELOPMENT PROJECT
- * THE COMMUNITY DEVELOPMENT UNIT
- * REASON FOR HEALTH EDUCATION
- * BDP'S FINAL PHASE CAMPAIGN
- * HEALTH EDUCATION IN SCHOOLS
- * FUNDS AVAILABLE

* BDP, THE BHAKTAPUR DEVELOPMENT PROJECT

The Bhaktapur Development Project started in 1974 and will end in 1986. At times, there were more than 1000 people from Bhaktapur employed under the daily wage system, 160 regular BDP employees, 12 full-time foreigners and a few part-time foreigners. The success of the Alternative Sanitation Scheme must be seen within this context in terms of the tremendous resources the Project had at its disposal. The Bhaktapur Development Project is described here at the beginning so that others who might want to run similar schemes might be in a better position to compare their own resources with those which BDP could make available to start this scheme.

"During the restoration of the Pujari Math, the wedding gift of the Federal Republic of Germany to His Majesty, King Birendra Bir Bikram Shah Dev and Her Majesty Queen Aishwarya Rajya Laxmi Devi Shah, the proposal for an integrated urban renewal project was prepared. The agreement based on this proposal was signed in 1974.

Bhaktapur, the third largest town in the Kathmandu Valley, is situated in the heart of the hill region of this country. Bhaktapur owes its origin and early economic and cultural prosperity to the coincidence of several favourable factors. Due to its location on a former trade route between India and Tibet, it played an important role in this trade. As the capital of one of the Malla Kingdoms it had a privileged position with respect to taxes and finances and was the urban centre for the surrounding fertile agricultural area.

Between the 14th and 18th centuries, when the urban kingdom was flourishing, impressively decorated private buildings and palaces as well as hundreds of shrines and temples were built. Many of them are still preserved and characterize the appearance of the town. In the 17th century, the first underground water supply system was established. This was fed by a canal 9 km long, the Raj Kulo, and there were detailed regulations concerning its maintenance.

The structure of the town and its hygienic aspects are determined by tradition. Religion - Hinduism with Buddhist and tantric influences - has always been fully integrated into daily life.

During the past 200 years, the basis of the strength and wealth of Bhaktapur has gradually been reduced. The town lost its political importance after the conquest and unification of the three kingdoms of the valley in 1768 by Prithvi Narayan Shah from Gorkha and the subsequent transfer of all administrative functions to Kathmandu. Its economic position was further weakened by the opening of new trade routes by-passing the town and the reduction of

trade with Tibet in general. Consequently, agriculture became the main source of income. Urban impoverishment led to the deterioration of infrastructure and buildings. Several serious earthquakes accelerated the physical decay." (Source 1)

The over-all goal of the Project was to improve the living conditions of Bhaktapur. Works were undertaken in the following sectors:

- Town Development Planning and Housing
- Support to the Local Town Administration (Nagar Panchayat)
- Community Development
- Restoration and Reconstruction
- Water and Sanitation
- Economic Promotion
- Landslide Protection.

TOWN DEVELOPMENT PLANNING AND HOUSING

BDP has prepared a Town Development Plan as a basis for future planning. It has drawn up a land-use plan with land-use regulations and design standards, mainly for the historically important areas (monumental zones), and prepared proposals for town extension schemes. The Town Development Plan is now being revised and updated.

SUPPORT TO THE LOCAL TOWN ADMINISTRATION

BDP provided training to the personnel of the Nagar Panchayat/ Town Implementation Office in the application of design standards, the granting of building permits, etc. A town cleaning scheme was established and public latrines were constructed, and both were handed over to the Nagar Panchayat. Funds and technical know-how were provided to carry out projects like the improvement of the town entrance including a mini-bus park, making of a sportsfield, construction of a new office for the Nagar Panchayat, etc.

COMMUNITY DEVELOPMENT

The organisation of local groups into local development committees as well as the formation of self-help groups, school committees, etc., received special support during Phase III from 1980 onwards. Under the supervision of BDP, those committees are now carrying out a major part of the construction programme, organising cleaning campaigns and ensuring the participation of the population.

RESTORATION AND RECONSTRUCTION

The restoration of culturally important buildings was the starting point of BDP. So far, more than 200 buildings, including small shrines and big temples like the Dattatreya Temple, have been restored. Two of these buildings are used for brass and wood carving museums. Technical and financial assistance was given to most of Bhaktapur's schools. After the completion of water and sewer lines, roads and squares in most parts of the town were paved.

WATER AND SANITATION

The major impact on people's health in Bhaktapur is expected from the improvement and extension of the water supply system, the building of a modern sewerage system and the construction of private and public latrines.

ECONOMIC PROMOTION

In the field of economic promotion, BDP supported the establishment of a small-industries area, an economic promotion fund for Bhaktapurian entrepreneurs, a small business consultancy service and an entrepreneurship development programme.

LANDSLIDE PROTECTION

The landslide protection component of the Project focused on the preservation of the existing surface water supply through various erosion control measures, including afforestation.

The total amount of money spent for local construction by the end of the Final Phase in 1986 will be in the range of Rs. 120 million, of which one third is to be met by HMG.

*** THE COMMUNITY DEVELOPMENT UNIT**

BDP, in its First Phase from 1974 to 1976, had cooperated closely with the town administration and the population of Bhaktapur. However, it subsequently grew so large that cooperation with the administration and the sharing of responsibilities with the people often became difficult. In Phase II until 1979, project activities were selected, planned and executed through BDP. Although physical improvements were made, religious buildings restored, private houses repaired, new sewer and water pipes provided and roads paved, the people were not satisfied, since those works were decided upon and planned by others. The benefits of those sanitary improvements were seldom understood - the people only realized that there was a great increase in job opportunities (sometimes more than 1000 Bhaktapurians were employed).

Therefore, two major changes were introduced in Phase III (1980-83):

- (1) Most project activities were handed over to and continued by local institutions.
- (2) The Community Development Unit (CDU) was formed for establishing continuous feed-back from the population and for securing regular public participation in project activities.

This new approach necessitated a change in project organization and decision making. Construction works were no longer carried out by BDP. Instead, Local Development Committees (LDCs) were initiated in all wards of Bhaktapur as a system to give townspeople more freedom to decide on projects in their own neighbourhood, as well as to continue some of the works already planned by BDP. These LDCs took over labour contracts, materials and tools from BDP and organized the construction works on their own. In a few cases, the profit was bagged by the leaders of the LDC, but usually it was shared among all members of the LDC. In some cases too, the profit was used for the common good, like construction of a school or as a down payment for household latrines.

CDU, apart from initiating and coordinating these Local Development Committees, had three more major working fields:

- liaison and support to the Nagar Panchayat
- assistance to the school construction programme
- preparation of a health education programme for 1983-85.

At the outset, CDU was staffed with one community development planner, one communication assistant, one draftsman/overseer, one office assistant and one foreign advisor.

* REASON FOR HEALTH EDUCATION

The Central Public Health Laboratory, Kathmandu, has given the following reasons for the poor hygienic conditions in urban areas of Nepal:

- drinking water, bacteriologically contaminated, partly because of lack of disinfectants, partly because of leakages in the distribution network
- lack of sanitary facilities
- public toilets not being used and cleaned irregularly
- contact with dung and human faeces during composting

- contact with untreated sewerage
- cleaning of vegetables with contaminated water
- lack of food control
- unhygienic housing of large part of the population.

Since 1974, the Bhaktapur Development Project has been carrying out infrastructure works with the potential of tackling some of the above listed problems which are also prevalent in Bhaktapur. Despite these efforts, the state of health of the population of Bhaktapur is not better than that of other urban communities in Nepal. (Source 2) Health surveys carried out from 1979 to 1981 in three wards of Bhaktapur show that 91% of the population were suffering from worm infections. Outbreaks of cholera, typhoid, dysentery, hepatitis and meningitis also occur from time to time, and the drinking water supply was contaminated by human faeces. The evaluation mission, besides recommending chlorination of the water intake and tank and control of water wastage, strongly recommended a health education programme for Bhaktapur. The programme as outlined below offered the following three packages:

"1. HEALTH IMPROVEMENT SCHEMES

The first health improvement scheme is to be started in the sweepers' area (Bhelukhel) with an awareness campaign (through a de-worming programme to make the people aware that they are sick, and then by discussing with them what they can do to prevent falling sick again. Then, after cleaning their area the construction of toilets and a 'safe composting campaign' is to follow. Information material is to be produced, after which health education is to be done by community workers.

After an evaluation, a similar scheme combining health education with action is to be started in two other areas of Bhaktapur.

2. HEALTH EDUCATION IN SCHOOLS AND FOR WOMEN

This package will start with an evaluation of those teachers' workshops earlier organised by BDP. Then a program will be developed for two pilot schools combining health education with actions (cleaning the school compound, school toilet construction, making a vegetable garden, etc.).

The same teachers will be involved in an adult education program for women focusing on health education topics. After an evaluation, the program will be extended to other Bhaktapur schools.

3. TOWN CLEANING AND WASTE REMOVAL

A revision of the present sweeping schedule, the repair of equipment, formation of 'clean your ward committees' in two wards, and motivational cleaning campaigns as a joint venture between sweepers and population are to be included within this scheme.

After an evaluation, the program will be extended to the rest of the town." (Source 3)

Since a decision was made for the Solid Waste Management Project to assist the Bhaktapur Nagar Panchayat in town cleaning and waste removal, the health education package No.3 'Town Cleaning and Waste Removal' has been replaced by the 'BDP Final Phase Campaign'.

On the following pages, a summary of the campaign planned for the phasing out of BDP and a summary of the school program are given.

START*****

CDU/13-2-85

BDP FINAL PHASE CAMPAIGN

1. WHAT DO WE WANT TO ACHIEVE?

- to create awareness on transmission of diseases - how a person can fall sick;
- to create understanding how the water supply system, the sewerage system and the toilets are functioning and how these sanitary facilities can prevent us from falling sick;
- to create awareness that BDP is packing up and that the benefits from those sanitary improvements will be lost if preventive maintenance is not done by the population.

2. WHOM DO WE WANT TO ADDRESS?

- local leaders, like ward chairmen, ward committees, youth clubs, teachers, etc., in meetings with 20 to 30 persons where slide shows and discussions are possible
- the population of Bhaktapur, in mass gatherings, with educational drama, film shows, etc.

3. SCHEDULE

For each of the 17 wards there should be one meeting for local leaders with a slide show and discussions, followed one week later in the same wards by a mass gathering with educational drama and film shows.

4. ORGANIZATION

4.1 Tasks of Nagar Panchayat for local leader meeting:

- to provide space for the meeting;
- to invite local leaders;
- to open the meeting.

4.2 Tasks of CDU/BDP for local leader meeting:

- to provide basic health education (transmission of diseases) for local leaders;
- to present slide shows on water supply system, sewerage system and toilets;
- to give information on the ending of BDP and request participation in preventive maintenance.

Local leader meetings should end with a discussion on what the community can do to preserve and maintain those sanitary facilities built by BDP.

4.3 Tasks of Nagar Panchayat for mass gatherings:

- to motivate local leaders to organize a mass gathering;
- to select space for mass gatherings;
- to organize, with the help of local leaders, stage set, film screen, etc.
- to open and close the performance.

4.4 Tasks of CDU/BDP for mass gatherings:

- to develop an educational drama on water supply, sewerage toilets and health, and on BDP leaving and the people taking over;
- to train youth groups for acting in the drama, to make costumes and provide all equipment required for the drama;
- to provide funds for tea and biscuits for the actors, and to hire microphones, loudspeakers, light tubes, etc.;
- to provide health education and other films and a film projector.

At the end of such a mass gathering the people should be aware of the relationship between sanitary facilities and their own health, and about BDP's departure and the need for the people to take over and to participate in maintaining those facilities.

4.5 Postering:

Posters on the misuse of water are to be produced by CDU/BDP, and postering at public taps is to be done by Nagar Panchayat.
*****END

BHAKTAPUR DEVELOPMENT PROJECT

HEALTH EDUCATION IN SCHOOLS

BACKGROUND:

During the short period of time remaining of the Final Phase of the Bhaktapur Development Project (BDFP) it was not possible to cover the rest of the town with as extensive health education as in the sweepers' community. However, health education on a larger scale was needed so that the population of Bhaktapur better understood how those physical improvements brought about by BDFP like:

- repair and extension of the water supply system
- construction of a modern sewerage system, of more than 1500 private latrines and about 30 public latrines
- and pavement of streets, courtyards and lanes

can contribute to better health if utilized properly. Improving health education classes in all schools of Bhaktapur not only reaches most of the children of Bhaktapur it also can serve as a basis for starting literacy classes for women, the most important change agents in a community.

OBJECTIVES

- 1) Better understanding of the relationship between health and hygiene.
- 2) Better understanding and utilization of sanitary improvement carried out by BDFP.

PROGRAM COMPONENTS

- 1) Reactivation of health education classes in all schools of Bhaktapur by teaching and doing.
- 2) Physical improvement of sanitary facilities of all Bhaktapur schools by teachers and pupils through self-help.
- 3) Literacy classes for women on topics of health education.

INSTITUTIONAL SETTING

The program is carried out by three parties:

- the District Education Officer
- the Curriculum Development Centre of the Ministry of Education
- the Community Development Unit (CDU) of the Bhaktapur Development Project.

STEPS OF THE PROGRAM

- 1) Formation of Teachers Health Education Committee (THEC) by teachers representing all the Bhaktapur schools.
- 2) Formation of working group out of THEC.
- 3) Preparation of curriculum on action oriented health education for grades 1 - 7. When the teacher talks about personal hygiene the children have to use nail clippers, clean their hands with water and soap, etc.; when the teacher talks about healthy food the students have to start a school garden where-ever possible; when toilet habits are discussed the school latrine has to be cleaned, repaired or built.

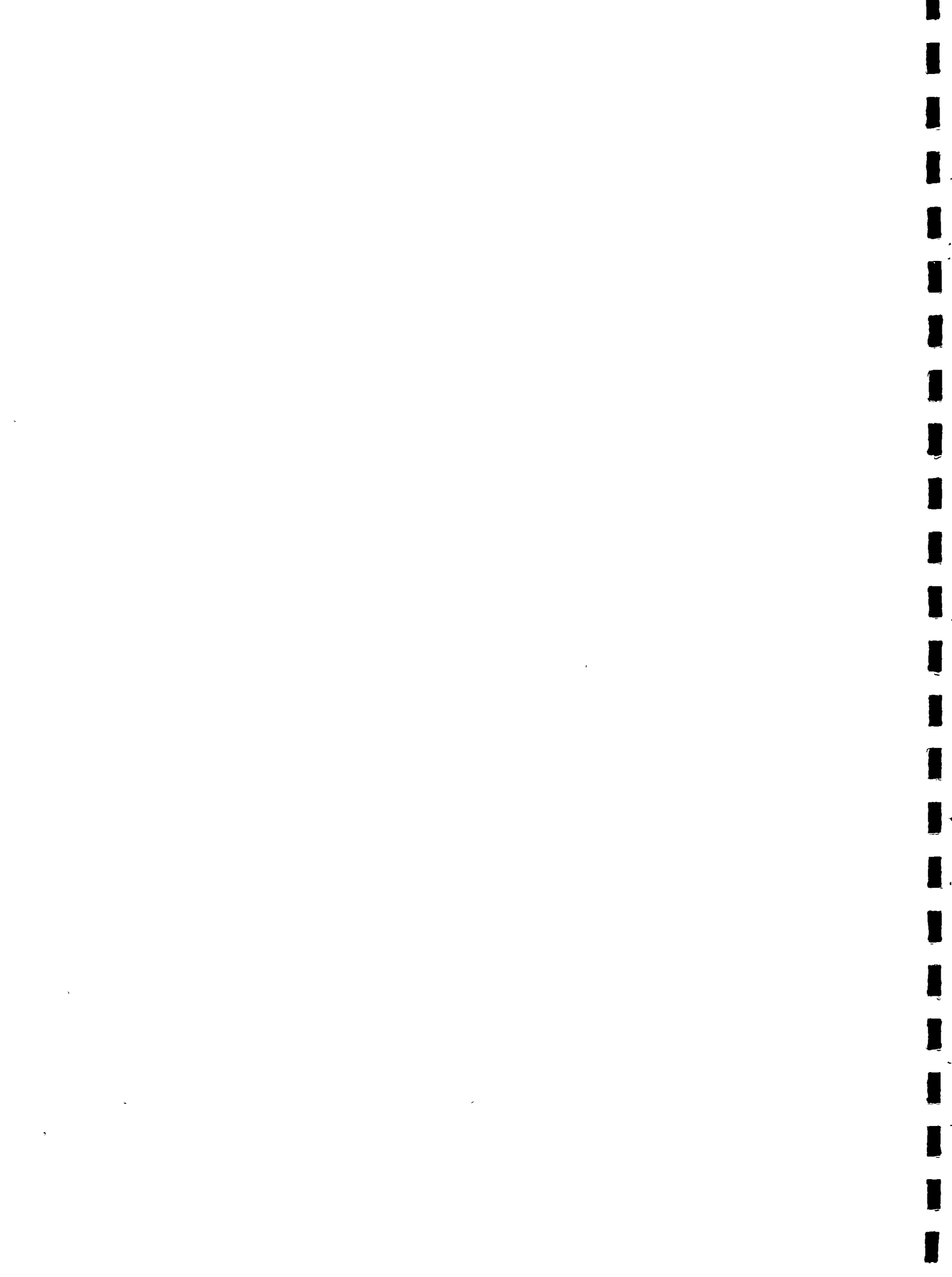
- 4) Preparation of teachers' guide book for grades 1 - 7 including topics like benefits and functioning of water supply systems, sewerage systems and public and private toilets.
- 5) Selection of teaching materials.
- 6) Preparation of curriculum for teaching skill training of those teachers giving health education classes.
- 7) 2 weeks teaching skill training.
- 8) Selection of 2 resource centre schools with the following functions:
 - distribution of teaching materials
 - health education like nail clippers, brooms, shovels, etc.
 - distribution of building materials for the repair or new construction of latrines and water supply
 - regular monitoring of health education classes by calling monthly meetings of all teachers involved.
- 9) One year of running action-oriented health education classes during which sanitary facilities of schools are repaired or built by self-help of teachers and students.
- 10) Preparation of teaching materials for women literacy classes.
- 11) Teaching training for teachers on literacy classes.
- 12) Continuation of health education classes and start of literacy classes for women.

* FUNDS AVAILABLE

Initially, the water-borne sewerage system was to be extended to Bhelukhel as well. Since the land was sloping and the area was not as densely populated as most of the town it became uneconomic to serve Bhelukhel as well with water-borne sewerage. The funds originally allocated (Rs. 500 000) were then made available to the 'Alternative Sanitation Scheme'. This amount was to be used for construction works only. Local consultants, the training of community workers and printing of educational materials were to be paid from different sources.

Sources:

- 1) Introduction to the BDP exhibition opened at the time of the PATA conference in 1984
- 2) Report of German evaluation mission, PN 74.2064.9, April 1982 Sector Infrastructure, page 14. by Mr. G.F.Heide
- 3) Work Programme Health Education 1983/86, May 1983, by Community Development Unit



(2)GETTING THE MAN- POWER TOGETHER

- * PLANNING THE PROGRAMME**
- * LOCAL CONSULTANTS**
- * ASSISTANCE BY OTHERS**
- * FIRST HAND INFORMATION**
- * ROLE OF FOREIGN ADVISOR**

* PLANNING THE PROGRAMME

In February, 1982, an agreement was made between the Water Supply and Sewerage Board Branch Office (WSSB) in Bhaktapur and the Community Development Unit of the Bhaktapur Development Project NOT to implement the earlier planned sewerage works in Bhelukhel, but to start an alternative sanitation scheme instead.

In order to start the programme, a concept, a work schedule and manpower were needed.

The first step of planning was done by looking at other similar projects and only then to formulate a draft work programme. The process within BDP of clarifying how much money could be spent, which BDP staff members would participate and of preparing this draft work programme took until December, 1982. CDU then researched in detail the "Khokana Semi-urban Sanitation Project" which was jointly carried out by the Ministry of Health, the Ministry of Panchayat and Local Development, UNICEF and New Era Consultant. The CDU report concluded with a list of all components of the Khokana Project already executed and all components of the planned Alternative Sanitation Scheme. A one-day workshop then was called for comparing both, the executed project with the planned scheme. As a result, CDU finalised the concept and the work schedule and detailed the manpower requirements for the 'Alternative Sanitation Scheme'.

Actual work was to start by the end of February, 1983. The first phase of the programme and the proposal for further improvement, Phase II, was to be completed by the end of September, 1983. Since the workshop only took place on the 5th of May, all dates of the following schedule had to be deferred by two months. A checklist with the new dates not given in this report was then prepared.

In the following, the minutes of meeting of that workshop are given together with the finalised work programme.

MINUTES OF MEETING

B H A K T A P U R D E V E L O P M E N T P R O J E C T

COMMUNITY DEVELOPMENT UNIT WORKSHOP ON 4-5-83 AT CDU OFFICE

health improvement scheme sweepers'area(Bhelukhel)

- S.R.Pathar, Local Development Officer
- J.G.Dongol, Pradan Pancha of Khokana
- N.M. Sthapit, Health Education Section
- K.B.Gurung. Family Planning and Parasite Control Project
- B.R.Khyaju, 4 - H Club
- K.B. Shrestha, Bhaktapur Jaycees
- Kathy Peterson, UNICEF
- L.R.Shrestha. PMO, Bhaktapur Development Project
- H. Mathaeus, PMO, Bhaktapur Development Project
- K.P.Lohani, CDU, " " "
- I. Guhr, CDU, " " "
- S.R.Satyaj, CDU, " " "
- R.M.Bachacharya, CDU, " " "
- D.N.Banepali, CDU " " "
- M.P.Shrestha, CDU, " " "

The workshop has been organised in order to finalise the program of the planned health improvement scheme.

Agreement has been found in the following points:
(listed here following the checklist provided during the workshop)

1) Mass meeting

At the beginning of the program a mass meeting will be held, in order to inform the community about about (a)the planned health improvement scheme and (b)that there is the need to form a users' committee.

It is expected that the meeting will be called by the local leaders and that the local leaders also will introduce the health improvement scheme and the idea of a users' committee.

Tasks:

- 1.1 To contact ward chairman and other local leaders in Bhelukhel and to brief them thoroughly about scheme and users' committee (CDU)
- 1.2 To prepare a summary of the program in Nepali for the local leaders(CDU).
- 1.3 To prepare a list of criteria for selecting the users' committee(CDU).
- 1.4 To prepare a list of tasks which are expected to be taken over by the users' committee(CDU).
- 1.5 To prepare a guest list for the mass meeting(local leaders + CDU).
- 1.6 To organise entertainment(sanitation film, etc.)(CDU campaign organisers).

All the above is subject to the consent of Nagar Panchayat.

2) 1st meeting users' committee

During this meeting the newly established users' committee will be briefed in detail on the planned health education scheme and that there is the need to select community workers from within their community.

3) Identification of community workers

A list of criteria for the selection of community workers has been prepared by CDU. And a list of the tasks of the future community workers has been prepared by CDU.

MINUTES OF MEETING

In Bhelukhel, the community workers will be identified by the users' committee (8-10 candidates).

In the other two areas of Bhaktapur, where health education activities will be started after the Bhelukhel program, a committee will be formed of ward chairman, panchas, local clubs, etc. for the identification of community workers.

Jenla has been identified as one area. Whether Byashi will be the second area depend on the talks with Family Planning and Parasite Control Project. If Byashi is not the second area than either an area of Phase I or Phase II will be chosen or another area in the middle or in the Western part of the town, depending on the view of Nagar Panchayat.

4)5) Selection of community workers

A committee will be formed of users' committee and CDU to do the final selection from those candidates identified earlier.

Then a written agreement will be signed by (a)BDP, (b)users' committee, (c)trainer of community workers, and (d)community worker (agreement for the period of the scheme only).

Payment of allowance will be made 20 Rs. per day participating in training, the rest for participating in the health improvement scheme.

Tasks:

4.1 The letter of agreement has to be revised(CDU)

4.2 An attendance form for the community workers has to be produced(CDU training organisers).

6) Training May Package

From May to September every month there will be a training package lasting for 3-4 days.

Since the credibility of the whole scheme will depend very much on the community workers, their training should be done as thoroughly as possible.

It was felt that the first training package has been overburdened too much, although it was understood that all those training topics were needed at this stage of the scheme. A meeting on the first training package will be held next Monday.

It was felt appropriate that on one day the community workers should be shown different toilet types on a site visit together with construction plans. Then they should get theoretical training with the help of the toilet leaflets. And on the following day they should participate in the construction of demonstration toilets. The work will be done by hired manpower. However, whoever wants can participate in the actual construction work, in order to learn by doing. During the following days they will prepare the outline of the awareness campaign. During these days every day they will spend one hour at the construction sites to learn about the progress.

The construction sites will be chosen by the users' committee.

Tasks:

6.1 Construction plans of toilets will be needed for the training (CDU consultants).

7)8) Plan preparation of awareness campaign

The plan will be jointly prepared by users' committee, community workers and campaign organisers.

The main components of the campaign will be:

- talking to the people about health hazards in the environment
- cleaning and improving (digging ditches, etc.) the environment
- deworming
- information to the people about toilet types.

Details and sequence of the above actions will be decided by the 3 groups mentioned above.

Tasks:

7.1 Awareness campaign plan (users' committee, community workers, campaign organisers).

9) Users' committee info meeting on toilets

CDU will brief the users' committee on all toilet and excreta disposal systems included to the toilet leaflet excluding:

- public toilets
- pit latrine.

The following changes should be made in the leaflets:

- Under the heading "What is a POUR FLUSH TOILET" it should be added that this toilet can be connected either to a sewerage system, or to a septic tank, or to a double composting pit.
- Tel. number of Health Education Section should be replaced by 14696
- At the VIP latrine it should be mentioned that this is a chute without water seal.
- The VIDP leaflet will be taken out from the set and not used.
- In the drawing of the open trench toilet there should be an indication that there is a roof above the women.

Tasks:

9.1 To decide upon a subsidy policy, how much the people will have to pay for normal toilets, for costly septic tanks, for toilet house, etc. (BDP)

9.2 To find out what the possibilities for water supply in Bhelukhel, types of supply and costs. (CDU/WSSB)

10) Toilet site visits for users' committee

It was felt that there should be separate site visits for community workers and for the users' committee.

11) Decision on type and number of toilets

It is expected that the community workers brief all households in the community, advise them on which toilet type to choose and assist them in selecting the site, and then to collect the application form. Then a sanitary engineer (CDU consultant) will visit all proposed sites, approve, or if necessary, suggest (a) another site or (b) another toilet type, then check whether the construction will cost more than the standard type.

With these data the users' committee will make the total costing and then organise the construction.

Tasks:

11.1 The application form has to be designed (CDU campaign organisers)

12) Training JUNE Package

It will start with the evaluation of the first month work and will include safe composting practices. Heavy emphasis should be put on all what is related to clean water.

13) Organisation of toilet construction

The users' committee will be considered as LDC so that a real contract can be made with them.

14)15) Safe composting campaign

This campaign will be organised with the assistance of the District Agricultural Officer.

Tasks:

14.1 Production of "safe composting report" in English for project employees, etc. (CDU)

14.2 Production of safe composting guide lines in Nepali for actual application. (Distr. Agr. Off. + CDU)

16) Construction of toilets

Regular supervision will be done by CDU consultant.

Tasks:

16.1 Production of construction guidelines will be done during construction to be used for future projects (CDU consultants)

17) Revision of leaflets and posters

It has been agreed that the Nepali version of toilet leaflets presently under preparation will only be printed in the number required for the scheme. Then, after using these leaflets for some months in the scheme they will be revised and reprinted in large numbers.

18)19) Evaluation of scheme/proposal of Part II

At the end of the scheme a joint evaluation will be done by users' committee, community workers and CDU.

Tasks:

18.1 An outline of the evaluation has to be prepared (CDU)

Herewith we would like to thank again all participants of the workshop for their contributions and their kind cooperation.

Community Development Unit

WORK PROGRAMME

HEALTH IMPROVEMENT SCHEME - SWEEPERS' AREA

PORE TOLE, BHAKTAPUR

A. CONCEPT

Infrastructure works planned by BDP for the Sweepers' area will not be implemented. Instead, the budget of NC Rs. 500,000 is to be set aside for health improvement measures defined by local needs. The first physical improvement of the environment is to be achieved by an awareness campaign. During this campaign, the entire area is to be cleaned, ditches/drains re-opened, soakpits built, etc. through community work. Combined with the physical improvement, a deworming campaign is to be carried out to demonstrate the present health status of the population. The next step is the selection of a low cost sanitation system by a Users' Committee formed in the area. The toilet types selected are to be built by the Users with BDP assistance. At the same time, sanitation education is to be carried out by earlier trained community workers. The third step is a "safe composting campaign". As support materials, information leaflets, posters and construction guidelines on different types of toilets and excreta disposal systems are to be prepared.

The funds remaining from the above budget are to be used for further improvement of the area following decisions made by the Users' Committee. Costs of manpower will not be covered by the above budget.

B. OBJECTIVES

- community workers trained (4 from Pore Tole, 6 - 8 from Jenla and Byashi).
- sanitation environment improved
- 80% children (6 months - 6 years) dewormed
- 100% population access to toilets (at least 50% of the households to private toilets)
- 100% households sanitation education
- households involved in composting reached by "safe composting campaign")
- information leaflets, posters, construction guidelines printed

WORK PROGRAMME

C. WORKFORCE

Manpower

Tasks

CDU Team

The present vacant posts of Community Development Planner, Town Planner and Town Planning Assistant is to be filled with 1 Health Education Expert, 1 Visual Aid Expert and 1 Artist.

- To secure funds, all manpower required and support from other parties; liaison to Nagar Panchayat, Users' Committee, population, coordination of the programme.

Local Consultant (East Consult)

In the fields of visual aids production, health education curriculum development and low cost sanitation.

- To produce information leaflets, posters, construction guidelines, training curriculum; supervision of training and of toilet construction.

Community Workers

To be selected from the area.

- To support awareness campaign, toilet selection and construction and to carryout sanitation education.

Trainers

Preferably from Bhaktapur.

- To organise and carryout practical and theoretical training of community workers.

Volunteers, Clubs, FPPCP, District Agricultural Officer

- To support the awareness campaign and the "safe composting campaign".

WORK PROGRAMME

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D. PROGRAMME

Dates/Deadline	Tasks	Responsible	Remarks
1. Immediately	Filling of CDU posts.	CDU	As outlined under C.
2. Immediately	Contract with local Consultants.	CDU	
3. Feb. 22 - 27	Collection of data on toilet type and site visits.	Cons.	
4. Feb. 24 - Mar. 6	Review of information leaflets on types of toilets and excreta disposal prepared by CDU.	Cons.	
5. Mar. 6	Proposal on types of toilets and excreta disposal to be included in the new leaflets.	Cons.	Private toilets + trench toilet.
6. Mar. 8	Approval of types selected.	CDU	
7. Mar. 8 - 24	Draft of new leaflets.	Cons.	To cover design, approximate costs, conditions for operation, advantages and disadvantages.
9. Apr. 2 - 8	Redrawn final leaflets.	Cons.	
10. Apr. 9 - 18	Printing of leaflets.	Cons.	Costs to be approved by CDU.
11. Apr. 9 - 20	Draft of posters on types of toilets and excreta disposal.	Cons.	Same types of toilets and excreta disposal as leaflets. Mainly pictorial, little writing in Nepali. Size : easily printable.
12. Apr. 21 - 25	Pre-testing of posters.	CDU + Cons.	
13. Apr. 26 - May 2	Re-drawn final posters.	Cons.	
14. Apr. 26 - May 10	Draft training curriculum for community workers.	Cons.	To include : Practical on-site training combined with theoretical training; 2-3 days training per month until the end of scheme.

WORK PROGRAMME

D. PROGRAM continued

Dates/Deadline	Tasks	Responsible	Remarks
15. May 3 - 10	Printing of final posters.	Cons.	Costs to be approved by CDU.
16. Up to May 10	Approval of scheme by Nagar Panchayat.	CDU	The scheme cannot be shifted to another area since the funds had been earmarked for Pore Tole.
17. Up to May 10	Transfer of Budget from WSSB to NP/CDU.	CDU	Procedures similar to those used for public toilets.
18. Up to May 10	Identification of trainers of community workers.	CDU	As outlined under C.
19. Up to May 10	Agreement with FPPCP on participation in awareness campaign.	CDU	For deworming component.
20. On May 10	Sweepers' mass meeting on "Health Improvement Scheme".	CDU	Requesting the formation of a Users' Committee; criteria outlined by CDU.
21. May 11 - 17	Formation of Users' Committee.	Local Leaders	
22. May 12	Approval of training curriculum.	CDU	2 components : (a) environmental sanitation, (b) health education. Form of training, practical field-work/identification of health hazards in the environment and of prevailing diseases. Theoretical training/causes and transmission routes of diseases, safe composting, etc. Communication methods, visual aids. The trainees are to make their own visual aids and are to define communication strategy.

D. PROGRAM continued

WORK PROGRAMME

Dates/Deadline	Tasks	Responsible	Remarks
23. May 13 - 24	Preparation of training.	Trainers	To be supervised by Consultant.
24. May 17	First meeting of Users' Committee.	Members + CDU	Requesting the selection of 4 community workers from within the Pore Tole; criteria outlined by CDU.
25. May 18 - 24	Selection of 4 community workers from Pore Tole.	Users' Committee	On the basis of an allowance scheme to be defined by CDU.
26. Up to May 24	Identification of 6 - 8 community workers from Jenla and Byashi.	CDU	As above.
27. May 25 - 26	First practical/theoretical training of community workers.	Trainers	To be carried out once per month until September.
28. May 27 - 31	Organisation of awareness campaign.	Users' Committee Community Workers FPPCP+CDU	2 components : (a) cleaning and improving the environment, (b) deworming of children.
29. June 1 - 17	Awareness campaign.	FPPCP Community Workers	To cover the entire area.
30. June 1 - 7	Information meetings on different types of toilets and excreta disposal systems with Users' Committee.	CDU Community Workers Cons.	As a basis for making an informed choice of the low-cost sanitation system best suitable to the local needs.
31. June 8 - 9	Site visits to existing toilets organised for the Users' Committee.	Cons + CDU	

WORK PROGRAMME

D. PROGRAM continued

Dates/Deadline	Tasks	Responsible	Remarks
32. June 10 - 17	Decision by Users' Committee on types and numbers of toilets to be built in the Sweepers' area.	Users' Committee CDU + Cons.	
33. June 10 - July 10	Technical drawings and cost estimates.	Cons.	
34. June 18 - 24	Organisation of construction works and first materials procurement.	Users' Committee	
35. Up to June 18	Agreement by District Agricultural Officer to participate in "safe composting campaign".	CDU	
36. June 18 - 24	Preparation of "safe composting campaign".	District Agr. Off. + CDU	All households involved in composting to be covered.
37. June 25 - July 25	"safe composting campaign".	District Agr. Off. + CDU	
38. June 25 - Aug 25	Construction of toilets.	Users' Committee	
39. June 25 - Aug 25	Construction supervision.	Cons.	
40. June 25 - Aug 18	Draft of construction guidelines on how to build the toilet types chosen.	Cons.	During actual construction these guidelines are to be made for future projects with less resources/manpower input. Nepali/English
41. Aug. 20	Approval of guidelines.	CDU	

WORK PROGRAMME

D. PROGRAM continued

Dates/Deadline	Tasks	Responsible	Remarks
42. Aug. 21 - 27	Pre-testing of guidelines.	CDU + Cons.	
43. Aug. 28 - Sep. 10	Re-drawn final guidelines.	Cons.	
44. Sep. 11 - 25	Printing of guidelines.	Cons.	Costs to be approved by CDU.
45. June 10 - 23	Review of leaflets/posters used; amendments.	Cons.	
46. June 29	Approval of amendments.	CDU	
47. June 30 - Jul. 14	Translation into Nepali.	Cons.	
48. July 15 - 28	Printing of revised leaflets and posters.	Cons.	Costs to be approved by CDU.
49. Sep. 11 - 17	Evaluation of Part I Health Improvement Scheme.	All	
50. Sep. 18 - 30	Proposal for further improvement of the area.	All	

Regular health education by Community Workers covering all households is to be carried out until the end of September.

*** LOCAL CONSULTANTS**

CDU had been operating for more than two years before this scheme was started. Since all the staff members at that time were already involved in a number of other BDP activities, additional manpower had to be found on a temporary basis. Expertise was required in different latrine systems, in curriculum development for training of community workers and in the production of training materials and visual aids. Instead of calling offers by different consultancy firms, great care and a long period of time was taken to identify individuals who were known to be excellent in their fields of work. After they had agreed individually, to work for the Alternative Sanitation Scheme, they were hired as a joint consultancy group by the Project.

CDU employees work from 10 a.m. to 5 p.m., Sunday to Friday. Most of them are not from Bhaktapur and need transport to return to Kathmandu. However, since community participation work has to be done when the people who are to benefit from the project have time, i.e., on Saturdays and in the afternoons and evenings, two Bhaktapurians were willing to work at those times and were hired as training and campaign organisers.

The Community Development Unit played the role of initiating and organising the programme and of monitoring the entire process.

*** ASSISTANCE BY OTHERS**

During the planning and implementation of the programme, much help was given free of cost by:

UNICEF and MPLD assisted in outlining the programme.

The INTEGRATED FAMILY PLANNING AND PARASITE CONTROL PROJECT assisted in organizing the de-worming campaign and in making stool tests.

The LAND RESOURCES MAPPING PROJECT (CIDA) was influential in planning the soil survey.

The DHANKUTA COMMUNITY MEDICINE AUXILIARY TRAINING CENTRE PROJECT and UNICEF helped in producing visual aids.

The WATER AND SANITATION DECADE SERVICES CELL assisted in the training of community workers.

WHO and PROCTOR & REDFERN INTERNATIONAL LTD. gave advice on latrine systems.

JOHN SNOW INCORPORATED gave advice on the health survey.

We are indebted to many individuals of those organisations and to many other people who have not been mentioned here.

* FIRST HAND INFORMATION

In order to get more detailed information, contact the following persons. They will freely share their experience with you:

RATNA BAJRACHARYA, Head of the Community Development Unit which is located at the mini-bus park at the entrance of Bhaktapur; tel.: 213235

DWARIKA NATH BANEPALI, Community Development Unit, Office Assistant and resident in Bhaktapur

BALRAM KHYAJU, Campaign Organizer, President of 4-H Club and Public Relation Officer of Jaycees in Bhaktapur

KAMAL B. SHRESTHA, Training Organizer, former President of Jaycees in Bhaktapur

PRAKASH C. JOSHI, Director of EASTAP, promoter of double pit composting latrines in Nepal; his office is part of East Consult, Kathmandu; tel.: 410225

LEKHA MAN SINGH Sanitary Engineer, designer of the trench latrine (to be reached through EASTAP)

NANDA MAN STHAPIT Curriculum Development Specialist Health Education Section, Department of Health Services, Teku, Kathmandu; tel.: 212413, 214696

RAM GOPAL DYOLA Member of Users' Committee, President of Kumari Club and resident of Bhelukhel

CHARAN DYOLA Community Worker, Secretary of the Users' Committee, Secretary of the Kumari Club and resident of Bhelukhel.

Members of the Bhaktapur Development Project, especially of the management, the Building Section and the Water Supply and Sewerage Board Branch Office in Bhaktapur.

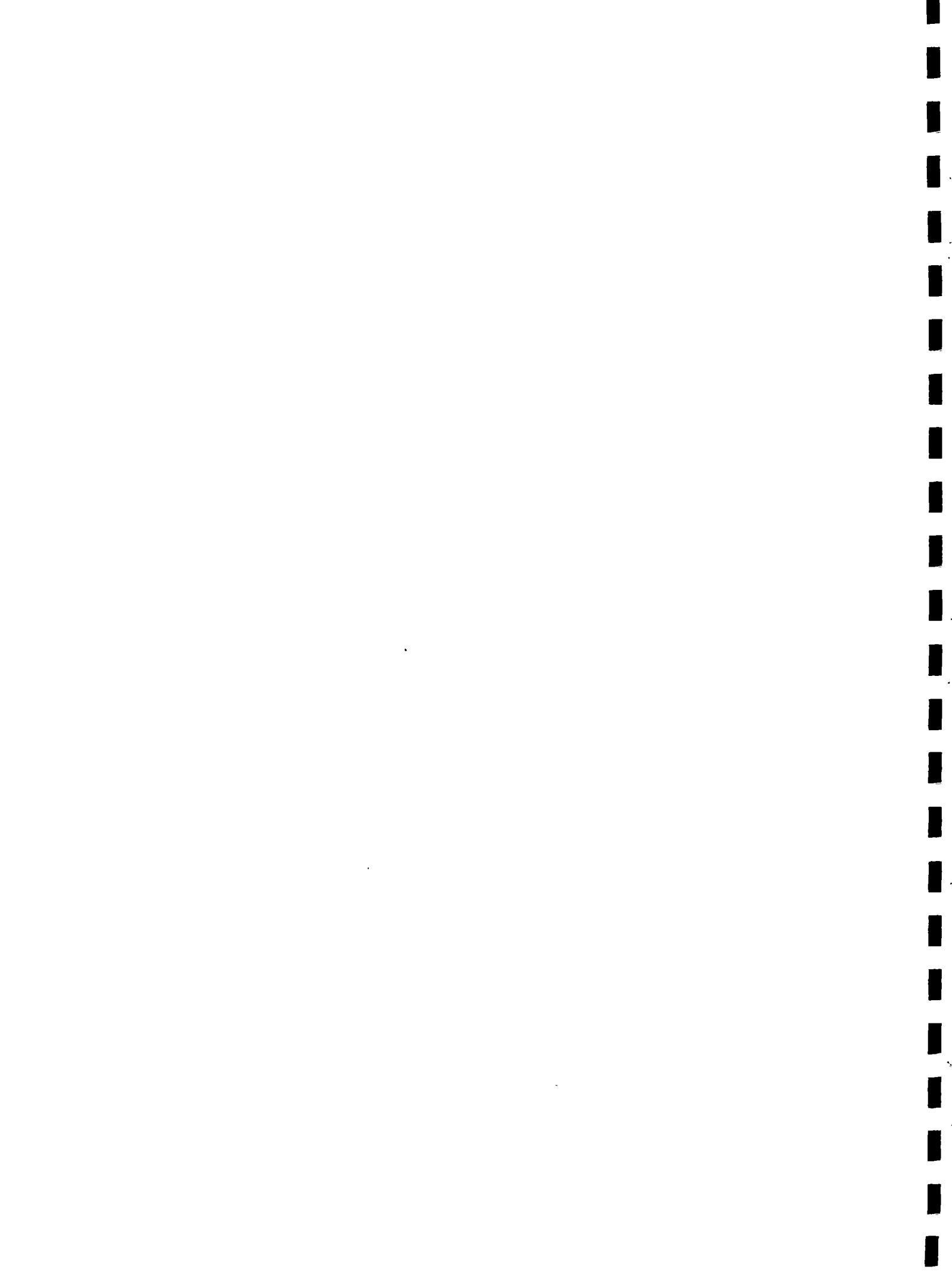
* ROLE OF FOREIGN ADVISOR

During Phase III, when re-integrating the Project, section by section, into local institutions, the scope of the foreign advisors of BDP also gradually changed from acting as the leading decision maker of a section into actually fulfilling advisory functions.

The work of the Community Development Advisor was divided into:

- covering GTZ reporting procedures
- assisting concept development of CDU activities
- providing on-the-job training for CDU members and motivating them for fulfilling their assigned tasks
- securing the continuation of CDU work whenever obstacles developed
- securing the assistance and cooperation by other organizations whenever CDU staff members were lacking the expertise required
- evaluating programme implementation and providing feedback to CDU members
- monitoring CDU's work programme with feedback to the management.

In Bhaktapur most people speak Bhaktapur Newari. The Advisor tried to learn Newari. However, it was Kathmandu Newari and he was not very good in it. This turned into an advantage. Most of CDU's work was very sensitive and had to do with direct contacts with people, with discussions and meetings. Instead of leading the discussions during a meeting, the advisor assisted in preparing the meetings, the Nepalese colleagues were running the meetings and afterwards the advisor assisted in evaluating the outcome of the meetings. Had his Newari been fluent, he often would have taken the lead in meetings and thus the chance away from the Nepalese colleagues for learning by doing.



(3) THE PEOPLE OF BHELUKHEL

- * POSITION WITHIN THE
CASTE SYSTEM
- * SOCIO-ECONOMIC DATA
- * DATA COLLECTION ON HEALTH

*POSITION WITHIN THE CASTE SYSTEM

All residents of Bhelukhel belong to the Pode caste. For their community the following rules were set under Raja Jayasthiti Malla: "The Podes shall cut their hair and nails themselves. While observing the death mourning these Podes should not wear clothes in pairs. Do not wear gold ornaments. Do not enter town after sunset without any urgent work. Beg for the remains of food or ornaments offered to gods and goddesses during sacrificial performances. Earn their living by hunting sparrows and fishes and selling the same. Do not touch upper caste people. Eat the pig's meat. Wear clothes used as dress for corpses during funeral ceremonies. Accept as offering only one dam. The female Podeni should pick up friendship with any upper caste women who is going to immolate herself with the dead body of her husband and wear her clothes. In case a wife who does not burn along with the dead body of her husband and falls down the pyre she should be made a member of the same Podeni family and live with the same. (Source 4)

"Development planning should be guided by basic criteria of social justice. However, Bhaktapur has a traditional society which does not fulfill these criteria and is structured in a feudal hierarchy with unequal distribution of status and power, entailing unequal access to resources. The people themselves conceive of their society as consisting of groups with higher or lower status following the traditional criteria of the still existing caste system:

- ritualistic - The concept of pollution distinguishes between pure and impure social groups with a scale of various degrees of purity between the extremes of Brahmanical purity at the top-level of the hierarchy and total impurity which leads to untouchability and out-caste status at the bottom.
- social - Interlinked with the concept of pollution is the attitude of considering people of low ritual rank to be inferior by birth to those of higher ritual rank. This results in rules regulating inter-group communication and social distances between the castes.
- economic - Socio-ritual status differentiation is backed by economic status-differentiation. There is a distinction between those groups which have access to the traditional subsistence sector, e.g., those who own agricultural land, and those who do not. The first ones can survive on their own resources, the others are dependent upon the first.....

educational - Traditional education is highly interrelated with religion, and to some extent monopolized by the upper castes, especially the priests, who are also the traditional teachers. Therefore, higher educational status tends to go along with higher socio-ritual status. Since education is a prerogative for qualified jobs in the modern sector, the upper castes have better chances than the low-status groups to get new jobs.

political - The previous criteria combine as provisions for attaining political power positions. Although the traditional caste system has been abolished by modern legislation, it is still highly valid in everyday life, and the fact that more than 80% of the members of the Nagar Panchayat in Bhaktapur belong to the traditional minority elite of the upper castes shows that the traditional social structure survives to a large extent in the modern political set-up." (Source 5)

How do the sweepers fare within the present-day society?

In 1974 Bhaktapur castes were listed under 19 different groups, starting with the Brahmins (Source 6):

START*****

Newar Status System From the Rājopādhyā
Point of View

<i>Jat Name</i>	<i>Number of Households</i>	<i>Traditional Occupation</i>	<i>Area of Residence</i>
1. Brahman	26	priest	Lāskū dhokā
2. Chatharīya	545	occupations in relation to the court	lower town, Tulācheṁ Cocheṁ
Joṣī	44	astrologer	Bolācheṁ
Malla, Pradhānānga	63	merchant(royal fam)	Bamśagopāl, lower town
Hādā, Hodā. Rāthor,	53	occupations in relation to the court	lower town, Lāskū dhokā
Rāyo		ministers	Khaumā, Tekhāco, Tibukcheṁ
Amātya, Bnau, Kasaju	93		
Tācābhārī. Munankarmī, Rāj- bhandārī, Gomga, Dhaubārī, Pakuvāṁ, Tīmīlā, Baidya, Khe- golī, Basī and 11 others	292	occupation in relation to the court	lower town, Golmādhī
3. Pañcharīya	199	Tāntric priests	
Ācāju(Karmācārya)	68	tāntric priests debased Chatharīya	Tulācheṁ lower town

Here follows the end of the same list:

14. Jugi (Kusle)	46	tailors, temple musicians	all over the town
15. Dhobī	2	washermen	Taumādhī
16. Nāy (Kasā)	110	butchers	on the outskirts of the town
17. Kulu	1	drum-makers	Cochem
18. Pore	73	sweepers, basket-makers, fishers	Taumādhī
19. Hālāhulu	1	sweeper	Taumādhī

*****END

The people of Bhelukhel are the last ones listed. They have two guthis, one large and one smaller. The eldest of each household is represented in one of the two guthis. Membership is by birth. The Nayos, the heads of the guthis, are the accepted leaders of the community. There is a four-member body consisting of four community leaders for settling community disputes. However, today they still are considered to be impure. A Brahman would not eat food prepared by someone from the Pode caste. Since their help is needed at the Bisket Festival, they are 'allowed' to participate in pulling the chariots of the gods and are assigned an additional rope especially distinguished for them. Socially, they cannot mix with other castes. Economically, they are assigned to provide certain services to the community like cleaning compounds, emptying latrines, etc. They also do not own agricultural land. But they are allowed to gather grains left in the fields after the harvest and they also collect food left-overs. One of the difficulties in moving up to other jobs is the lack of formal education. In 1981, not more than three or four persons could read and write. When the Alternative Sanitation Scheme started, only three children were attending school. Children have to help at home. In addition, Pode children still suffer from discrimination in schools although the teachers are trying their best to protect them.

* SOCIO-ECONOMIC DATA

Before the scheme started, data listed here have been collected in the following way:

- various 'environmental sanitation walks' were taken
- key-informants like youth club members and doctors of the Bhaktapur hospitals were interviewed
- from already existing reports.

1. SIZE OF POPULATION

In April, 1981 there were 454 people forming 88 households (with separate cooking places).

122 adult males 128 adult females

204 children below 16

75 % households with 5 family members and 2,3 children statistically per household (Source 5)

In October, 1983 at the time of the de-worming campaign the population had increased to 522 persons.

2. SOURCES OF INCOME (Source 5)

Sweeping was the main source of income for 78.5 % of the households, with 88 male and 40 female sweepers.

Additional sources of income were collection and sale of raw sewer, composting, fishing, basket making, mat weaving, pig and duck raising. Only fishing is done exclusively by men. Traditional women's tasks are the construction and repair of traditional ovens, cooking, childcare, midwifery and the maintenance of traditional mud walls and floors.

3. EDUCATION (Source 5)

In 1981, only a few persons in the area could read and write. Literacy classes for adults were given by some residents. The children of the community could go to school only irregularly, if at all due to small work tasks like collecting firewood or looking after animals and young children. The school was in another Tole.

4. PREVALENT DISEASES

No data are available especially for Bhelukhel. The people of Bhelukhel do not visit the hospital much. However, according to Dr. Misrah, at that time Superintendent of Bhaktapur Hospital, they can be expected to be highly affected by the following diseases common among the Bhaktapur population:

- MALNUTRITION (in few cases lack of food; in most cases lack of education);
 - PARASITIC WORM INFECTIONS (caused by disposal of night soil, bad water and food handling, bad toilet habits and lack of education);
 - TUBERCULOSIS (damp/dirty housing, overcrowding and lack of education);
 - TRACHOMA, CHRONIC CONJUNCTIVITIS (bad water supply, personal contact, dirty towels);
 - SEASONAL WATER BORNE AND WASHING RELATED DISEASES LIKE TYPHOID, CHOLERA, AMOEBIC DYSENTERY, INFECTIOUS HEPATITIS, etc.
-

* DATA COLLECTION ON HEALTH

1. METHODS FOR GATHERING DATA (Source 7)

(a) PARTICIPANT-OBSERVATION

The researcher establishes residence in the community to be studied and remains there weeks or months, observing and recording the activities and events of daily life. Participant-observation is a basic ground-level technique that is often combined with key-informant interviewing but usually precedes all other kinds of data-gathering methods. It can provide the details of daily life that are necessary for designing survey questionnaires or holding group discussions.

An abbreviated form of this method, mainly observation, can be adapted to water and sanitation projects by taking an "environmental sanitation walk" through the community (visiting water sources, noting street conditions, visiting inside homes and public buildings, and asking to use the latrine) to get a general feel for conditions. In many low-income communities, a number of key activities like fetching water and defecation take place at dawn or dusk, and these are the times when households and the community as a whole meet and discuss matters.

(b) KEY-INFORMANT INTERVIEWING

Key-informants are people living in the area itself who are particularly knowledgeable about certain matters like physical geography and public buildings ("Is there a health unit here?" or "What are your main sources of water here?"), institutions or institutional roles ("Do you have a latrine builder here?"), dates of important community events ("When did you get a well in this village?"). However, key-informant interviewing alone might provide a distorted view of the community under study. Key-informant interviewing can be most useful when combined with participant observation.

(c) OPEN-ENDED QUESTIONNAIRES

When working in an entirely new cultural or community group or planning a new kind of development programme, it is usually difficult to design a meaningful, structured interview questionnaire because of the lack of reliable knowledge about what is or is not relevant. In this situation, open-ended interviews help to elicit information comparatively unbiased by an investigator. Data gathered from open-ended interviews can then be used to design survey questions, if a survey is desirable. There may be other important considerations never dreamed of by the project designers. Therefore, rather than designing a questionnaire that asks a person about what type of latrine he prefers, where he wants it located, etc. the interviewer could begin by asking the respondent to describe all the characteristics and use-situations of all the places where he habitually urinates and defecates, and how he feels about each one.

It is desirable to use very large answer sheets that contain plenty of space for writing, or to allow one page for each answer. The design of such open-ended question forms must go through a series of steps. First, the topics must be listed. Questionnaires are then designed, translated into the local language, and then back-translated by a third party to check for translation errors. Next, each interviewer should pretest the questionnaire on at least two people very similar to those to be interviewed. Then the final version should be made and pretested again. These open-ended questionnaires should be used for a minimum of about thirty people.

(d) SURVEYS

Surveys are most useful for collecting demographic data, for quantifying the occurrence of observable objects or characteristics, and for estimating the prevalence of particular attitudes, beliefs and values. Nearly every water and sanitation project will require a household survey, in order to collect

quantitative information on questions such as size of household, primary source of income, existing water source and sanitary facilities, renter or owner status. However, there are certain limitations to SURVEY RESEARCH:

3 examples (Source 8):

- One woman had reported to the interviewer that she had used birth control pills. One might think that at least for some time she wanted to practice birth control. However, this was not true. She had used the pill not for contraception but for the purpose of delaying her menstrual period (and therefore her state of ritual impurity) so that she could participate in an eminent religious festival.
- One man had reported only three members in his household, although normally seven were sharing kitchen and food. On the day of the interview he had had a quarrel with his sister, so he had excluded her and her children from his mind when talking to the interviewer.
- Another man told the interviewer he had eight chickens although he owned ten. When asked about the discrepancy he replied that he expected two of them to die soon.

Ramesh Shrestha (Source 8) found out that "The general intelligibility of the social science survey questionnaires among the rural mother tongue and non-mother tongue Nepali speaking population is rather low. Based on the limited nature of our data, it can be suggested that 80 % of Nepal's questionnaire respondents either totally fail to understand difficult questionnaire items or understand them only in part. The words are too technical, they are often borrowed from other languages, they are unfamiliar, and they are 'high' sounding. Sentences are lengthy, ambiguous and full of expressions unfamiliar to rural respondents.... The very concept of a questionnaire is the product of a literate culture. In short, the questionnaire is a sophisticated 'instrument' designed by a sophisticated urban group of people. However, the groups of people these survey instruments reach are mostly illiterate. We can easily see, then, how the questionnaire-interview situation leads to a conflict between two essentially different cultures, each with its own kind of sophistication and efficiency."

In addition, replies might be overshadowed by the presence of other people such as one's neighbours, local panchayat representatives, mother, father-in-law, husband, etc. Often, respondents give answers that they think will please the interviewer.

REASONS WHY SURVEYS MIGHT GIVE WRONG RESULTS:

The respondent is not able to give a correct reply because

- there are language difficulties
- conceptually he does not understand the question
- he cannot remember

The respondent is reluctant to give a correct answer because

- the topic is too sensitive, intruding into his privacy
- he fears negative consequences
- he is interested in benefits
- he wishes to act as he thinks the public expects him to act.

The interviewer causes errors because

- he does not understand the content of the question
 - he does not understand the context of the issue questioned
 - he leads the respondent to the reply which he thinks is the right one
 - he does not want to lose face.
-

2. FURTHER DATA COLLECTION

Were the data which were collected before the scheme started sufficient or were additional data required?

A household survey was not needed, since such information had already been collected in Bhelukhel by Dr. Moser-Schmitt in 1981 and up-dated during the de-worming campaign.

A questionnaire for a baseline health survey had been prepared but not used; the survey was not done. In the eyes of the people of Bhelukhel, it would have been yet another survey, more strangers visiting Bhelukhel, more promises made, and still nothing much coming out of it - for them.

After the users' committee had been formed, the community workers trained, and the de-worming campaign carried out, many questions came up. Is there a need for a baseline survey now and follow-up surveys one or two years later? The health baseline survey would have given information on the health of the people, but how reliable would follow-up surveys be? Would they record the impact of the Alternative Sanitation Scheme on the health of the people? The idea of a health baseline survey and health follow-up surveys was given up. Why?

In many sanitation projects, the health of people does not improve considerably after a water supply system and good latrines have been built. There are many other factors influencing the health of the people. For example, cast metal pots, used for fetching water, might hold worm eggs in the rough internal surface, thus immediately contaminating clean water. Or if children are allowed to defecate around the house (their faeces not considered to be dangerous) the health of the entire family might not improve despite the new sanitary facilities. The follow-up health survey would have told us about the health situation at the time of the survey. It would not have told us whether the health has improved because of the sanitation project or because of other factors. Nor would it have told us which other factors still make the people sick. This can only be discovered through long-term, expensive, comprehensive research. For that, we had neither the time nor the funds.

After latrine construction work was completed, the people of Bhelukhel decided which further sanitary improvements they wanted to have in Phase II of the scheme. They also decided that they wanted to have more health education. Health education in which fields? Child care? Safe water handling? Personal hygiene? In order to find out in which other fields health education was needed, additional information has to be collected. The question then was how that information could be collected best, so that further health education could be custom-made to the situation in Bhelukhel.

3. MULTIPLE-METHOD RESEARCH FOR SELECTING HEALTH EDUCATION TOPICS

We wanted to know what the people do and what they think. We did not have the time or resources to do a year of PARTICIPANT OBSERVATION that might have given us more reliable data. This constraint and the questionable validity of survey research lead us then to the following combination of data collection:

THROUGH OPEN-ENDED QUESTIONNAIRES

- different kinds of illnesses children under the age of five experience
- different kinds of diseases of adults
- beliefs of people as to the causes of such illnesses
- different possible cures
- those who can administer the cure
- places of defecation for adults after latrine construction
- " " " for children
- characteristics of different defecation places.

THROUGH SIMPLIFIED PARTICIPANT OBSERVATION

For a few days, one female and one male researcher would try to observe men and women during their daily activities in order to detect possible causes of diseases like:

- causes of illness by water storage and handling
- causes of illness by food preparation and eating habits
- causes of illness in child-care
- causes of illness by personal hygiene
- causes of illness by household hygiene

THROUGH STOOL TESTING

- Film shows and stool testing at the local youth club to find out the degree of worm infestation after the people had been using household latrines for 6 months.

THROUGH SOIL TESTING AND HAND SMEARS

- worm infestation in the area surrounding the public tap
 - worm infestation of living room and kitchen floors, cooking utensils and dishes
 - worm infestation of water fetching and storage containers
 - worm infestation of fingernails
 - cleanliness of hands when feeding a baby, preparing food
 - others.
-

4. SUGGESTIONS FOR THE OPEN-ENDED QUESTIONNAIRE:

1. USE CHAIN QUESTIONS

Example No.1:

- Which illness did members of your family have during the last two weeks ?
- What caused each of those illnesses ?
- Which is the best cure for each of those illnesses ?
- Who can administer each of those cures?
- Who in your community can give the best advice on health?
- Who else?

Example No.2:

- Which is the most pleasant place for defecation ?

- Which is the second most pleasant place ?
- Describe your favourite place. What does it look like ?
When do you use it?
- Describe your second choice for defecation. What does it look like ? When do you use it ?
- Any comments on changing your present latrine ?

(These questions men and women have to be asked separately.)

2. Have the English questionnaire translated, and then have it translated back into English by an independent person, to see what might have been changed by the first translation.
3. Each interviewer should do at least two interviews as pre-testing.
4. Ask two interviewers not to read the questions, but to speak in normal language and record it on a tape recorder. Then compare this with your written questions. Change all questions into spoken language even if it looks strange when written down.
5. Find out persons for your interviews who are typical of the community - not too modern, not too traditional. Define the qualities of the typical person living in Bhelukhel and then select your interviewees accordingly. What does it mean to be a normal person in Bhelukhel ?
6. Reduce the number of words in your questions. The shorter the better. No interpretations.
7. Have total privacy. Arrange to have the interviews in a room where nobody can listen.
8. Let the interviewer finish the questionnaire. Then, after they have put it away, let them informally ask some opinion questions like: "How could we improve the latrines?"
9. Develop some method for a cross check of some data and let the interviewers know that some cross checking is done.

10. Have an interviewer meeting after completion of the survey and let them write down what additional information they have received besides the replies to the questionnaire. Let them go through all their questionnaires and mark those questions which they think were not replied correctly.

DATA COLLECTION REFERRED TO ABOVE WAS DONE AT THE BEGINNING OF PHASE II OF THE ALTERNATIVE SANITATION SCHEME. RESULTS WILL NOT BE AVAILABLE BEFORE THE COMPLETION OF THIS REPORT.

Sources:

4

Quoted by Narayan Prajapati in "In Content of Popular Participation", BDP NEWS BULLETIN, No.36 from "Nepal Vaidhanik Parampara, pp 160 by Dr. Jagdish Chandra Regmi

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Exerpts from "Communication and Community Development", pp.16-19, 1981 by Dr. Erika Moser-Schmitt

6

"Ordered Space Concepts and Functions in a Town of Nepal", pp.56 - 58, 1975 by Niels Gutschow and Bernhard Koelver

7

"Methods for Gathering Socio-cultural Data for Water Supply and Sanitation Projects", 1983 by Mayling Simpson-Hebert for United Nations Development Programme Interregional Project INT/81/047

8

"The Use and Misuse of Social Science Research in Nepal" by J. Gabriel Campbell, Ramesh Shrestha, Linda Stone, 1979
Research Centre for Nepal and Asian Studies, Tribhuvan University

**(4) THEIR NEIGHBOURHOOD-
THE PROJECT AREA**

- * LOCATION
- * HOUSING
- * OTHER OBSERVATIONS

* LOCATION

According to the legend, the god Bhelu once visited this area to observe the Bhisket Festival. Bhelu is the Newari name for the god Bhairava. A Tantric recognized him by his mantra and Bhelu suddenly disappeared from the ground. Therefore, this area is called "Bhelu Khel", the place of Bhelu.

Bhelukhel is located at the south-eastern part of Bhaktapur. It covers about 20, 000 sqm. To the north and west there are 4 other Toles. The eastern border is formed by the Nagar Panchayat compost plant, the southern border by the religious festival ground and the Hanumante River. The land slopes downwards from the centre of the town towards the south-east making it difficult for the sewerage line to be built in Bhelukhel so that the Alternative Sanitation Scheme was started instead.

During the Period of the Malla Kings, Bhaktapur was surrounded by walls with several gates. One of those gates was to the north of Bhelukhel, leaving the whole neighbourhood outside the town walls.

* HOUSING

Traditionally, the sweepers were not allowed to live inside the town. Many of them settled on public land used for religious purposes during festivals. In order to prevent them from getting settlement rights, those houses on public land were torn down from time to time. Prescribed materials were unburnt bricks and thatch for the roof. One storey only was allowed. This traditional mud hut consisted of one or two rooms only. In front of the house is the pig sty with an outlet to the street. During the night the pigs are kept under the living room. The first two-storey houses were built in the mid-forties. Since then up to March, 1982, 54 of those 89 houses have been rebuilt. Most of the new houses are built with burnt bricks and have tiled roofs.

* OTHER OBSERVATIONS

The limited space in their homes and streets is fully utilised for making baskets or drying food which is usually covered with flies. This food is not protected from the dogs, ducks and pigs that roam the streets.

Children were playing in the streets with dirty faces and bare feet and with little or no clothes on. Some children had swollen stomachs and skin diseases, but otherwise they looked healthy.

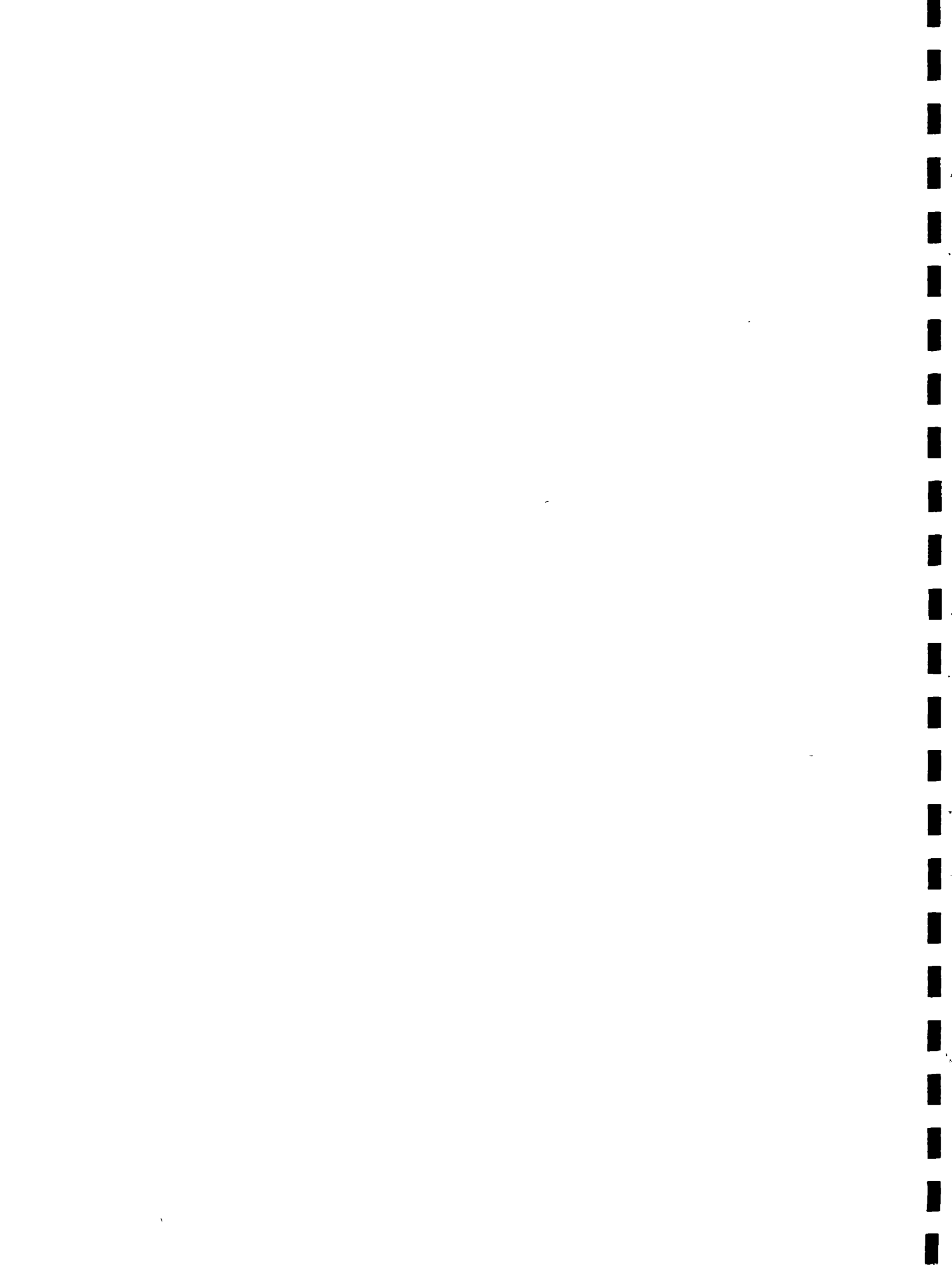
Fresh sewage (wet) brought from toilets or collected from open places is sometimes kept in one of the two rooms until it is sold.

Apart from a number of smaller religious sites, there is a place called Pappar Dumfo where the sweepers have established their family god.

Three public taps supply drinking water which is stored in clean-looking metal vessels.

There are two public latrines. One is closed, and the area surrounding the other was full of faeces. Since there is a water tank for the latrine, women wash their laundry there.

Apart from these two public latrines, the renovation of two public resting places by the Project and, in 1983, the construction of a permanent house for the youth club, the community had not yet received much outside assistance.



(5) INVOLVING THE PEOPLE

- * COMMUNITY PARTICIPATION**
- * STEPS OF ORGANIZATION**

* COMMUNITY PARTICIPATION

Too often, people are requested to contribute voluntary labour to projects already planned, and this is called 'self-help' or 'community participation'. When people are called in at that stage, their needs have been identified by outsiders and decisions about how to meet those needs have already been made. The potential of the people in solving their own problems has not been used. Why should they then consider the project as theirs and feel responsible for its maintenance?

Community participation has been interpreted in many different ways. We follow a working definition used by a number of international organizations (Source 9) which has three dimensions:

- INVOLVEMENT IN DECISION MAKING (what should be done and how) of all those who are affected by the project;
- MASS CONTRIBUTION to the implementation of the decision;
- SHARING IN THE BENEFITS of the programme.

How far the Alternative Sanitation Scheme came close to this working definition will be referred to later in Part 13 on evaluation.

STEPS OF ORGANIZATION

1. APPROVAL BY NAGAR PANCHAYAT

CDU had developed the concept. This should have been done in close cooperation with the town authorities, but in fact the Nagar Panchayat was informed about the intention of starting such a project and then, when the concept was developed, they were asked for their approval. It was not feasible for them to allocate much of their time for this scheme which was relatively small in comparison to other BDP works.

2. MASS MEETING

The people now had to be informed and their cooperation obtained. A mass meeting was called, the concept explained and the request made that a Users' Committee, representing the people of Bhelukhel, be formed.

3. USERS' COMMITTEE

Within one week, a committee of 19 members was elected. Since there were too many people for a working group, an 11-member working committee was formed. The first task of the Users' Committee was to select candidates for community worker training. This again took one week.

4. HOUSEHOLD REPRESENTATION

The community workers became the active link between the people and the Users' Committee, and between the people and the Project. They did much work for the Users' Committee. They divided the neighbourhood into three areas (A, B and C) and called meetings in which one representative from each household had to participate. In these meetings they gave information to the people and collected data which became the basis for decision making by the Users' Committee.

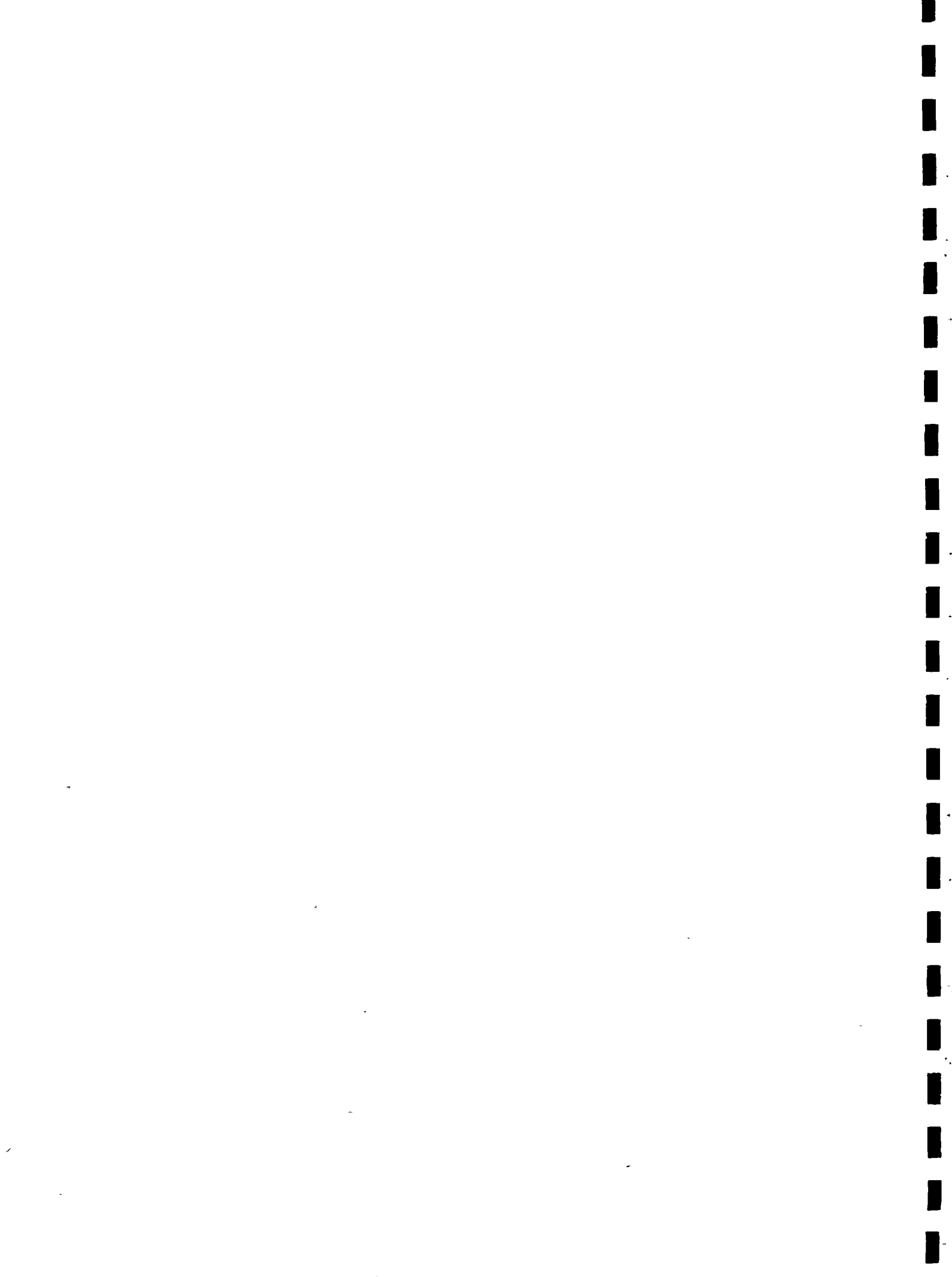
Meetings were recorded in the following way:

- सहभागीहरूको सहा
- १ वंदी
 - २ फाज मान
 - ३ गुन वहादुर
 - ४ लाक्षण
 - ५ राम गोपाल रामीएजाव
 - ६ वसु लाल
 - ७ बुद्धा
 - ८ दान वहादुर
 - ९ प्रेम लाल प्रेमडाहा
 - १० पूण भाई
 - ११ मोहन माया
 - १२ बसल माया

Sources:

9

"Community Participation in Water and Sanitation - Concepts, Strategies and Methods" by Dr. Alastair White, 1981, International Reference Centre for Community Water Supply and Sanitation.



(6) TRAINING OF COMMUNITY WORKERS

- * SELECTION PROCEDURE**
- * CURRICULUM DEVELOPMENT**
- * TEACHING MATERIALS**
- * TASKS OF COMMUNITY WORKERS**

* SELECTION PROCEDURE

START*****

CRITERIA FOR THE SELECTION OF COMMUNITY WORKERS

- 1) Reading, writing and speaking ability in the Newari language is a must and fluency in spoken Nepali is desired.
- 2) The candidate should be living in the local area.
- 3) Preference will be given to candidates with general knowledge of sanitation and health.
- 4) Preference will be given to the magnitude of involvement of the candidate in social works and to his/her interest in community development.
- 5) To be an example oneself is one of the factors in motivating the others. Those candidates conscious of sanitation in their own area will be considered.
- 6) The candidate should have the ability to convince and motivate other people.
- 7) The candidate should be capable of getting things done by maintaining good public relations. Preference will be given to those who have already created good public relations.
- 8) Among the four community workers from each of the areas, two will be women.

PROCEDURE FOR SELECTING COMMUNITY WORKERS

1. In order to select volunteers as future community workers, Daffa Guthi, Clubs and Ward Committees shall be informed about our programme either by contacting each of them or by conducting a joint meeting with them.
2. For the selection of four community workers from each of the two areas, the advertisement for free competition with the following preferences shall be done:
 - one person recommended by ward committee
 - one person from an active club
 - one person from Daffa Guthi
 - one person on the basis of free competition.
3. Actual selection will be done by interview based upon the above criteria.

*****END

AGREEMENT FOR PARTICIPATION IN
HEALTH IMPROVEMENT SCHEME

Between

Mr. _____
of CDU/BDP

and

Mr. _____

Date of Birth: _____

Nationality: _____

Resident in: Jenla, Bhaktapur/Byasi, Bhaktapur/Bhelukhel,
Bhaktapur

hereinafter referred to as the Community Workers (in abbrev. CW)

Article 1:

Now, it is hereby agreed that with effect from _____,
Mr./Mrs./Miss _____ shall be engaged as
Community Worker and shall receive training for fulfilling
his/her tasks.

Article 2:

Under the supervision of CDU, the CW shall perform the
services as set forth below:

1. Diagnosing environmental health hazards in the area and developing a program for cleaning and improving the environment in the sweepers' area, in cooperation with the community and CDU.
2. Informing the community about the health improvement scheme by doing house to house visits and by attending formal meetings and informal gatherings.
3. Assisting in the organization of community meetings (general meeting, users' committee meetings)
4. Discussing and explaining the health hazards in the environment and suggesting ways for improvement.
5. Motivating the community for deworming and for other sanitary improvement activities.
6. Procuring, if necessary developing health education materials (posters, leaflets, etc.) for the propagation of sanitation activities.

7. Explaining the different types of toilets to the community and assisting in the selection of the adequate types.
8. Assisting the construction works under the supervision of the sanitary expert during the construction of the toilets.
9. Developing their own communication approach during the training.

On the average, there will be 3-4 working hours per day.

Article 3:

Changes in the scheme might require changes in the working tasks of the CW.

Article 4:

The CW shall fully attend all classroom training and all field practice.

Article 5:

The CW shall fully be responsible to the CDU and shall be available for the scheduled tasks for any time as fixed by CDU.

Article 6:

The agreement shall commence on _____ and expire on _____, and all work and services required for the Scheme shall be completed as per schedule in due time.

Article 7:

The agreement does not include any legal rights of the CW against CDU.

Article 8:

If the CW fails to serve satisfactorily and in case of non-cooperation, the services of the CW can be terminated by CDU.

Article 9:

The CDU agrees to provide an allowance of Rs. 250/per month in return for his/her services. In case of non-participation, in the training or in a scheduled programme, the allowance shall be reduced.

Article 10:

After the completion of the training, the CW is not allowed to leave the job.

*****END

* CURRICULUM DEVELOPMENT

1. THE TRAINEES

Initially, it was planned to train twelve community workers, four from Bhalukhel and four each from two other neighbourhoods in south-eastern Bhaktapur. All twelve were supposed to work for the Alternative Sanitation Scheme in the sweepers' area.

Of those twelve candidates selected for training, two dropped out and another person joined, so that eleven community workers received training, out of whom four were girls.

2. METHODOLOGY

Training packages of four days per month were prepared. After the training, the trainees would put into practice for the rest of the month what they had learned during those four days. The next training would start with an evaluation of how far the training actually had helped them to do their work.

Training classes were held in the Kumari Club, the youth club of Bhalukhel, with everyone sitting in a circle. This was found to promote better discussion and participation by the trainees. Trainers were invited from different organizations. No trainer was allowed to talk for more than fifteen minutes. Then group work or group discussions had to start.

3. OBJECTIVES OF TRAINING

After the completion of the first training package, the community workers were expected to be able:

- to explain the different components of the Alternative Sanitation Scheme;
- to understand their role and carry out the tasks assigned to them;
- to identify health hazards in the community and suggest ways for improving the situation;
- to explain different transmission routes of diseases and how environmental sanitation could prevent certain diseases;
- to explain different toilet types, conditions for their installation, advantages and disadvantages and costs of each toilet type;
- to participate in the de-worming campaign;
- to visit houses, discuss environmental sanitation with the people and organize meetings and campaigns.

TRAINING OF COMMUNITY WORKERS
HEALTH IMPROVEMENT SCHEME/CDU, BDP.
May Package -- 4 days

CURRICULUM

TOPICS	TRAINING OBJECTIVES	RESOURCE PERSONS	MATERIALS REQUIRED	SOURCE FORM
A. HEALTH IMPROVEMENT SCHEME	<ul style="list-style-type: none"> - The Objectives of HIS - Activities to be covered - Implementation Procedure - Public Involvement and Finance - The Policy - What the Project contribute for making the latrine and what people should do. - Role of CW in HIS 	<ul style="list-style-type: none"> - Mr. Kumar Lohani - Mr. Ingo Guhr - Mr. Ratna Bajracharya 	<ul style="list-style-type: none"> - HIS Documents - Plan of Action - Khokana Report - Information Leaflet 	<ul style="list-style-type: none"> CDU CDU CDU CDU
B. ROLE & RESPONSIBILITY OF CW	<ul style="list-style-type: none"> - The Role of CW - Job Responsibilities - Specific Activities to be carried out - Terms of Reference - Agreement - Programme Activities 	<ul style="list-style-type: none"> - Mr. Lalram - Mr. Kanwal 	<ul style="list-style-type: none"> - HIS DOCUMENTS - Job Responsibility - Agreement Form 	<ul style="list-style-type: none"> CDU CDU CDU
C. HEALTH HAZARDS IN THE COMMUNITY	<ul style="list-style-type: none"> - Survey of the Community - Health hazards conditions <ul style="list-style-type: none"> - Housing - Garbage Collection - Drainage - Toilet - Path & Lanes - Pig Pen - Health habits - Details of the activities to be carried out to improve the situation. 	<ul style="list-style-type: none"> - Mr. Janda Man Sthapit - Mr. Balram Khyaju - Mr. Kamal Shrestha - Mr. Ingo Guhr 	<ul style="list-style-type: none"> - Slide sets; Health for All 	<ul style="list-style-type: none"> UNICEF

TOPICS	TRAINING OBJECTIVES	RESOURCE PERSONS	MATERIALS REQUIRED	SOURCE FOR MAT.
<u>Environmental Sanitation</u> - Why Sanitation - Nature & Extend of Sanitation Problem - Ways of Keeping Sanitary Environment - Home Sanitation - Food Sanitation - Excreta Disposal - Waste Disposal	The trainee will be able to explain why Sanitation is necessary & how sanitation problem can be solved & be able to explain the ways of keeping clean environment & to forward the plan of Action to improve the environment	- Mr. Rajendra Basnet - Ms. Shanti Surav Manandhar	Film : How to have a healthy home - Gram Safai Sanitation: Why & how Sanitation Hand book Flip Chart: Marke Ra Kanchha	HES UNICEF UNICEF UNICEF
D. <u>TRANSMISSION OF DISEASE</u> - Examples of Infectious diseases - Source of Transmission - Mode of Transmission - Direct contact - Water - Food - Air - Preventive Measures	The trainee will be able to explain the causes, mode of infection of disease, and Preventive methods.	- Medical Doctor ?	Sanitation: Why & How Sanitation Hand Book Posters Film: World of Micro Life.	UNICE
E. <u>TOILET TYPES</u> - Need of Toilet - Different Toilet Types - Condition to build - Suitability - Advantages - Disadvantages - How to build - Cost - How it function - How to maintain	The trainee will be able to explain different kinds of toilets and how they work, their advantages and disadvantages, the suitable condition for specific type of toilet, and the methods of construction, use and maintenance & be able to demonstrate toilet by the process learning by doing.	Mr. P.C. Joshi (East) Mr. L.J. Shrestha	Leaflet on Toilet Poster Slab/Pan/Water Trap	ODU

TOPICS	TRAINING OBJECTIVES	RESOURCE PERSONS	MATERIALS REQUIRED	SOURCE OF MAT.
F. DEWORMING CAMPAIGN				
Relation between Worm Disease & Sanitation	The trainee will be able to explain on the topics mentioned and to plan and forward the deworming campaign & to prepare & forward the Plan of Action.	WPCOP	Booklet Bags Pamphlet Posters on Parasite Film : Jooka Microscope/Slide Medicine Stool Container	
- Types of Worm Diseases				
- Causes, development, harmful effects, Transmission, Control measures				
- Plan for Deworming Campaign				
G. HEALTH EDUCATION & COMMUNICATION				
- Effective Communication Skills	The trainee will be able to communicate with people with desired effectiveness and to use different approaches and methods of communication, and to use different audio Visual materials for communication activities.	- Mr. Chiranjibi Karnacharya - Mr. Datta Pray Roy - Mr. J. Sthapit	Examples of A.V.Aids Posters Charts Flip Charts Materials for Visual Visual Aid	
- Health Education				
- Different Methods of Communication				
- Audio Visual Materials				

* TEACHING MATERIALS

1. 'TOILET TYPES - EXCRETA DISPOSAL SYSTEMS'

The people in Bhaktapur know that household toilets connected to the BDP water-borne sewerage system are presently being built. The sweepers of Bhelukhel wanted to have the same type of sanitation as the higher castes. Since their toilets could not be connected to the main sewer, it had to be an individual system for each household. However, the Project did not want to choose the type of toilet they were to get. The people were to make their own decision after considering what would be best for themselves. Therefore, leaflets were produced on different toilet systems for the training of the community workers. The community workers then went from house-to-house and pasted mini-posters to the house walls and explained the different toilet types until people could make an informed choice.

2. 'HEALTH IMPROVEMENT SCHEME - CHECKLIST FOR DATA COLLECTION' (page 135 - 140)

At the start of the Alternative Sanitation Scheme, CDU did not have such checklists. They were developed later and are included to help other schemes.

3. FLASH CARDS ON 'SORE EYES' AND 'PREVENTION OF DIARRHOEA'

The originals were produced in India. Adaptation to the Nepal situation was done by CDU, and advice was given and printing costs taken over by UNICEF.

4. 'HOW TO BUILD A SULABH TOILET FOR 10 USERS'

People of Bhelukhel were trained to build double pit composting latrines. During the process these construction guidelines were produced, in order to promote this latrine system in other parts of the country. These cards are to be thrown on the ground. People should find the right sequence of the different steps of construction. When they think that the cards are laid out in the right order, they can turn them around and check on the back side with the numbers whether they were right.

5. 'HEALTH EDUCATION MADE EASY'

By one example during the first talk the students learn about the transmission route of a disease. Then they discover at home where and how the transmission of diseases can actually happen. Next, they themselves develop methods for decreasing the possibility of disease transmission in their own homes. This folder has been made for school children; modified, it can be used for nurses in hospitals, for women around a tube well in a village, etc.

TEACHING MATERIALS

START*****

HEALTH IMPROVEMENT SCHEME
Information: WHICH DATA ARE TO BE COLLECTED?

Community Development Unit, Bhaktapur Development Project



The attached check list of data to be collected for the selection and design of sanitation systems is part of:

A SANITATION FIELD MANUAL

BY

JOHN M. KALBERMATTEN, DEANNE S. JULIUS and CHARLES G. GUNNERSON

WORLD BANK/DECEMBER 1980

This manual can be highly recommended for anyone working in the low-cost sanitation field.

TEACHING MATERIALS

INFORMATION NEEDED FOR SELECTION AND DESIGN OF SANITATION SYSTEMS

1. CLIMATIC CONDITIONS

1.1 Temperature ranges:

1.2 Precipitation:

1.3 Drought or flood periods:

2. SITE CONDITIONS

2.1 Topography:

2.2 Geology:

2.3 Soil stability:

2.4 Hydrogeology:

2.5 Seasonal water table fluctuations:

3. POPULATION

3.1 Number present:

projected:

3.2 Density:

3.3 Growth patterns:

INFORMATION NEEDED FOR SELECTION AND DESIGN OF SANITATION SYSTEMS

3. POPULATION continued

3.4 Housing types:

3.5 Occupancy rates:

3.6 Tenure patterns:

3.7 Health status:

Under five:

Adults:

Old people:

3.8 Income levels:

3.9 Locally available skills:

3.10 Locally available materials and components:

3.11 Municipal services available:

Water:

Sanitation:

INFORMATION NEEDED FOR SELECTION AND DESIGN OF SANITATION SYSTEMS

3.11 Municipal services available continued

Transport:

Health:

Education:

Power:

4. ENVIRONMENTAL SANITATION

4.1 Existing water supply service levels:

Accessibility:

Reliability:

Costs:

4.2 Marginal costs of improvements to water supply:

4.3 Existing excreta disposal:

INFORMATION NEEDED FOR SELECTION AND DESIGN OF SANITATION SYSTEMS

4. ENVIRONMENTAL SANITATION continued

4.4 Sullage removal:

4.5 Storm drainage facilities:

4.6 Other environmental problems such as garbage or animal wastes:

SOCIO-CULTURAL FACTORS

5.1 People's perceptions of present situation and interest in or susceptibility to change:

5.2 Reasons for acceptance/rejection of any previous attempts at upgrading:

5.3 Level of hygiene education:

5.4 Religious or cultural factors affecting hygiene practices and technology choices:

INFORMATION NEEDED FOR SELECTION AND DESIGN OF SANITATION SYSTEMS

5.5 Location and use of sanitary facilities for

males:

females:

children:

old people:

6. OTHER REMARKS

*****END

* TASKS OF COMMUNITY WORKERS

START*****

Date	Programme
13th Bhadra Wednesday [August 29th]	Discussion and Programme Planning
14th Bhadra Thursday [August 30th]	Instruction to the Users' on bringing out the incomplete toilet in a probable condition to put to use
15th Bhadra Friday [August 31st]	Training for Users' on the Safe Use of Sulab Toilet and its Proper Maintenance
16th Bhadra Saturday [Sept. 1st]	Cleaning Programme [Responsible: Junior CW's]
17th Bhadra Sunday [Sept. 2nd]	Practical Training to Local Inhabitants on Personal Hygiene
18th Bhadra Monday [Sept. 3rd]	Continuation of Environmental Sanitation Instruction
19th Bhadra Tuesday [Sept. 4th]	Discussion with Junior Community Workers and Training for Children on Personal Hygiene
20th Bhadra Wednesday [Sept. 5th]	Evaluation - Examination
21st Bhadra Thursday [Sept. 6th]	Briefing and Orientation on Job Description of relating offices pertaining to the Activities of Health Improvement Scheme
22nd Bhadra Friday [Sept. 7th]	Games and Other Entertainment
23rd Bhadra Saturday [Sept. 8th]	Cleaning [Responsible: Junior CW's]
24th Bhadra Sunday [Sept. 9th]	Discussion on Problems with Organisers/ Trainers and finding out a solution
25th Bhadra Monday [Sept. 10th]	Film Show and Training for Junior Community Workers
26th Bhadra Tuesday [Sept. 11th]	Review on the Feedback and Experiences gained
27th Bhadra Wednesday [Sept. 12th]	Personal Hygiene
28th Bhadra Thursday [Sept. 13th]	Discussion with Junior Community Workers on the Need of Physical Improvement
29th Bhadra Friday [Sept. 14th]	ENVIRONMENTAL Sanitation
30th Bhadra Saturday [Sept. 15th]	Meeting on Phase II of Health Improvement



TIME SCHEDULE FOR THE EXTRA ACTIVITIES PROMOTED BY THE

LOCAL COMMUNITY

TASKS OF COMMUNITY WORKERS

Date	Time Schedule:			
	4 PM-5 PM	5 PM-6 PM	6 PM-7 PM	8 PM-9 PM
Sept. 1st Saturday			Eng. Language [Mr. H. Gobinda]	Adult Education [Mr. Charan]
Sept. 2nd Sunday		Scouting [Mr. Debendra]		Adult Education
Sept. 3rd Monday		Scouting	Eng. Language	" "
Sept. 4th Tuesday		Scouting	Knitting [Mrs. Gaby]	" "
Sept. 5th Wednesday	Knitting	Knitting	English	" "
Sept. 6th Thursday		Scouting	Knitting	" "
Sept. 7th Friday	Knitting	Knitting	English	" "
Sept. 8th Saturday		Scouting		" "
Sept. 9th Sunday			English	" "
Sept. 10th Monday	Knitting	Scouting	Discussion, Sport with Jr. CW's [Mr. Harold]	" "
Sept. 11th Tuesday	Knitting	Knitting	English	" "
Sept. 12th Wednesday	Knitting	Scouting	Sight visits	" "
Sept. 13th Thursday	Knitting	Knitting	English	" "

English Language Course

By Mr. Hari G. Kayastha &
Mr. Harold

Adult Education

By Mr. Charan.

Knitting

By Mrs. Gaby

Scouting

By Mr. Debendra Joshi &
Ms. Pushpa

*****END

(7)DE- WORMING CAMPAIGN

- * DESCRIPTION OF ACTIVITIES**
- * STOOL TEST CHARTS**

* DESCRIPTION OF ACTIVITIES

The people in Bhelukhel told us that they are very healthy. Only after having seen a film on round worms a few times, after stool tests had been done, medicine distributed and photos of their own round worms had proved that they were not that healthy, did the people start to cooperate and take action on their own. We learned that people first have to be convinced that project activities are directly related to their own life before they will do something, so the de-worming campaign was the actual start of the Alternative Sanitation Scheme.

How was it done?

On four evenings film shows were organized. The main attraction, the film on round worms, was in Nepali, but translated with a mega-phone into Newari. Entertainment films were shown before and after the round worm film. At the last film show it was announced that those who wanted to have their stools examined could bring their stool samples to the Kumari Club, where they also could have a look into the microscope themselves. 522 stool containers were distributed and 467 were returned, out of which 445 samples had from one to three different parasites. Medicine was distributed. However, we still wanted to have more publicity, more awareness among the people. So a round worm competition was organized. The person with the most worms after the medication would win the first prize. It was a seven year old girl who produced 64 round worms in three sittings after taking the medication.

The community workers then walked from house to house and informed each family that they would fall sick again within a few weeks if they did not take action. They could start cleaning activities in their neighbourhood. They could forbid their children to defecate wherever it pleased them, and they could build latrines. However, all this was their own problem. The community workers would then withdraw from the community. However, in case the people needed any assistance from CDU, they could come to the office to discuss their plans with CDU.

* STOOL TEST CHARTS

- the first chart (page 145) shows the details of age and sex distribution, number of containers distributed and returned, parasites found and medicine distributed;
- the second one (page 146) shows the results of the test.

Stool Examination Report

Deworming Campaign

Oct 4, 1983

S.No.	Household No.	Name of the household	Num bet of family	Age & Sex Distribution												Total		No. of Contd. Inert. Ingestive	Para-site positive in	Para-site not seen in	No. of Stool contain or not collect- ed.	Types of Parasites found	Medicine Distribu- tion - No. of Tab.
				<1		1-4		5-8		9-12		13 ab-ove		Total	Male								
				M	F	M	F	M	F	M	F	M	F			Fe- male							
1.	1A'	Maiba Dyola	2	-	-	-	-	-	-	-	-	-	-	-	2	2	-	2	Round, Hook & Whip	6 Tab.			
2.	2A'	Kali Bdr. Dyola	9	-	1	-	1	-	2	1	2	1	2	3	9	9	1	8	" , Whip & Strongyloids	17.5 "			
3.	3A'	Chandra Lal	6	1	-	-	1	-	1	2	1	3	3	6	6	6	6	2	" , " , & Hook	12 "			
4.	4 "	Tulsi Shakti	2	-	-	-	-	-	-	-	-	-	-	1	2	2	2	4	"	6 "			
5.	5 "	Mohan Maya	5	-	1	-	-	-	-	-	-	-	-	3	4	5	5	6	" , Hook & Whip	12 "			
6.	6A'	Kanchha	9	-	2	-	-	-	-	-	-	-	-	4	9	4	4	8	" , & Whip	16 "			
7.	7 "	Bulel	4	-	1	-	-	-	-	-	-	-	-	2	4	4	4	8	" , " "	10 "			
8.	8 "	Jegat Lal	8	-	-	-	-	-	-	-	-	-	-	3	8	8	8	8	" , " "	14 "			
9.	9 "	Suku Man	10	-	-	-	-	-	-	-	-	-	-	6	10	9	9	1	"	18.5 "			
10.	10 "	Moti Man	12	1	-	-	-	-	-	-	-	-	-	4	12	9	9	3	" , Whip & Hook	22 "			
11.	11 "	Purna Singh	8	-	1	-	-	-	-	-	-	-	-	3	8	6	4	2	"	8 "			
12.	12 "	Mangal Das	8	-	-	-	-	-	-	-	-	-	-	4	8	8	8	3	" " Strongyloids	20 "			
13.	13 "	Dil Bahadur	3	-	-	-	-	-	-	-	-	-	-	2	3	3	3	5	" & Hook	6 "			
14.	14 "	JyapuCha	5	-	-	-	-	-	-	-	-	-	-	2	5	5	5	5	" , Whip & Hook	5 "			
15.	15 "	Mataya	6	-	-	-	-	-	-	-	-	-	-	2	6	6	6	6	" , Whip & Hook & Stro.	14.5 "			
16.	16 "	LimbuCha	9	-	-	-	-	-	-	-	-	-	-	4	9	9	9	9	" " & H.nang	21.5 "			
17.	17 "	Bis Lal	8	-	-	-	-	-	-	-	-	-	-	3	8	5	4	2	"	9.5 "			
18.	18 "	Muti Maya	6	1	-	-	-	-	-	-	-	-	-	2	6	4	4	4	" & Whip	21 "			
19.	19 "	Ganesh Bdr	9	-	-	-	-	-	-	-	-	-	-	4	9	9	9	9	" , Whip & Hook	24 "			
20.	20 "	Narayan	2	-	-	-	-	-	-	-	-	-	-	1	2	2	2	2	" & Giardia	6 "			
21.	21 "	Sayatha	7	-	-	-	-	-	-	-	-	-	-	3	7	6	6	5	"	6 "			
22.	22 "	Mahanta	6	-	-	-	-	-	-	-	-	-	-	3	6	6	6	5	" , Whip & Giardia	11 "			
23.	23 "	Bal Bahadur	14	-	-	-	-	-	-	-	-	-	-	8	14	8	8	8	" " & Stro.	18 "			
24.	24 "	Gopal	6	-	-	-	-	-	-	-	-	-	-	4	6	6	6	6	"	14 "			
25.	25 "	Bhaicha	8	-	-	-	-	-	-	-	-	-	-	3	8	8	8	8	" & Stro.	16.5 "			
26.	26 "	Krishna Maya	3	-	-	-	-	-	-	-	-	-	-	2	3	3	3	1	-	-			
27.	27 "	Simbeli	5	-	-	-	-	-	-	-	-	-	-	2	5	4	4	4	Round	12 tab.			
28.	28 "	Jit Bahadur	6	-	-	-	-	-	-	-	-	-	-	2	6	6	6	6	" , Whip & Hook	18 "			
29.	29 "	Buddhi Man	10	-	-	-	-	-	-	-	-	-	-	4	10	10	10	6	"	18 "			
			195	3	4	8	11	13	11	8	11	6	9	5	100	195	170	157	13	25			

Report Deworming Campaign

Oct 4. 1983

S.No.	Group Division of Community Workers	No. of House visits Sept. 29 - Oct 3.	No. of Containers issued	No. of Container collected & tested	Parasites positive in	Types of parasites found	Parasites not seen in	Container not returned						
								No.	Reasons	Action taken				
1.	Group 'A': - Mr. Jaya P. Lakhe - Ms. Shanti Shrestha - Mr. Laxmi Prasad Dyola	26	174	150	141	i. Round Worm ii. Hook Worm iii. Whip Worm iv. Strongyloides Stromalis v. Hymenolipes nang	9	24	i. Forgot ii. Not defecated in the morning iii. Left the home early in the morning iv. felt ashamed (Ladies) v. Difficult to collect from Children vi. Out of City	- re-visited house to motivate				
2.	Group 'B': - Mr. Charan P. Dyola - Ms. Raj Devi Dyola - Mr. Ram Bhakta Kaju	27	165	155	147		8	10						
3.	Group 'C': - Mr. Nhuchhe B. Sainju - Mr. Maiya Mehatar - Mr. Sundar Bohaju	39	183	162	157		5	21						
4.	Assisting Group - Mr. Sunil Metangi - Ms. Indra Kumari													
Grand Total							92	522	467	445	22	55	(4.7%)	(10.5%)
							(100%)	(100%)	(89.5%)	(95.3%)				

⑧ CLEANING CAMPAIGN

* COMPONENTS

* COMPONENTS

After the de-worming campaign, the community workers told the people of Bhelukhel that any further action would have to come from the residents themselves. Four days later a delegation came to the CDU Office requesting assistance in the following areas:

1. DEMONSTRATION LATRINES

The residents wanted to build demonstration latrines for the leaders of the community. For a sulabh latrine, they had selected the president of the youth club, the secretary of the users' committee and two more users' committee members who at the same time were community workers. For the ventilated improved pit latrine, they had selected the leader of one of the two guthis who also was member of the users' committee. The Project agreed to provide the materials on the condition that two different latrine types would be built and the materials for the latrine house would come from the people.

By 11.00 a.m on the following day, the latrine sites had been selected, the materials collected, the pits dug, and the construction of the latrines started.

2. CLEANING THE NEIGHBOURHOOD

The people wanted to remove all health hazards from their neighbourhood. They requested bricks from the Project to line the open ditches which carried the over-flow from the public latrine and were usually full of garbage and mud. The Project did not provide bricks for the lining of ditches since it was planned to pave the streets and to improve the surface water drainage later.

Following an announcement during a film show on 7th October, an impressive cleaning campaign was launched. On 8th October, having divided the area into three parts the community workers went from house to house in groups of three. One did the talking, one did the nail clipping and one took notes. They asked the people what they thought about the de-worming campaign, about their reaction to the medicine, whether they had seen their own worms or those of any of the others, whether they had understood the cause of worms and other diseases, discussed the importance of sanitation and finally invited each family to take an active part in the cleaning campaign by making suggestions and by doing something. On the third and fourth days the whole neighbourhood was cleaned. Lime was spread, and ditches were emptied and lined temporarily with old and broken bricks.

On the fifth day a cleaning competition among the residents of Bhelukhel was started.

The motivation talks for the cleaning campaign marked the beginning of regular health education on topics such as sanitation, personal hygiene, food hygiene, water storage, etc.

3. CLEANING COMPETITION

All families participated. It was supposed to go on for four weeks; however, it was continued for six weeks. Each family was checked daily and points were given on a record card. The maximum number of points one could get was 10 points each for personal hygiene, cleaning the house, cleaning the immediate surroundings of the house, food hygiene, toilet habits; 15 points could be reached for proper disposal of waste; and 20 points for active participation in the 'health improvement scheme'. For the people, it was a 'health improvement scheme'; for the Project, an 'alternative sanitation scheme'. At the end of the cleaning competition, a prize giving ceremony with special guests was organized. The three cleanest families and the two most active volunteers received prizes. After the ceremony, application forms for household latrines were distributed.

4. REHABILITATION OF A PUBLIC LATRINE INTO A CLEANING CENTRE

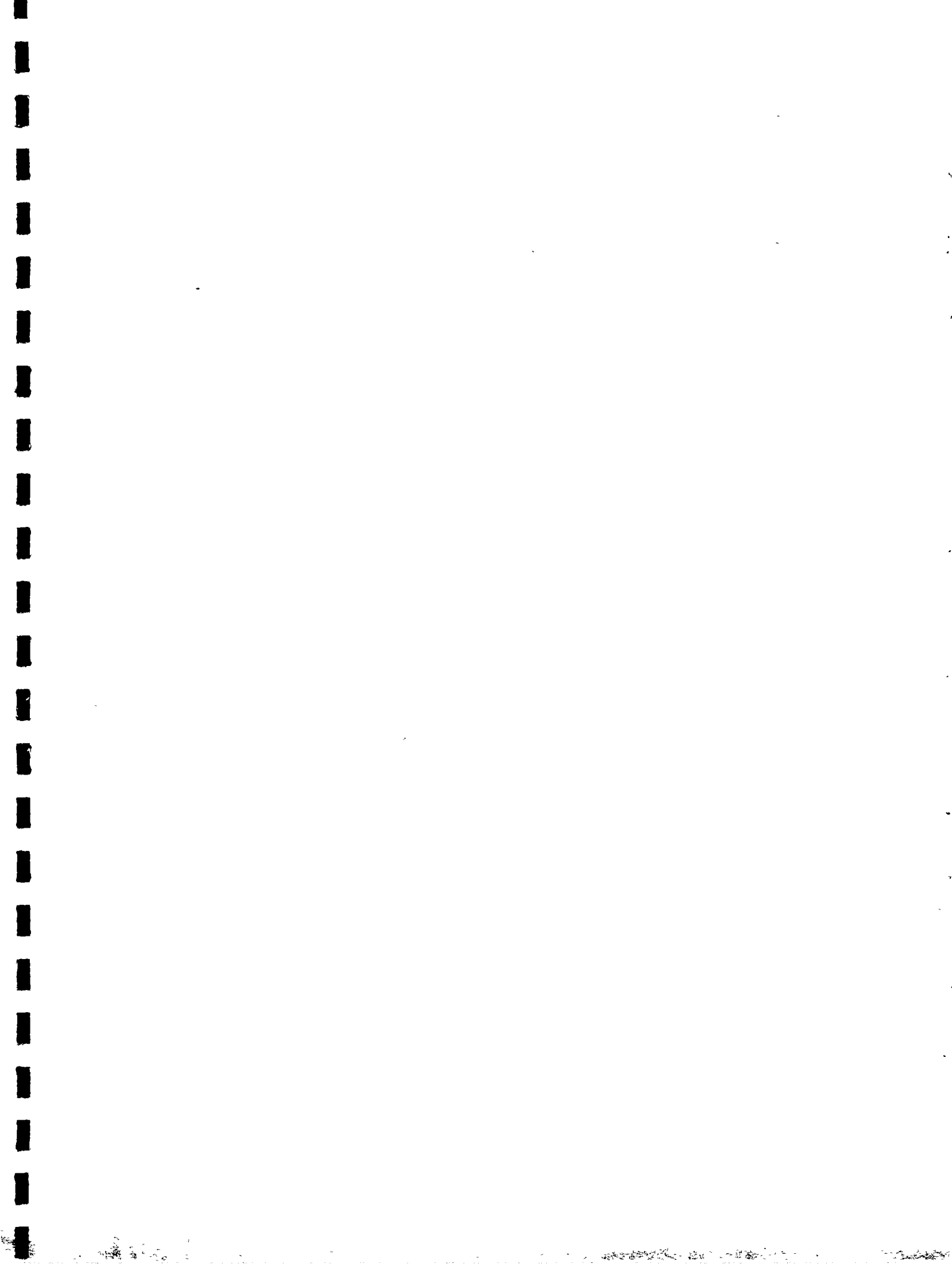
One of the two public latrines was closed. The other was heavily used and women were also doing their laundry there because of the water tap at that place. However, it was in appalling condition. It had not been repaired for a long time, the septic tank overflowed from time to time, and excreta were floating in the open ditch, through the neighbourhood, and down to the river. In the course of removing all health hazards from the neighbourhood during the cleaning campaign, it was decided to deal with this problem. On 10th December, the users' committee decided to repair the septic tank and the toilet, to install two showers, one each in the male and female sections in front of the toilet cubicles, and to build a platform for washing clothes.

The Project was to provide building materials and skilled labour. The people of Bhelukhel were to clean the surroundings of waste and weeds, empty the septic tank and soak pit, remove all waste, do all the digging work, transport materials within the area, provide two unskilled workers for the entire construction period and organize and supervise the construction works. For making the construction drawings and cost estimates, they secured the help of the Nagar Panchayat mason.

Normally, whenever the Project provides funds or materials, cost estimates and work orders have to be prepared by the Project. In this case, in order to start the work immediately as a trust building measure, the Project approved the cost estimates made by the NP mason, provided funds, and then, when the work had already started, made the proper estimates following HMG regulations.

How were the people participating in the latrine repairs?

The excitement of the cleaning campaign was over, and people had done a lot. At this time, in addition to the cleaning campaign and the ongoing cleaning competition, regular work was requested from them for the rehabilitation of the public latrine. Each family was to provide one person for helping at the latrine. This proved not to work as well as the contributions to the two-day cleaning campaign. Mostly, old people and children turned up and the work could not be done as quickly as planned. This had to be accepted as normal for the community. Finally, construction works were completed and the people could start using their new cleaning centre. Whenever there is water, the centre is full of life, with women chatting and washing their clothes or cleaning their children. (See photos No. 40, 96, and 97.)



Head of the
Community Development Unit
shaktapur Development Project
Shaktapur

Sub.:- Assistance for Toilet Construction

From:- Users' Committee, Bhelukhel Health Improvement Scheme.

Sir,

In context to the private toilet construction campaign being launched by the User's Committee of Bhelukhel carried out under the CUU/WDP, I hereby have filled up this form as application for constructing a private toilet in my house.

house No.:- Name of the main house owner:- Address :-

Family Number:- Ladies:- Gents:- IN TOTAL:-

Type of Toilet selected for construction :-

- 1) Improved pit latrine
- 2) Sulav Waterseal latrine
- 3) Pit latrine
- 4) Modern water seal latrine

Reasons for selecting the aforementioned toilet type :-

Site location for construction of the above toilet :-

- 1) Ground floor of the house
- 2) Room - - - - -
- 3) Inner courtyard - - - - -
- 4) Courtyard - - - - -
- 5) Garden area - - - - -
- 6) In front of the house - - -

In addition to abiding to the rules and to the set tasks, following the decisions made by the users' committee I agree to the following:

- 1) I will do all unskilled work required by myself or pay someone else in my absence.
- 2) I will take over the entire organization of work for the construction of my toilet and supervise the construction works.

The site of construction is my family property which I have been using for my private purposes. Any penaltics imposed for wrong information given above shall be met.

Signature :

Full Name, Caste :

Applicant

Age :

Date :

(9)HOUSEHOLD LATRINE CONSTRUCTION

- * SOIL TESTS**
- * BDP'S SUBSIDY SCHEME**
- * WORK ORGANIZATION**
- * VIP LATRINE**
- * LOW-COST VERSION OF
DOUBLE PIT COMPOSTING LATRINE**

By the time the application forms for household latrines were distributed, information talks on different types of toilets had already been given by the community workers. They had gone in groups of two or three to each of the three areas, into which they had divided the neighbourhood, stopped wherever people were working or sitting outside, pasted a mini-poster with a picture of the first toilet type on the housewall, and explained its functions, advantages, disadvantages and costs to the people. When all questions were answered, they pasted the next mini-poster to the housewall and continued until all the different toilet types were explained, so that the people were in a position to make an informed choice when applying for a household latrine. At that time, soil tests were made, and the subsidy system for household latrines was discussed with the users' committee.

* SOIL TESTS

A member of a Canadian project assisted in defining what type of tests were to be done. The following terms of reference were then given to the local firm doing the tests:

START*****

Ref.: Permeability test of soil in Bhelukhel, Bhaktapur.

Background:

Under the Alternative Sanitation Scheme in Bhelukhel, 80 - 100 private toilets are to be built. The systems used will be pour-flush latrines with double composting pits, ventilated improved pit latrines, or pit latrines. Septic tanks may also be built, provided the people take over the additional high costs.

Tasks:

1. To make one day of soil tests (test drills) to get an understanding of the soil formation, like disturbed or undisturbed ground, thick layers of broken bricks from former houses, etc.
2. After determining the soil formation, to select three locations representative of the area for doing soil permeability tests.
3. To delineate the areas where the above toilet types cannot be built because of poor drainage conditions and high ground water table during monsoon.

*****END

Source 10

START*****

2. METHODOLOGY:

Three in-situ permeability tests were conducted at pre-determined locations in Bhelukhel, Bhaktapur as per BS:5930 -1981. Auger boreholes were made to a depth of 1.5 m and the casing was then inserted until the bottom of the casing was approximately 25 cm above the bottom of the borehole. The test borehole was made perfectly clean before clean water was poured into it. The water was filled up to the top of the casing and allowed to flow into the soil surrounding the uncased portion of the hole. Once the flow became steady, the casing was again filled with clean water. The distance of the falling water level from the top level of the casing was recorded with elapsed time. A large number of observations were recorded, but only the last four observations were used to evaluate the permeability characteristics of the soil.

4. CONCLUSIONS:

From the in-situ permeability tests the conclusion was drawn that the drainage characteristics of soils in Bhelukhel vary from good to poor (Casagrande & Fadum, 1940). Borehole No.1 and No.3 showed good drainage conditions, whereas No.2 showed poor results.

Sulabh latrines/pit latrines will be successful in the areas close to No.1 and No.3. In the area close to No.2, it is suggested to fill approximately 15 cm of sand around the pit walls and into the bottom of the pits to improve the drainage performance.

*****END

* BDP's SUBSIDY SCHEME

Subsidies in community participation projects are a very sensitive issue. If subsidies are excessive, people consider the project outputs as gifts which they do not need to maintain. The gifts come from the project, so the project can also maintain them. In such cases it is very difficult to elicit community participation. Also, if subsidies are excessive, people might accept those components of development projects which they otherwise would not accept if much of their own efforts and funds were involved. Here again, future maintenance is at risk.

CDU did not want to provide high subsidies for latrine construction in Bhelukhel. Long negotiations were necessary before a

final settlement could be reached. Since the final agreement with the sweepers was not what CDU had intended to provide earlier, the influencing factors, together with BDP's history of latrine subsidies, are given below:

1. BDP's ORIGINAL SUBSIDY SCHEME (Source 11)

BDP constructed approximately 1,100 private toilets from 1975 to 1979, and approximately 200 additional ones up to January, 1984. An applicant had to deposit Rs. 200 for a household toilet and water connection. The costs for the toilet were Rs. 1,182 and Rs. 960 for the tap. Moreover, out of the Rs. 200 deposit, Rs. 113 were to be paid to WSSB as water connection charge. This implies that the BDP subsidy level had reached 96%. This is a high percentage, but is understandable within the context of BDP's plans for a large sewerage system which would become uneconomic if not serving a large number of households. Also, at that time the majority of Bhaktapur's population was considered by the Project to be not wealthy enough to afford a higher deposit.

2. BDP's PROPOSAL FOR CHANGING THE SUBSIDY SYSTEM (Source 12)

The programme for 1984 - 1986 called for the construction of 3,200 toilets. The deposit of Rs. 200 was not to be changed. However, BDP's assistance was to be given for the toilet only and not for the private tap. BDP would offer two types of toilets:

(a) The Pour Flush Toilet connected to the sewer system, in cases where a private water connection has been installed and where there is no demand for fertilizer.

(b) The Sulabh Latrine, connected to double pits for composting, in cases where there is no private water connection and the owner wants to use the night soil as fertilizer.

The costs in both cases are approximately Rs. 1,200. The applicant must provide unskilled labour for digging, refilling and material transport.

In order to realize as much participation as possible, each ward should receive a quota for toilets to be constructed and the ward committee should handle the programme.

3. BDP's PRESENT SUBSIDY SCHEME (Source 13)

Subsidies are only provided for toilets. The applicant has to complete an application form and dig the pit. On that basis he receives Rs. 450. On the completion of the toilet, another Rs. 450 are paid. Construction supervision is done by WSSB. By April, 1985, 416 applications had been received by WSSB.

The purpose of the Alternative Sanitation Scheme was to motivate the target group to create a sanitary environment and build toilets for themselves. CDU's proposal was to provide 50 % in subsidies as in other sanitation projects presently being carried out in the Valley. Each toilet should have a superstructure. Experience in India has shown that toilets without toilet house are either not used or used only as long as the temporary superstructure made out of reeds or gunny bags lasts. The superstructure should also have a tiled roof in order to preserve the cultural heritage of the townscape.

Different views were expressed during the discussions with the users' committee, such as agreeing to pay 50 % of the cost of the latrine, determining contributions according to income, or paying the same amount as the other Bhaktapur residents. The final agreement was the following:

- all building materials, construction supervision and training are to be provided by the Project
- the applicant will provide the unskilled labour and coordinate all works related to his toilet; in case he cannot do this, he is to pay someone as his replacement.

The contribution by the people was much less than CDU expected. The sweepers felt that since they belonged to the socially and economically lowest section of the population, they should not have to pay more for their latrines than other people in Bhaktapur. Furthermore, their latrines could not even be connected to the sewerage system.

* WORK ORGANIZATION

By January 3, 1984, 68 families had applied for sulabh latrines, three had applied for the BDP toilet (which could not be built since there was no sewerage line), three families did not have sufficient space for a latrine, five families already had demonstration latrines, and twelve of the 92 families did not respond.

Site selection for the latrines was done by each individual house owner. Some latrines were built inside the pig pen in front of the house, others inside the house itself. Approval for the site had to be given by the sanitation consultant.

Originally, the users' committee wanted to take over all latrine construction works as contractor for the Project. They wanted to purchase all materials, hire trained masons and do everything by themselves. This was not possible due to HMG regulations. The Project had to purchase materials through the store and send them to Bhelukhel whenever materials were available. This caused much disappointment, especially when delays in the delivery of materials occurred. On the basis of a work order, materials were supplied to Bhelukhel and stored in the Kumari Youth Club compound. Two community workers volunteered to sleep there to guard the materials. From there, materials were supplied to the individuals who then were responsible for the progress of their own latrines. To avoid loss, only 25 bags of cement were provided at a time. Tiles for the roofs of the latrines and timber were stored in different private houses. Special water seals with a low water volume and properly sloping toilet pans were produced by the sanitation consultant. Tarpaulins were borrowed so that latrine construction could continue during the rains.

The sanitation consultant also sent his own mason to train four people in the construction of the first twenty latrines. The rest were then built by the people themselves. However, construction supervision was provided throughout.

When it became apparent that the entire work could not be given to the sweepers, a proposal was made to let them take over the production of the cover slabs for the pits (four slabs per latrine). This again had to follow established regulations and they had to submit three different quotations to get the contract. Originally, it was planned to have the slabs made at the latrine sites. This was given up since most people did not have enough space for the curing of slabs. It then proved to be more practical to produce all slabs at one site.

शुलभ शौचालय



'SULABH' TOILET



ईस्ट शुलभ शौचालय सकृय कार्यक्रम

पोस्ट बक्स नं. ११६३, फोन ४०३२५

EAST SULABH TOILET ACTION PROGRAM

P. O. B. J. X. No. 1192, PHONE No. 416225

KATHMANDU

वर्ष २०४३

माहिना चैत्र

YEAR Feb. 1985

MONTH Feb.

मोटामोटी खर्चका बितरण		TENTATIVE COST ESTIMATE					
सागान	परिमाण	दर भाउ	जम्मा रु	Materials	Qty	Rate	Total Amt
ईटा	१००० वटा	४५०.००	४५०.००	Bricks	1000 Nos	450.00	450.00
सिमेन्ट	२ बोरा	१४०.००	२८०.००	Cement	2 Bags	140.00	280.00
बालुवा	३० क्यू.फि.	२.००	६०.००	Sand	30 cft	2.00	60.00
सिपाबुडकर्मी	४ जवान	४५.००	१८०.००	Skilled Mason	4 Nos	45.00	180.00
ज्यामी	६ जवान	२५.००	१५०.००	Labour	6 Nos	25.00	150.00
सुपरभाइजर	१ जवान	५५.००	५५.००	Super. per	1 No	55.00	55.00
जम्मा			११०५.००	S total			1175.00
तयारी स्ल्याब	१ सेट	३००.००	३००.००	Precast Slab	1 Set	300.00	300.00
तयारी प्यान	१ मोटा	५४.००	५४.००	Precast Pan	1 No	54.00	54.00
तयारी साइफन	१ मोटा	३२.००	३२.००	Precast Syphon	1 No	32.00	32.00
तयारी पाइपान	१ जोर	१२.००	१२.००	Precast Footrest	1 Set	12.00	12.00
हुवानी खर्च	%	मोटामोटी	२००.००	Transport Cost	%	L.S	27.00
इष्ट्यापकी- सुपरभिजन सर्वि.	-	-	-	Estap Supervision Cost	-	-	-
जम्मा :-			१६००.००	TOTAL			1600.00

* VIP LATRINE

Noone had applied for the VIP latrine since this type had already caused some problems when built as one of the demonstration latrines. One community worker had volunteered to have a VIP latrine in her house. When the sanitation consultant inspected the site, it was too close to the house and did not have sufficient sunlight. So the latrine was not built there. The VIP latrine should be built:

- away from the house
- where there is enough sunlight so that the pipe can be heated to create a hot air current for driving out flies and bad smells
- away from drains so that it does not get flooded.

Another site was selected where while digging the ground water had come up. The final site, then, was the house of the guthi elder. The basic problem with promoting this type of latrine in Bhelukhel under the agreed subsidy system was that the people could get a better type, the double pit composting latrine, for the same money. Even the improved VIP latrine with a toilet pan and an opening for emptying (See photo No. 83.) that was suggested by the sanitation consultant could not compete with the sulabh latrine.

* LOW-COST VERSION OF DOUBLE PIT COMPOSTING LATRINES

The double pit composting latrine, also called PFDVC (Pour Flush Double Vault Composting Latrine) and popularly known as the 'SULABH' (affordable) LATRINE, has been promoted in more than ninety countries by WHO and more than 200,000 have been built in India. In Nepal, the major promoter of sulabh latrines is EASTAP (EAST Sulabh Toilet Action Programme), a non-profit making branch of EAST Consult (P) Ltd. EASTAP ascertained that this design was promising to promote in Nepal because:

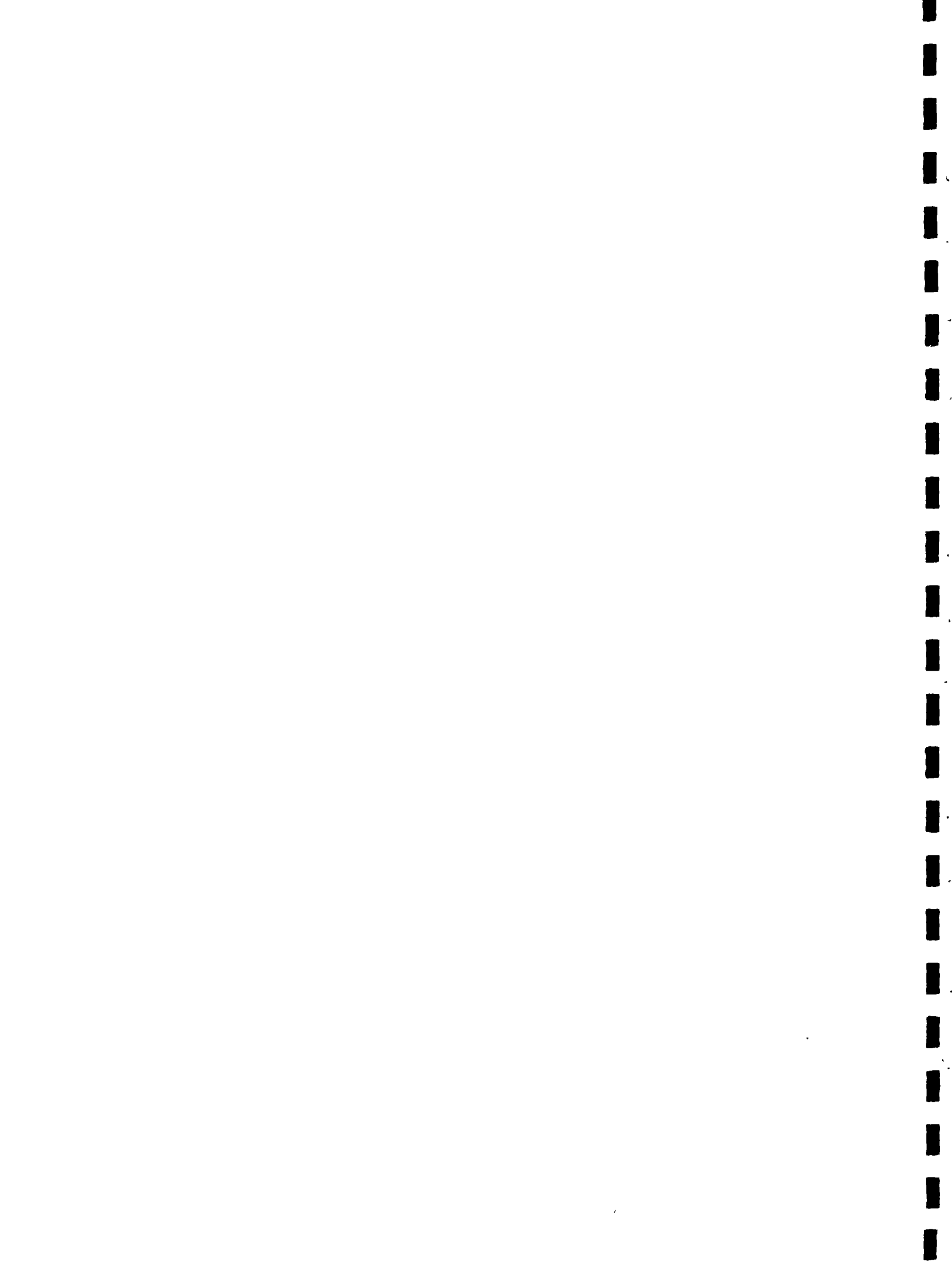
- all components can be locally produced;
- the design allows permanent installation with minimal need for maintenance;
- the unit cost is comparatively low;
- the design allows simple replication through prefabricated components;
- it can be installed in a small space inside an existing dwelling in rural as well as in urban areas.

So far, EASTAP has been involved in sulabh latrine construction programmes in Kirtipur (supported by the German Embassy), in Dhadikot, Lhubu, Kathmandu, Thimi, Bode and Darmasthali (all supported by UNICEF), and has provided 500 pans and seals to the Khokana Semi-Urban Sanitation Project of MPLD and UNICEF. EASTAP guarantees a one-year free repair and maintenance service of those latrines constructed by them.

In order to bring costs down in rural areas, a low-cost version of the 'sulabh latrine' was built on EASTAP's premises under the supervision of Mr. R.L. Das, the Vice Chairman of Sulabh International from Patna. This type can be built (January, 1984) for Rs. 250, not including the two pits.

Sources:

10. Permeability Test Report by Soil Test & Civil Designs (P) Ltd. October, 1983
11. Thoughts on the Implementation of the Private Toilet Subsidy Programme as approved by BDB on January 27, 1984, H. Matthaeus
12. Proposals for the change of the subsidy system (presented and discussed during the Short Term Planning Workshop on 16-17th November, 1983)
13. WSSB





122. A mould made of timber or concrete is used to press the shape of the water seal into the ground.



123. The first coating of the water seal is done with clay plaster.



124. After the water seal is completed, the y-shaped drain is formed by hand and plastered.



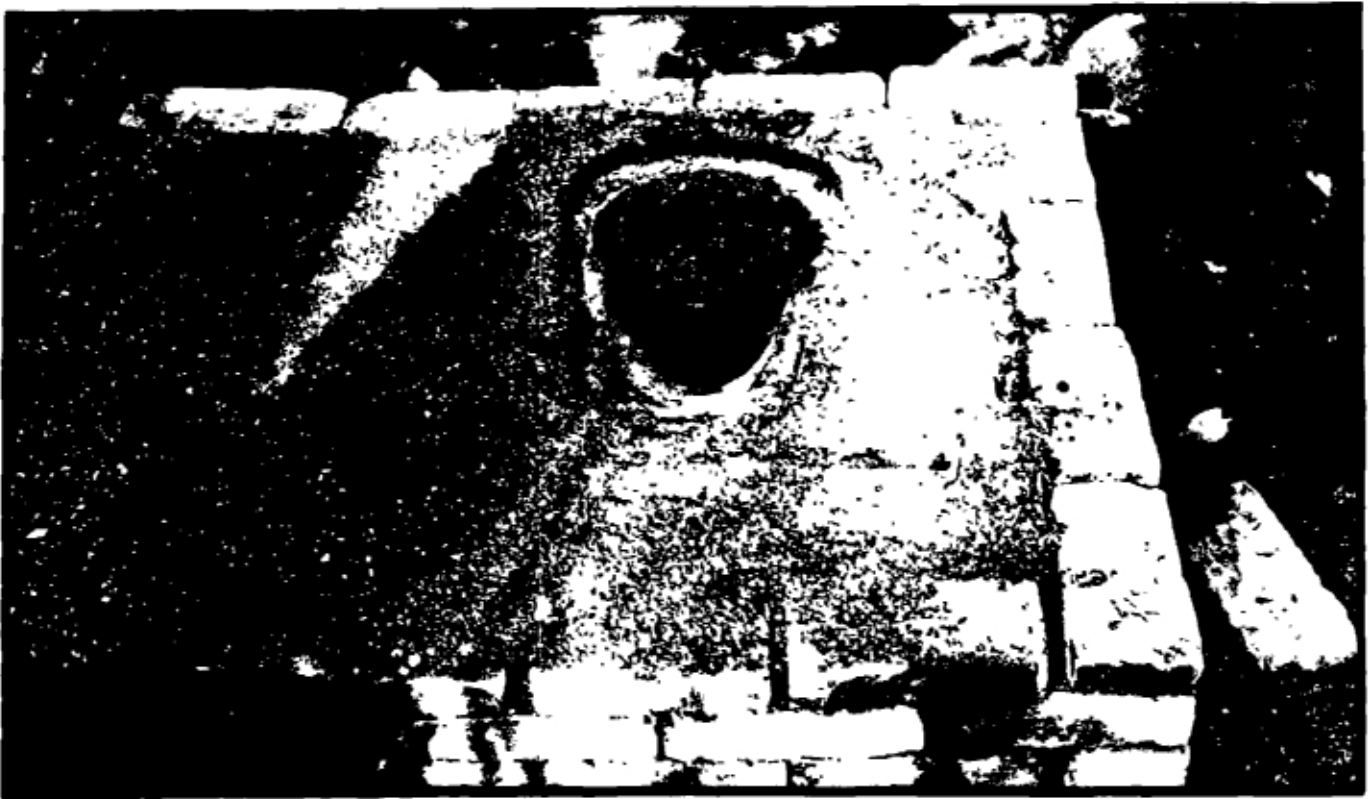
125.
A brick is used as
the middle part of
the water seal.



126. Rich sand/cement mortar (1 : 1) is used to give a 3/4" thick second lining to the water seal and drains. Then a wooden or concrete mould is placed over the water seal.



127. Dry bricks are used to build the soil platform around the pan.



128. After compacting the soil around the mould, it is carefully removed and the shape of the mould remains.



129. Lastly, the pan is also made by one coat of clay plaster and a second 1" thick coat of sand/cement plaster (1 : 1). Then bricks are placed on the platform as foot rests.



130. Such a low-cost 'sulabh latrine' has been used by Mr. Das in his home for more than ten years.



131. Also the pits can be made with local materials at low cost as shown here.

DO NOT REPEAT OUR MISTAKES

**ALLOW LIGHT AND AIR INTO YOUR
LATRINES!**

**IF NO LIGHT GETS IN, CHILDREN
MIGHT BE AFRAID AND PREFER
OPEN SPACES TO THE DARK LA-
TRINE.**

**IF NO LIGHT GETS IN, THE LA-
TRINE WILL BE DIRTY AND YOU
MAY STEP INTO THE FAECES OF
OTHERS.**

**IF NO AIR GETS IN, THE LATRINE
WILL NOT DRY AFTER IT HAS BEEN
CLEANED WITH WATER.**

THE EASY SOLUTION IS:

- (1) TO LEAVE THE UPPER PART
OF THE WALLS OPEN;**
 - (2) TO SHORTEN THE DOOR ON
TOP BY ONE FOOT;**
 - (3) TO HAVE AS MANY HONEY
COMB OPENINGS IN THE
WALLS AS POSSIBLE.**
-

(10)SAFE COMPOSTING CAMPAIGN

- * ACTIVITIES PLANNED**
- * SURVEY ON COMPOSTING PRACTICES**

* ACTIVITIES PLANNED

Heap composting is done between the river and the first houses of Bhelukhel, and where space allows it on private premises.

Wet composting is the process of composting liquid wastes from sewage and sludge. In Bhelukhel it is done at the river banks. (See photo No. 95.) Usually fresh sewage is used, into which straw and other grain stalks are immersed. Night soil and sludge are filtered out by this process and decomposition then takes place. Separate basins are built along the river banks, of which the contents are taken out after a period of between four days and four months to be used as fertilizer. The work in fresh sewage is done barefooted and with bare hands. (See photo No. 94.) Due to the high infestation rate of parasites of the Bhaktapur population, the chances of disease transfer through direct contact with fresh sewage are great. Since composting is one of the traditional occupations of the sweepers, it was assumed that they were doing wet composting and a 'safer composting campaign' was recommended for Bhelukhel by the German evaluation team. (Source 2)

Campaign Objectives:

- To improve composting skills in order to increase incomes
- To create awareness on health hazards in composting.

Schedule:

1st day:

Community workers made house-to-house visits and invited the residents to take part in the campaign.

2nd day:

Materials and sites for demonstrations were prepared.

3rd day:

Demonstrations in pit and heap composting were given.

4th day:

Community workers made house-to-house visits and assisted in improving household composting.

The campaign was held in March, 1984, and 54 families participated.

* SURVEY ON COMPOSTING PRACTICES

Objectives:

- To identify different composting methods used;
- To identify health hazards during composting;
- To identify areas for economic improvement.

Methodology:

One member of each of the 92 families was interviewed on the basis of a pre-structured questionnaire (February-March, 1984).

Findings:

54 households still do composting, of which 20 do it on their own premises.

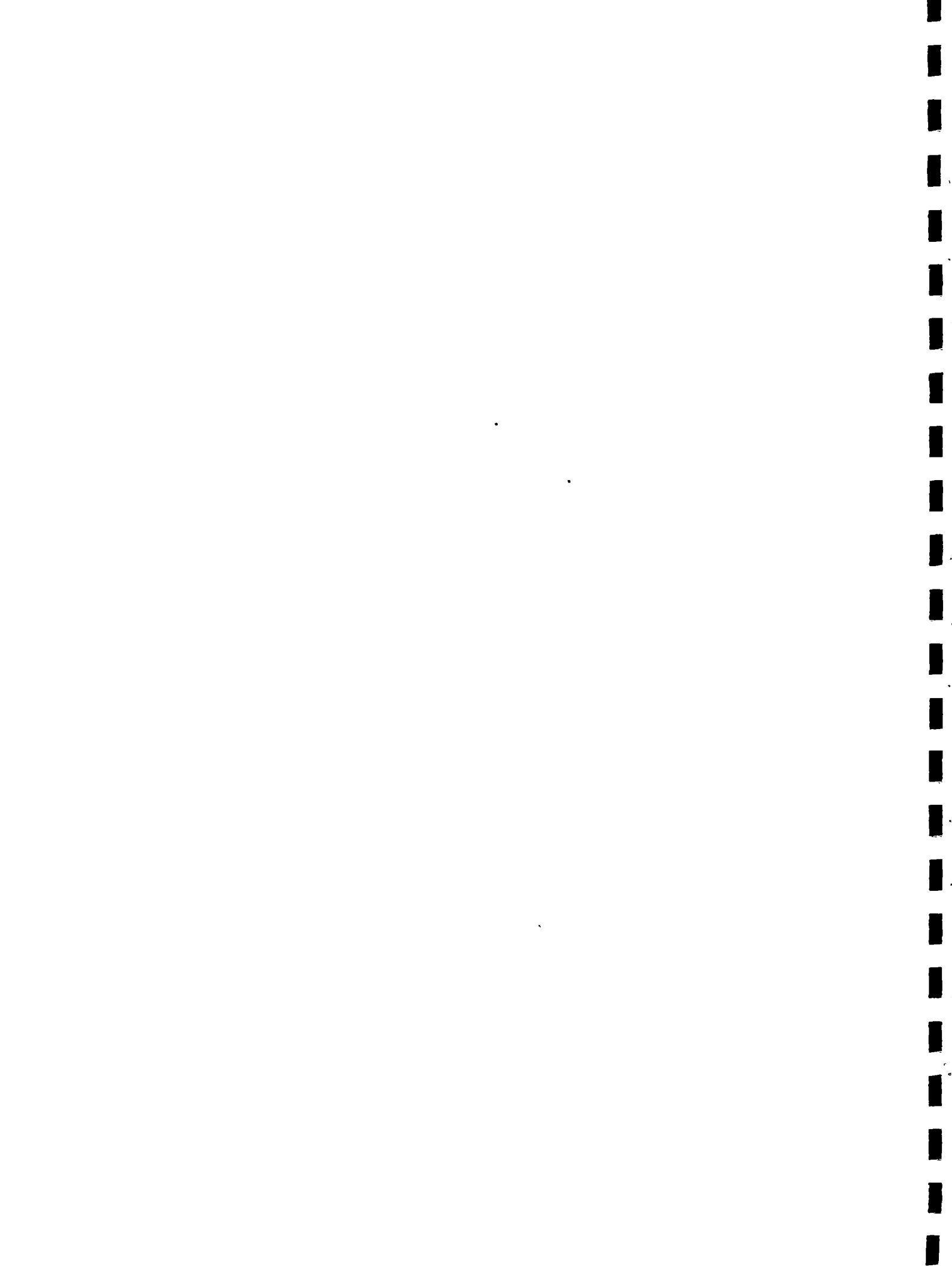
40 families regularly use night soil mixed with other raw materials for composting; 41 families use pig dung .

Most of the households were not aware of health risks in composting.

They all prefer heap composting to pit composting because it is easier, there is a lack of understanding of the decomposition process and 'compost worms' cannot be taken out of a pit.

They produce compost to sell to, or barter with the farmers, and for producing 'compost worms' (maggots) which are fed to their ducks.

None of the sweepers was doing the dangerous wet-composting on the banks of the river. It was found that wet composting is mainly done by farmers from Chasukhel Tole of Ward No.8. They prefer to do this by themselves, since they do not need additional raw materials, they are independent from the sweepers and it does not cost anything. It was suggested that a 'safer composting campaign' be done to make these people aware of the dangers of wet composting whenever the 'Alternative Sanitation Scheme' is implemented in other areas of Bhaktapur.



(11) PUBLIC LATRINES

- * BDP'S PUBLIC LATRINES**
- * LATRINE FOR WOMEN IN JENLA**
- * TRENCH LATRINES**

During the discussions on how the funds of Rs. 500, 000 were to be spent, the suggestion was made to build another public latrine in Bhelukhel instead of household latrines and use the money saved for other improvements. To decide on this proposal, the experience with BDP's public latrines had to be looked at.

* BDP'S PUBLIC LATRINES

(See photos 11, 12.)

More than 25 public latrines had been built by the Project. The surroundings of those latrines were often covered with faeces and necessary repairs were not made. The Project then followed the slogan: "New public latrines should only be built provided the users want them and maintenance and cleaning services are secured". However, this did not solve the problem of the already existing public latrines. Observations of defecating habits of latrine users then revealed the following:

- The existing latrines could not cope with the large number of people who defecate at the same time in the early morning; and when too many people are queued up, defecation around the latrine starts;
- The public latrines were regularly cleaned by the Nagar Panchayat sweepers. Only when a sweeper was sick or had to do some other work were the latrine and its surroundings dirty.
- Most public latrines were too small.

A survey report on most of Bhaktapur's public latrines (Source No.14) made the following recommendations:

- To form a users' committee for each public latrine needing repair;
- To provide materials for repair only if the users' committee makes the repairs;
- Proposals for repair work should be made jointly by the users' committee, the sweeper responsible and a sanitary technician;
- To provide health education after the formation of a users' committee;
- For places where the people requested a new public latrine, the trench latrine design is to be used.

* LATRINE FOR WOMEN IN JENLA

The first public latrine similar to the trench latrine design was built for the women of Jenla Tole (Source No. 15). The women themselves decided what type of latrine they wanted to have. A female interviewer discussed with them (during a week of house visits in the mornings and evenings) what the latrine should look like. She asked them: - Should the latrine have a roof or not? - What type of surrounding wall should it have? - Should it have an open entrance or a closed gate? - Should there be a trench for defecation or holes? - How high should the partition walls between users be? - Is a water connection required? - Will composting be done or not? - How will maintenance be done? In a meeting, 96 women made the final decision on what their latrine should look like. A clay model was built accordingly, shown to them, and slightly changed on their recommendations. The construction drawings were then made by the Project. It was the women's decision to have a trench for defecation around the four sides of the enclosure. The trench discharges into the new BDP sewage system. The roof only covers the trench area, leaving the centre open so that light and air can get in. In the centre is the water tank with four taps. The idea of partition walls was given up when it became clear that without them more people could be served at the same time. Now the latrine has space for 32 users. (See photo 100.) Previously, according to the latrine committee, about 300 women were using the traditional open defecation space where the new latrine has been built. They had to walk through a narrow lane already soiled by old people and young children to reach the open space covered with broken bricks. From time to time those bricks were overturned, when they became too slippery during the rainy season. After defecation they had to clean their feet at a nearby water tap, which could only be done when there was water.

* TRENCH LATRINES

(See drawings attached)

Why did the Project suggest that the Nagar Panchayat build trench latrines, when there is a health risk from faeces floating in the open trench towards the sewerage line? Transmission of pathogenes by flies is possible. During the evaluation of public toilets in Bhaktapur, besides the BDP latrines, also traditional open defecation places and the first traditional latrines, consisting of a trench only, without outlet, were visited. One latrine built by the people, without outside assistance, about six years ago got the highest marks. (See photo 99.) It serves a large number of users, is maintained by the people, there is a water source to float the faeces towards the still functioning traditional sewerage system, and it is not cut off from light and air as many modern public latrines are. However, there is no water tap nearby for personal cleaning. The design of the trench latrine developed by the

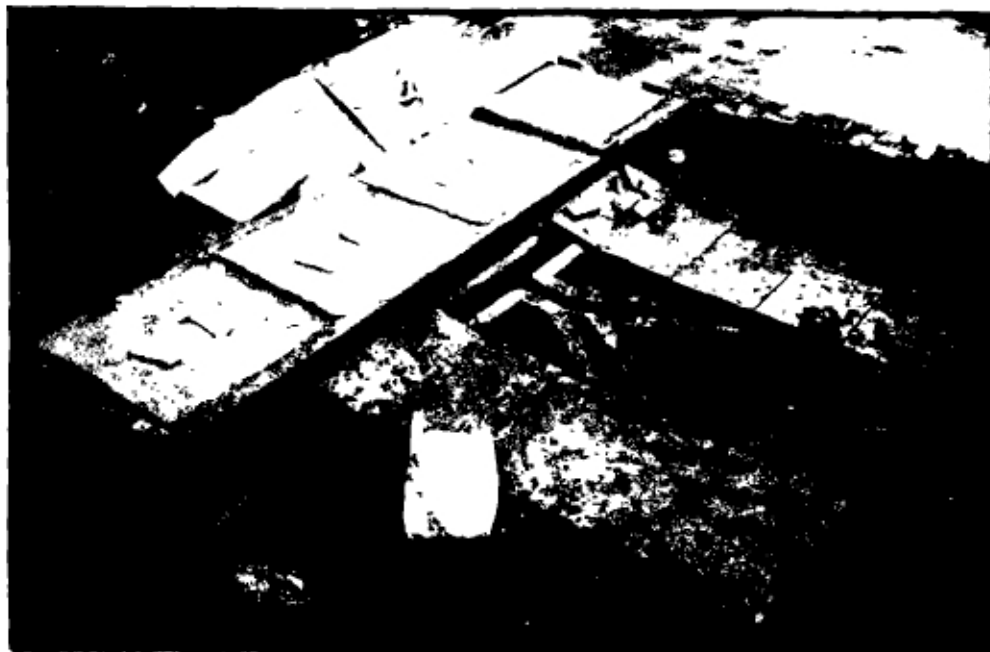
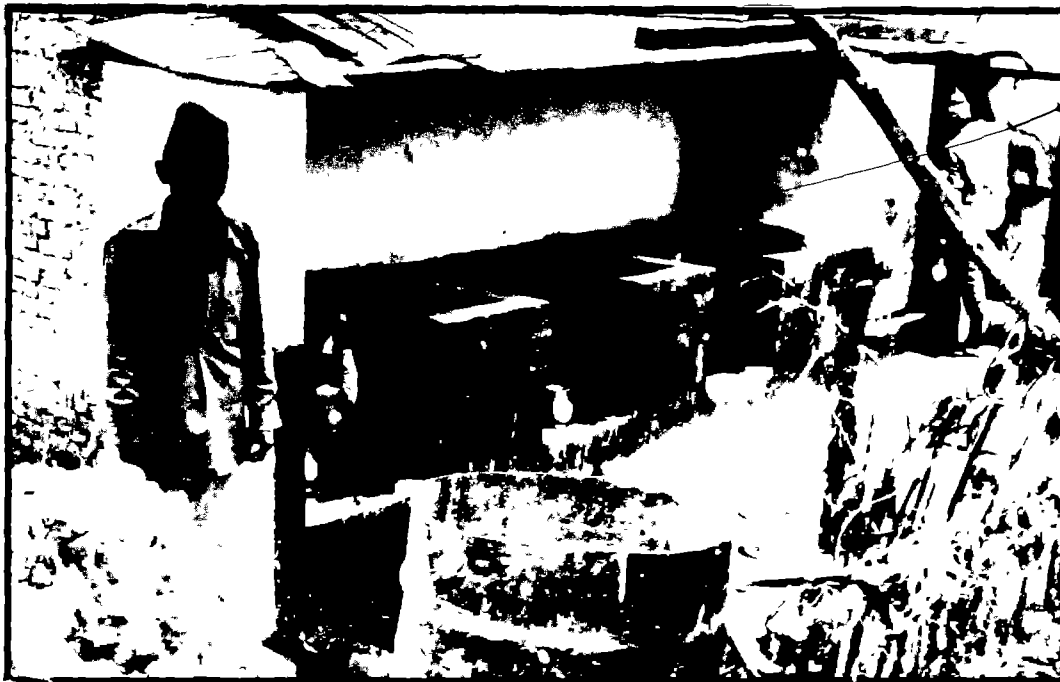
sanitation consultant follows the lay-out of this public latrine. The main improvements of the new design are that it has a roof, a water tap for cleaning and one or two (depending on the size of the latrine) water tanks which are emptied in the morning and the evening for flushing the faeces down towards the sewerage connection. Further improvements suggested:

- A double trench with single outlet could be considered for the people to face each other during defecation.
- A depression will be required between each set of foot-rests to prevent defecation around the foot rests.
- No depression should be made between two adjacent set of foot-rests.
- The space in front of the foot-rests should have a gentle slope towards the trench.
- The trench should be slanting inwards to prevent night soil from splashing onto it.
- The trench bottom should have sufficient slope to allow flushing with a minimum use of water.
- Some kind of protection over the trench is required to prevent people from falling into the trench. No defecation should be possible on it.
- Some cleaning tools, like long handled scrapers, are required to help moving faeces towards the sewerage connection.
- Cleaning equipment should be kept right on site in a locked cabinet .
- This type of latrine can be built at places where there is a sewer connection or a sulabh type disposal system can be considered.

Two trench latrines already have been built by the Nagar Panchayat. The Pradhan Panch himself together with the users selected the locations. Five more are presently being designed. This type of latrine serves the early morning peak demand. It is better than open defecation and traditional latrines, and it is a temporary solution until sufficient household latrines can be built.

For Bhelukhel, considering the above experience with Bhaktapur latrines, the rehabilitation of one of the existing public latrines and the promotion of household latrines was then chosen as the most hygienic solution .

132. 133. Examples for school latrines built with the sulabh system:



Sources:

14

Public Toilets in Bhattapur, November 15, 1982 - CDU report.

15

Local Action Supported by BDF - Here: Public Toilet for Women
Designed by the Users, November, 1982 - CDU report.



(12)ACTIONS STARTED BY THE PEOPLE

- * DIFFERENT ACTIVITIES**
- * INDICATORS FOR SUCCESSFUL
COMMUNITY PARTICIPATION**

* DIFFERENT ACTIVITIES

For a long time it was not sure if the Alternative Sanitation Scheme would become more than just a latrine building programme. Then, when filthy conditions after the cleaning campaign had returned to the community, and women and youngsters started doing something about it, it became obvious that the Scheme had succeeded.

1. ACTION GROUPS FOR CLEANING THE NEIGHBOURHOOD

(See photos 103, 104.)

A few weeks after the end of the cleaning competition, the area slowly became filthy again. Then a group of teenage boys started some cleaning on their own. They were disappointed because their neighbourhood, despite their good work during the cleaning competition, again looked dirty. A week later they cleaned again, which did not take them more than one or two hours. Since they had all the cleaning equipment of their parents at home, it was not very difficult for them to organize. Then the girls also began to help by forming their own group. Both groups are still doing this work and the leaders were allowed to participate as junior community workers in the community workers training.

The effects of the cleaning competition in terms of attitude change lasted longer with this age group than with other people in the community. In order to keep this going, more moral support was given in the form of what the Project called 'incentive days' and they called 'activity afternoons'. Arranged once a month, games and quiz competitions between the girls and the boys groups were held at the Kumari Club. (See photos 113, 114.) Races in which the girls also participated were held throughout the neighbourhood. All children who wanted to participate in those 'activity afternoons' had to be clean and enrol one day before. After a few months, all youngsters of the community participated and a picnic for all children, including the younger ones, was organized in the botanical garden.

Both the teenage boys and girls groups are now meeting regularly. Scouting was also started, and the costs for uniforms (Rs.100) were taken over by the parents. (See photos 115, 116.)

2. HEALTH EDUCATION AND MOTIVATION PROGRAMME FOR CLEAN CHILDREN

In Bhelukhel, as in most other sanitation projects, the women proved to be the ones most concerned about the health of the family and the education of their children. After the end of the cleaning competition, some women met with the female community workers and

developed a programme for the children. They felt that what happens to the children affects the lives of all the community. The children directly and indirectly contribute to some of the objectives of the Scheme.

Objectives of Children Motivation:

- To change the unhygienic appearance and the unhealthy habits of children
- To create awareness among the children on the need for environmental sanitation and to get their assistance in keeping the neighbourhood clean.
- To mobilize the parents through the children to get used to better personal hygiene.

First, the community workers made house-to-house visits, informed the people about the programme, and requested the parents to send their children to the Kumari Youth Club for the orientation programme. About 150 children came. They were instructed to:

- wash and keep all parts of their bodies clean
- brush their teeth daily
- cut their nails and keep them short
- wear clean clothes and to try to keep them clean
- always wear shoes outside the house
- keep their hair combed
- request their parents to help them in keeping their clothes and bodies clean
- not play with dirt
- defecate in the toilet only and not somewhere else
- keep the surroundings clean.

Daily supervision and motivation was done by community workers for checking whether or not the children followed the instructions. On November 26th, 28th, 30th, and December 6th, 1984, orientation programmes on personal hygiene for the women were organized.

Once a month a programme was organized as incentives for the children. Those children found clean during the first cross-check were taken to the circus, then during the second cross-check to the Zoo in Kathmandu, and during the third to a video show.

UNICEF then started a day-care centre at the Kumari Youth Club for which two of the female community workers were trained.

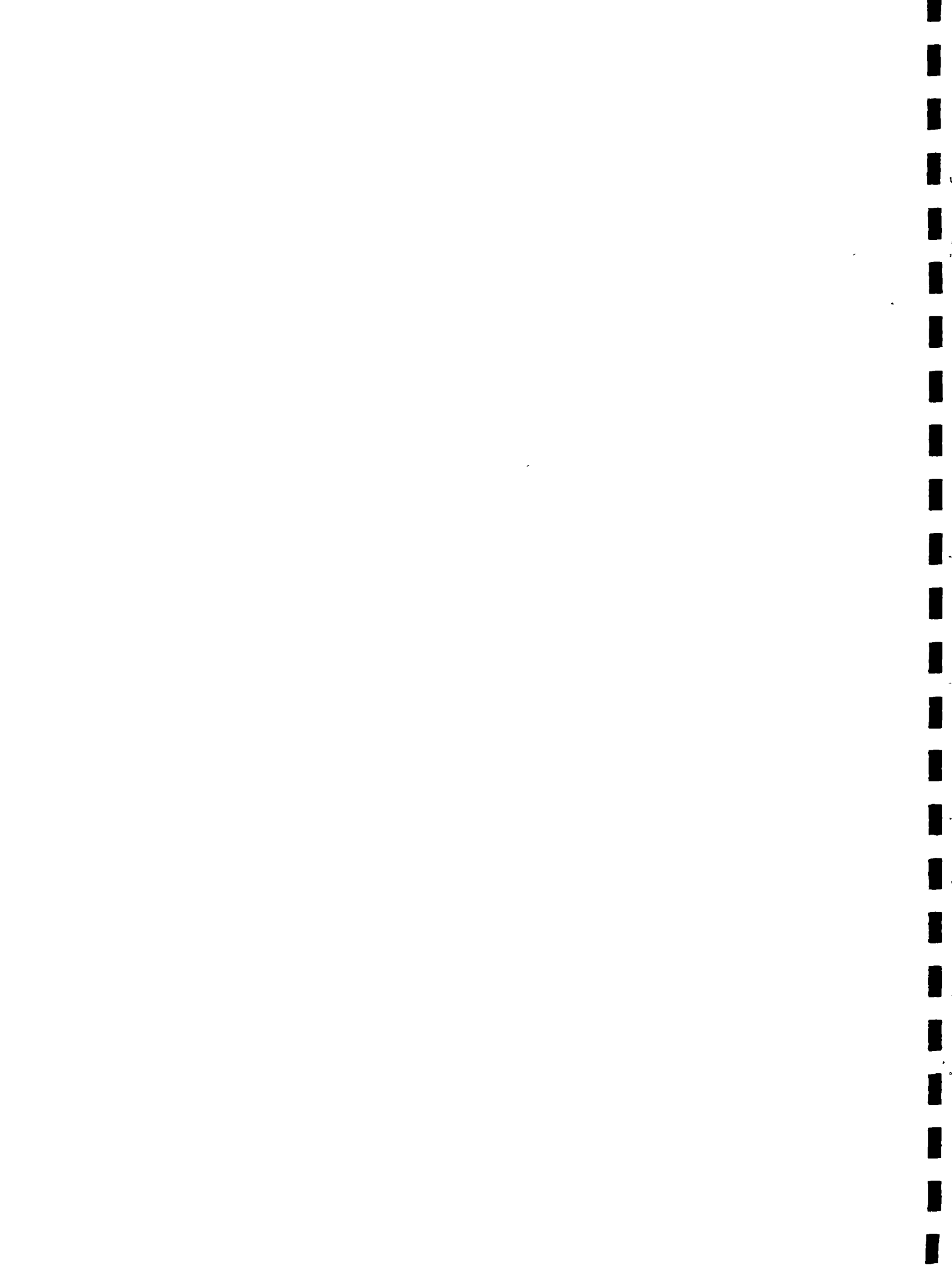
3. INFORMAL TRAINING

It is difficult for the people of the Pote caste to get access to educational facilities. Previously, only a few adult education classes and some classes for children on reading and writing had been given by the community workers, in their free time. Then, slowly, the Kumari Club developed into a 'learning club'. The same community workers started lessons for children in the Club. Knitting classes were given by a volunteer, a foreigner who had stopped in Bhaktapur for some time. Another foreigner gave English classes once a week. Since this was not enough, a Bhaktapur resident was hired to hold English classes every second day. The participants have to pay part of the costs. A few martial arts classes were given, also for girls, by another foreigner. A guitar was given to the Club and the youth groups started learning Nepali, English and German songs. Perhaps the most important informal training activity was started in April, 1985. Under the 'Informal Girls Education Programme', a five-month course is given, during which the girls receive two hours of training per day in reading and writing. One class is held in the Kumari Club, and one in the private house of one of the community workers.

* INDICATORS FOR SUCCESSFUL COMMUNITY PARTICIPATION

When asked about the success of this scheme, an engineer might refer to the physical output only, the people to the degree their lives have been made easier, and the project planners to how far their budgets and schedules were followed. Different people will make different judgements. To measure the impact and success of community participation projects, the following list of indicators might be used:

- physical targets achieved (latrines built, etc.);
- degree to which maintenance and repairs are taken over by the people (Ditches are regularly cleaned, water taps repaired, broken toilet pans replaced with their own funds, etc.);
- physical changes in the environment due to attitude changes (garbage not thrown into ditches, etc.);
- improvement of health as a result of the combination of physical sanitary improvements and health education (less diarrhoea, fewer parasites, etc.)
- degree to which the majority is involved when decisions are made (decisions made by one person, by a few local leaders or by all, etc.);
- duration of decision making process (Weeks of discussion will bring a carefully thought out solution and a strengthening of the community as a whole.);
- degree of opposition by the community to project proposals (Community intervention may help to avoid oversights in project planning.);
- degree to which the objectives of the scheme are understood by the majority (If a health improvement project is just understood as a latrine building project, the results might be not as good.);
- degree to which women are actively involved (They are the ones with the most influence on hygiene, food preparation, water storage, and educating the children.);
- degree to which children are involved (Their understanding of hygiene will control the future health of the community.);
- degree to which people participate in educational activities (People first have to understand that faeces of sick persons may be dangerous, before they start protecting themselves.).



(13) PLANNING OF BHELUKHEL PHASE II

- * PLANNING PROCESS**
- * EVALUATION**

* PLANNING PROCESS

The evaluation of Bhelukhel Phase I was supposed to be the basis for planning Bhelukhel Phase II. In reality, the planning process for Phase II had already started before the evaluation.

After the construction of household latrines and the rehabilitation of the public latrine, about two thirds of the originally allocated Rs.500,000 was not yet spent and was to be used for the second phase. The Project did not want to decide how that money was to be used. This was to be done by the people themselves.

How could the residents of Bhelukhel take part in a planning and decision-making process of the Project?

Three planning meetings were organized, one for each of the three areas into which the neighbourhood had been divided. Out of the community's 92 families, 42 were represented by 23 men and 19 women. First, the improvements that had been made up to that time were discussed, and each participant was given the opportunity to make proposals for further projects in their neighbourhood. Those families not present were visited afterwards by the community workers and asked which further improvements they wanted to have for their community. A list of about 39 proposals, made by individual families, was then compiled and given to the Project. There were many proposals for which the funds could not be allocated so that they had to be cancelled. The final list starts with those proposals which were requested by the greatest number of people: road pavement (35); improvement of Popper Domfo, the place of their family gods (31); a primary school (29); a clinic for health checks (28); a round pipe sewerage line (25); more private toilets (22); more public water taps (21); private water taps (17); renovation of a path (14); adult education classes (11); surface water drainage with slab covers (11); construction of a roof for their cremation ground (11); improvement of the second public toilet (6); sports and games facilities (5); building of a container at the traditional site for depositing afterbirths (3); rehabilitation of the god close to the Yoshinkhyo tap (2); improvement of a well (2); transferring the Yoshinkhyo public water tap to another site (1).

Each of the eighteen proposals was then drawn by an artist on a card (See the primary school proposal card on page No. 73.), a heading was given and rough cost estimates were made. To implement all requests, about Rs.900,000 would be required, whereas only one third of that sum was available.

Then, a users' committee meeting was called to make the final selection and to cut the costs down. With the help of the picture cards, they discussed how many people would benefit from the different projects, which one could be implemented immediately and which one could be done by themselves.

Priority was given by the users' committee to the following six projects:

- 1) surface water drainage with slab covers;
- 2) road pavement;
- 3) improvement of Popper Domfo;
- 4) two more public taps;
- 5) repair of the second public toilet;
- 6) sports and games facilities.

These decisions were made by the users' committee, and had to be approved by the Project. The Project then made more detailed cost estimates and it turned out that the open surface drainage with slab covers was among all alternatives available the most expensive form of surface water drainage. Almost all funds would have been eaten up by this proposal alone. Instead, the Project suggested shallow open drains along the roads. With the new understanding of cleanliness, this solution was not acceptable, since many pig breeders throw the sludge from their pig sties into the street. The negotiations between Project and users' committee became heated. After site visits in other towns, the users' committee felt that slab covered drainage was the most convenient form of drainage, and now again, as with the household latrines, it seemed that the Project did not want to give them the best solution. Arguments became so fierce that some people even threatened to tear down the new household latrines. The compromise then was that closed drainage was to be put in, but in a less expensive form with round pipes.

* EVALUATION

When the evaluation of the Alternative Sanitation Scheme was being done, a list of indicators to appraise the success of community participation projects was not yet compiled. Instead, the evaluation followed the simple objective to get a clearer understanding on what should be retained and what should be changed in future programmes. Comments and recommendations for corrective measures, given in the following, are based on 77 household interviews with residents of Bhelukhel, a five hours brainstorming meeting with the users' committee, and informal talks with community workers, volunteers, visitors and BDP members.

At this time, thanks should be given to those who have contributed to this programme, as part of their employment or as volunteers. Special thanks go to colleagues of the other sections of BDP who helped to make this programme a success. If some of the comments made during the evaluation are critical, they should not be taken personally; they were meant as constructive criticism.

Ref: GETTING THE MANPOWER TOGETHER

- Looking at other projects and using the experience made by others helped to avoid a lot of mistakes.
- The work programme was revised after the one-day workshop so that all objectives of the programme listed on page No. 96 could be fulfilled.
- Although the process of identifying individuals with specific expertise, who then formed a consultancy group, took about three months, it was worth the effort since the quality of work of those hand-picked consultants was excellent.
- Similarly positive was the employment of two Bhaktapur residents as training and campaign organizers. They not only knew their own town well, but they were also able to work in the evenings and on weekends when most of the target group were at home.
- In future community participation projects, provision should be made for HMG employees to be able to work during hours other than those established by HMG rules and regulations.

Ref: THE PEOPLE OF BHELUKHEL

- It was an advantage to work with one caste only. Furthermore, the residents of Bhelukhel were not only aware of what was going on, they were also very cooperative.
- Collection of information on Bhelukhel became easier and more reliable the longer the Project was involved with the community. The more the Project knew about the community, the better and more effective became the cooperation.

Ref: INVOLVING THE PEOPLE

- Because the programme was suggested by BDP and not by the Nagar Panchayat, it took a long time to brief the Nagar Panchayat and obtain their approval to start the programme.
- The mass meeting and the briefing of the community helped to create awareness about the programme from the very beginning.
- The users' committee proved to be real representatives of the people since they were elected and not imposed on the community by the Project.

INVOLVING THE PEOPLE continued

- The key to community participation was direct contact with the people through the house-to-house visits by the community workers and area meetings with representatives of each family.

Ref: TRAINING OF COMMUNITY WORKERS

- The candidates for community worker training were proposed by the users' committee. The formation of a different selection committee, then avoided complaints that vested interests were involved during the final selection.
- The curriculum was prepared under the assumption that lectures would not take longer than twenty minutes and that most of the training would involve group work. After the first training package was over and the community workers were tested on what they had learned, it became obvious that the outcome of the training did not reach expectations. Fourteen afternoons of training had to be added to complete the original four-day training course. Shortcomings were seen in the following areas:
 - * Each day of training was overburdened with too many subjects.
 - * Trainers too often followed the traditional 'raised finger' approach in teaching, lecturing instead of guiding the students through discussions.
 - * Trainers were not sufficiently briefed and prepared to use the group work approach; a smaller number of trainers better geared to modern teaching methods might have improved the quality of the training.
- Of the teaching materials listed, only the leaflets on different toilet types and the mini-posters were essential to the success of the scheme. The other materials produced were by-products of the scheme and useful for health education. Most of them are now used in different parts of the country. Too many other teaching materials are produced by different organizations because there is a lack of coordination on teaching aid production in the country.
- Site visits to see different types of latrines built in Khorana, Thimi and Kathmandu were an important part of the training.
- Similarly important was the participation of community workers in building the demonstration latrines. Learning by doing

TRAINING OF COMMUNITY WORKERS continued

is more effective than listening to a lecture. Construction works were a compulsory part of their training.

- After the training was completed, a firm commitment from the community workers was necessary in order to carry out in practice what they had learned during training. However, they could not be employed by the Project since there were no open posts, and they could not be expected to work without any remuneration. A combination of a very detailed agreement, signed by the community workers, and the provision of some allowance then solved the problem.
- Five of the eleven community workers came from Bhelukhel. The rest came from two other neighbourhoods in which similar schemes were to be done based on the experience in Bhelukhel. Due to the phasing out of BDP, this was not possible. However, the community workers from one of these two areas were asked if they could do similar work in their own neighbourhood. Some activities, supported by the people, have already been started there without the Project.
- The work of the community workers proved to be the backbone of the scheme, and many requests were made for more health education, especially for the women.

Ref.: DE-WORMING CAMPAIGN

- Film shows were a good medium for getting people together, for communicating messages like those in the 'round worm film', and for making public announcements.
- Some of the reasons for the high rate of return of stool samples might be that the stool testing was done in their own youth club and not somewhere else, the people could look through the microscopes, and members of their own community assisted in stool testing.
- Actual testing was done by members of the Family Planning and Parasite Control Project. In all fields specialists from other projects were willing to cooperate.
- Photos on round worms became an effective medium for talks.
- It was important that stool testing did not stop with the tabulation of results and that worm medicine was given. This was a fast and cheap trust building measure. People became more positive towards the Project because their lives had improved.

DE-WORMING CAMPAIGN continued

- Only when people realized, through the de-worming campaign, that their health was not as good as they claimed did they give their full cooperation.

Ref.: CLEANING CAMPAIGN

- The most important aspect of the cleaning campaign was that it was not organized by the Project, and the community workers on house visits had briefed all families on their responsibility to do something about their future health.
- The structure of the cleaning competition was defined by the people together with the community workers.
- Most people had gone out of their way to participate in the cleaning competition. The award giving ceremony, attended by official guests, was a public acknowledgement of their individual efforts.
- Since there was discontent about the distribution of awards, it was suggested that future cleaning campaigns not be competitive.
- The application form for household latrines was the written medium by which the community received feedback on the decisions on the people's contribution and subsidies.
- The sweepers themselves say: "Before we used to clean other places and were careless about the dirt in our own place. Now we are also cleaning our place since we understand how we are getting sick. Our personal cleaning habits have also changed".
- Even months after the cleaning campaign, Bhelukhel is cleaner than the surrounding neighbourhoods.

Ref.: HOUSEHOLD LATRINE CONSTRUCTION

- The results of the soil tests were to be used for convincing the people that certain types of latrines cannot be built in certain areas. The results were then actually used to define where the sulabh latrine could be built and where a layer of sand had to be added for better drainage.
- In the beginning, the community workers did not quite understand that the mini-poster of the first toilet type had to be pasted to a house wall and explained, and the next mini-poster had to follow only after the first toilet type was fully understood.

HOUSEHOLD LATRINE CONSTRUCTION continued

- Most of the community workers were young and without much experience in motivating older people. Therefore, doing motivation work in twos or threes gave them more confidence.
- There was also the complaint that the community workers had become too confident, that some of them were behaving like film stars.
- During the mini-poster campaign, the people were briefed on the various toilet types so that they could make an informed choice. Due to the subsidy agreed upon, the same deposit had to be paid for the sulabh as well as for the VIP latrine. Therefore, there was no real choice but to take the sulabh latrine because it offers more for the same money than the VIP latrine.
- During the discussion on subsidies, the people complained about not being able to get the same latrine type as the rest of the town, and they made it clear that the sulabh latrine was only their second choice.
- The VIP latrine improves upon the design of the basic pit latrine by the addition of a vent pipe which draws flies and bad smells away. It is better than the pit latrine, but can still be built at low cost. The demonstration VIP latrine built at Bhelukhel is more expensive because of two further improvements, a pan (without a water seal) instead of a hole, and a removable slab for taking the faeces out when it is full. In this form, it is not much cheaper than the double pit composting latrine. However, it does not need water and can be built in areas where it is difficult to carry water to the latrine.
- The double pit composting latrine has a water seal with low water consumption, the night soil turns into compost, and it can be built inside the house as well. Even in the lower parts of Bhelukhel, all latrines survived the rainy season.
- Due to the training and latrine construction programme about 30 people in Bhelukhel now know how to build sulabh latrines.
- Most latrines do not have enough openings to admit sufficient light and air. It proved to be difficult to convince people to leave some open space above the door and in the walls.
- Slab making was done on a contract basis. Here, for the first time, the administrative procedures of the Project proved to be time-consuming and frustrated the people who wanted to start the work.

HOUSEHOLD LATRINE CONSTRUCTION continued

- Construction works also were hampered by slow delivery of timber and tiles. Tiles for the latrine roofs were required in small quantities, making them uneconomic for the Project to purchase. Timber for the latrine roofs at government rates was not available, and the Project was not allowed to purchase at a higher rate in the open market. Delays were the natural consequence. Such matters are best left to the people, who will always find solutions, even if they have to add some of their own money to cover the difference between government rates and market prices.
- The users' committee often was blamed by their own people that there were too many meetings and too little work progress. "Let the funds not be finished only by conducting meetings".
- Local Development Committees normally take over the works planned by BDP in their own areas. Accordingly, the sweepers wanted to get the contract for putting in the water pipes in Bhelukhel. After requesting the office concerned to give them the contract, they were very disappointed when the work was given to outsiders. Either they had not been briefed thoroughly enough or they could not be convinced that special groups who had been trained for this type of work had to be hired.

Ref.: SAFER COMPOSTING CAMPAIGN

- This campaign, originally intended for those people doing wet composting, but done instead for the sweepers, was commented upon by some Bhelukhel residents as improving neither their composting practices nor their economic returns. However, it created an awareness of health hazards related to composting.

Ref.: PUBLIC LATRINES

- The Project supported the rehabilitation of the public latrine in Bhelukhel (See photos 39, 40, 96, and 97.) as a trust building measure by easing the administrative procedures so that funds could be released immediately. Materials were not supplied regularly as had been promised earlier. The slow delivery of supplies and, at the same time, caste related treatment of users' committee members by the Project again caused discontentment among the Bhelukhel people.
- When too many activities for the Alternative Sanitation Scheme were started at the same time, like household latrine construction, repair of the public latrine and planning meetings, delays were unavoidable. People just do not have that much time.

PUBLIC LATRINES continued

- A delaying factor which decreased towards the end of the scheme was the competition and rivalry among the leaders of the community. This has to be accepted as part of a process during which community leadership is built.
- Another example of unsatisfactory communication between the Project and sweepers, similar to the case of the contract for the water pipes, was the cost estimates for the rehabilitation of the public latrine. The Project had accepted the cost estimates made by the sweepers so that the funds could be released as soon as possible. However, Project cost estimates also had to be made, which turned out to be lower than the first cost estimates. Measurements taken after completion proved to be even lower than the Project cost estimates. Payments are always made according to the works actually carried out, whereas the sweepers expected payments according to the first cost estimates. The task of the Community Development Unit was to improve communication and it was not always successful.

Ref.: ACTIONS STARTED BY THE PEOPLE

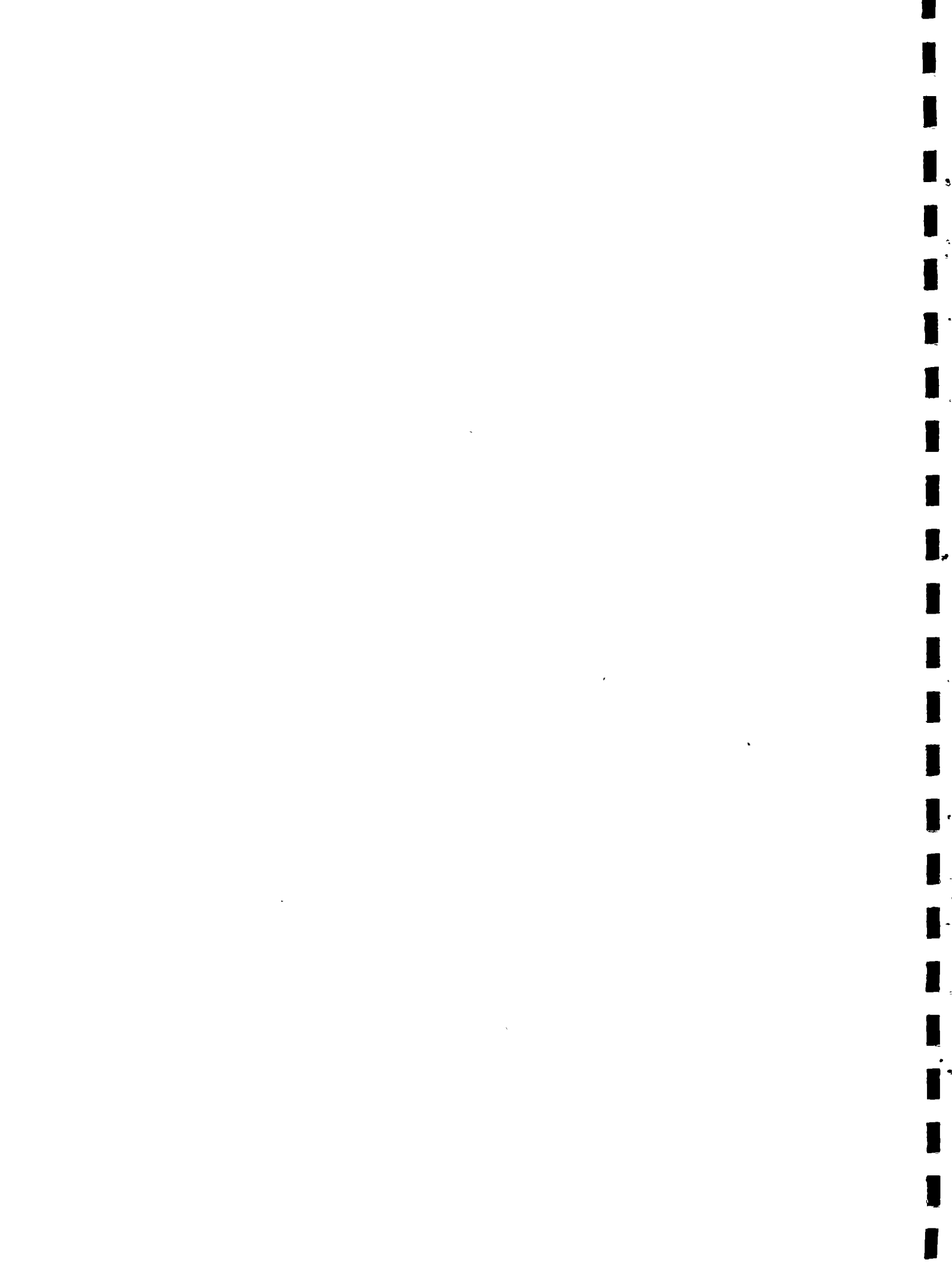
- Due to the lack of educational facilities and limited recreational activities offered in Bhelukhel, the informal training activities, incentive days for the youth groups and children's motivation programmes were all highly appreciated highly by the community and requests for more were made.

Ref.: PLANNING OF BHELUKHEL PHASE II

- The Project had to learn to work with the people. Project employees often forget that they are using technical terms, such as planning targets, budgets, and work orders - topics unfamiliar to most people. The picture card proposals (See the school proposal picture card on page 73.) were one attempt by the Project to be on the same level as the people during the planning process.
- Site visits to Patan and Kirtipur convinced those people who wanted to have a water borne sewerage system in Bhelukhel that sulabh latrines would be a good solution for them. However, the same site visits were later to cause problems, since the people also became convinced of the advantages of slab covered drainage which was too expensive.
- A number of respondents requested the Project to provide more health education and training. They realized for the first time that even they, members of the Pode community, could learn something and can get an education.

PLANNING OF BHELUKHEL continued

- During the evaluation talks, strong criticism was again raised against BDP's decision to have a sanitation system in Bhelukhel that differed from the one built for the rest of the town.
 - From the openness of discussion and the strong criticism raised, the Project realized that it was no longer dealing with individuals, but with a group of people who had gone through a two-year long process of discussion, decision making, of implementation and sharing in the benefits of the programme, and had finally become a strong and united community.
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(14) PROPOSALS

- * COMMUNITY PARTICIPATION UNDER THE DECENTRALIZATION ACT
- * HEALTH EDUCATION SUPPORT PROJECT

* COMMUNITY PARTICIPATION UNDER THE DECENTRALIZATION ACT

The Community Development Unit of the Bhaktapur Development Project acted as the intermediary between the residents and the Project. The Nagar Panchayats all over the country do not need such a go-between to reach the people since they are the representatives of the people anyway. However, they might need a motivation unit for community participation, for motivating the people to take over some of the public responsibilities within their community.

Community participation is not understood here as a political slogan or moral appeal; rather, it is understood as the duty of each citizen to take over some responsibility for maintaining the amenities provided by the Government to improve the living conditions.

Let us take the example of the public latrines in Bhaktapur. After more than 25 public latrines had been financed and built by the Project, they were handed over to the Bhaktapur Nagar Panchayat. Regular cleaning and repairs had to be done. The cleaning became part of the work of the Nagar Panchayat sweepers; for regular repairs, there were neither funds nor manpower. Discussions have been going on for more than five years about establishing a unit for maintaining those public facilities built or restored by the Project. When such a maintenance institution finally does get off the ground, there is no doubt it will suffer from all those normal attributes common to government bureaucracy, like desinterest and excuses that there is no equipment, no time, etc. It will not be easy to cope with the enormous workload of maintaining all those facilities built by the Project. Why not share with the users the responsibility for maintaining at least those facilities, which directly benefit the population? If a latrine is not functioning and a tap not working, it is felt by the people. They themselves should be made responsible to keep facilities properly functioning. Preventive maintenance can save a lot of money. However, people will not care if they are not motivated.

The role of a Community Motivation Team of the Nagar Panchayat could be to initiate user groups around each public tap and public latrine. (See Chapter 11 on Public Latrines.) If those groups know that repairs only will be made if they themselves make or initiate them, then they will take action whenever required. Materials for repairs can be provided by the Nagar Panchayat. By initiating user groups around public facilities, the Community Motivation Team will save funds which otherwise would have been spent for repairs.

User groups have to be motivated. They need to know that these

public facilities are their own and that there are insufficient funds to maintain these facilities in the long run. They also have to know, that latrines and water taps can have a big impact on the health of their community. This means that user groups will not work for a long time if they do not know the importance of proper sanitation and clean water. They need to know the direct connection between these facilities and their own lives. Therefore, the major input for motivating user groups is basic health education. (See the 'Health Education Made Easy' leaflet.) The Community Motivation Team has to teach health education in order to keep the user groups going. By initiating user groups for maintaining public facilities, the Nagar Panchayat will save money and the costs of the team can be covered.

In larger communities, where Local Development Committees are initiated for planning and carrying out community projects, the Community Motivation Team can coordinate and monitor the progress of those Local Development Committees.

In addition, such teams can assist the Nagar Panchayat in information campaigns for different purposes, for example, when building rules and regulations have to be brought to the public, when new projects for the community are planned, etc. Such teams can assist the Nagar Panchayat in implementing the requirements of the Decentralization Act more effectively.

MANPOWER

Such teams can be started with one female and one male motivation officer. They should come from within the community, be fluent in the local language, and be trained in health education. If they receive a basic salary with additional payments according to achievements (per number of functioning maintenance committees) their outputs might improve.

* HEALTH EDUCATION SUPPORT PROJECT

A similar motivation team could work for motivating the beneficiaries of water and sanitation projects as suggested by the following proposal for a 'Health Education Support Project'.

D R A F T

HEALTH EDUCATION SUPPORT PROJECT

1. Located: MINISTRY OF PANCHAYAT AND LOCAL DEVELOPMENT (MPLD)

2. Support to: SANITATION UNIT OF MPLD

3. Tasks: AS SUPPORT SERVICE TO WATER AND SANITATION PROGRAMS OF MPLD

- TO BRIEF LOCAL LEADERS ON WATER AND SANITATION PROGRAMS (URBAN AND RURAL)
- TO INFORM ABOUT IMPACT ON HEALTH BY CLEAN WATER AND SAFE SANITATION
- TO ORGANIZE TRAINING FOR VOLUNTEERS AND ALL EXISTING VILLAGE WORKERS
- TO ASSIST IN ORGANIZING A DEWORMING CAMPAIGN (IF PEOPLE SEE THAT THERE IS SOMETHING WRONG THEN THEY ARE MORE WILLING TO DO SOMETHING AGAINST IT)
- TO ASSIST IN ORGANIZING HOUSE TO HOUSE DISCUSSIONS ABOUT WHAT PEOPLE CAN DO
 1. CLEANING THEIR NEIGHBOURHOOD
 2. BUILDING TOGETHER A SAFE WATER SYSTEM AND
 3. BUILDING HOUSEHOLD LATRINES
- TO ASSIST IN ORGANIZING A CLEANING CAMPAIGN (TO REMOVE ALL HEALTH HAZARDS FROM THE ENVIRONMENT)
- TO ASSIST IN ORGANIZING CONSTRUCTION WORKS OF A COMMUNAL WATER SYSTEM AND

3.Tasks: continued

OF INDIVIDUAL TOILETS

- TO TRAIN VILLAGE WORKERS IN MONITORING AND FURTHER HEALTH EDUCATION
- MOVING TO THE NEXT PROJECT
- RETURNING AFTER 6 AND AFTER 12 MONTHS FOR EVALUATION AND FURTHER TRAINING

4.Design of IN GENERAL, LIKE BHAKTAPUR HEALTH IMPROVE-
scheme:

MENT SCHEMES ARE ORGANIZED BY THE COMMUNITY DEVELOPMENT UNIT. VARIATIONS POSSIBLE LIFE STARTING WITH SCHOOL OR HEALTH-POST DEMONSTRATION LATRINES OR ADDING LATRINES TO AN EXISTING WATER SCHEME OR USING A WATER SCHEME FOR INTRODUCING LATRINES.

TRAINING MATERIAL AS PRODUCED IN BHAKTAPUR.

5.Manpower: - 2 TEAMS, EACH CONSISTING OF 1 VILLAGE ORGANIZER, 1 TRAINER, 1 HEALTH SPECIALIST, 1 ENGINEER FROM SANITATION UNIT AND 1 DRIVER.

- 12 MM FOREIGN ADVISOR FOR PROGRAM DESIGN AND MONITORING

6.Equipment:- 2 LANDROVER

- 2 MOBILE LABORATORIES
- 2 FILM PROJECTION SETS
- 2 SLIDE PROJECTORS.

*****END



AN EXERCISE IN



COMMUNITY PARTICIPATION

