

Water and Sanitation Cell  
Local Government and Rural development Department  
Quetta, Balochistan, Pakistan

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Training Manual

to train the

Female  
Community  
Organizers

of the

Master  
Trainer  
Teams





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Throughout this manual, the text has been illuminated by drawings from an IRC Technical Paper no.29, titled 'Just Stir gently'. In these drawings, frogs stand in for human beings.

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Training Programme Part 1  
 Subject: Female Involvement

Time	Topic	Method	Requirements
9.00 - 9.30	1. Why and in what ♀ involvement in a WS&S project in general and in ours specifically?	Brainstorm	white board with markers conclusions (transparency/hand out 1 A)
9.30 - 10.00		drama to show how we convince the village women that we need them to participate in the programme	field manual exercise
10.30 - 11.30	2. importance of site selection of pump and latrine	case study	case study with questions (hand out 1 B, 2 p.) and answers
11.30 - 12.30	3. methods of involving ♀ in site selection	lecture about map making and the compound survey	field manual
13.30 - 14.00	4. organization of women	role play about first meeting with men to get their agreement	role play with instructions (hand out 1 C, 2 p.)
14.00 - 14.30		lecture about communication channel	communication channel (transparency/hand out 1 D) field manual
14.30 - 15.00		role play about communication channel	role play with instructions (hand out 1 E, 2 p.)
15.00 - 15.15	closure		



Training Programme Part 2  
 Subject: Hygiene Education

Time	Topic	Methods	Requirements
9.00 - 10.20	1. What is hygiene education? Why is it important? For whom is it important?	Brainstorm	<ul style="list-style-type: none"> <li>- white board</li> <li>- summary sheet (transparency/ hand out 2 A)</li> <li>- sheet with interventions to improve health (transparency/ hand out 2 B)</li> <li>- disease cycles hand out 2 C, 6 p.)</li> </ul>
10.20 - 10.40	2. Relation between water, sanitation and health	Exercise relating the mouth to fingers/food/flies etc.	<ul style="list-style-type: none"> <li>- transmission routes and possible interventions (transparency/ hand out 2 D, 2 p.)</li> </ul>
11.00 - 13.00	3. Difficulties of changing hygiene behaviour	role play between village woman and female community organizer	<ul style="list-style-type: none"> <li>- role play with instructions (hand out 2 E, 2 p.)</li> <li>- changing behaviour (hand out 2 F)</li> </ul>
13.30 - 14.00	4. Focus of our own hygiene education programme: priorities, messages and target groups	lecture about our choices in the programme	<ul style="list-style-type: none"> <li>- hand out D, page 2</li> <li>- programme interventions and messages (transparency/ hand out 2 G, 3 p.)</li> </ul>
14.00 - 15.10	5. Methods of hygiene education in our approach	exercise, relating the common traps in hygiene education with the two pile and the gap method	<ul style="list-style-type: none"> <li>- field manual</li> <li>- common traps in hygiene education (transparency/ hand out 2 H, p 1)</li> <li>- exercise (hand out H, p.2)</li> <li>- overview of methods of male and female hygiene education (hand out 2 I, 2 p.)</li> </ul>
15.10 - 15.20	closure		





Training Programme Part 3

Subject: Cross sectional teaching preparation

Time	Topic	Methods	Requirements
9.00 - 9.30	1. introduction to teaching set up	lecture/brainstorm	white board
9.30 - 10.00	2. introduction and distribution of topics	lecture	hand out 3 A hand out 3 B
10.00 - 10.30	3. participants read the training notes and will ask questions clarify the notes	individual reading and individually briefing by one of the trainers as resource person	needed transparency sheets and copies of hand outs
11.00 - 14.30	4. participants prepare themselves	individual preparation with possibility to ask questions to resource person	
11.00 - 15.30	5. individual try-out of presentation of the participants	individually presentation to resource person who observes and gives feedback	feedback rules

Cross sectional training topics from female community organizers to other team members:

	Topics	Methods	Requirements
	1. introduction: overview of female activities in the first 6 steps	lecture	transparency 3 B hand out 3 B
	2. Why is women involvement important in site selection of hand pump and latrine?	Case study with questions about why it is important Lecture about how:option list and compound survey	hand out 3 C answers
	3. Why does hygiene education play an important role in our programme?	Exercise about the relation between project interventions and the impact on health	white board hand out 3 D
	4. Why is changing hygiene behaviour so difficult?	Brainstorm about what is needed to change hygiene behaviour	newspaper sheets transparency 3 E hand out 3 E
	5. Some examples of hygiene education methods	Demonstration and explanation of the gap method and two pile method	hand out 2 F 2 pile cards gap method flip chart



## Part 1 Female Involvement

### 1.1 Why and in what female involvement in a WS&S project and in ours specifically?

#### ■ Introduction (5 minutes)

You all worked with women before, so this subject is not new for you. However may be not all of you have worked in a WS&S project before. During this session we want to do a brainstorm together about the possible reasons to involve women in a WS&S project. After this brainstorm will talk about the same subject, why do we need to involve the women, but than we will focus on how to convince the village themselves that they are needed.

#### ■ Brainstorm (20 minutes)

- Write down on the white board (use only the right part of the white board): reasons to involve women in a WS&S project. Ask the ladies to come up with ideas and write all down, if necessary add some of yourself at the end and give the two main conclusions (use the hand out as a checklist).
- Write down on the left hand of the white board: in what activities should the women be involved in a WS&S project. Ask the ladies again to come up with ideas and write them all down, and check this again with the hand out)
- Explain to the women that we talked about a Water Supply and Sanitation Project in general. It is not always possible to involve women in all these activities. All kind of constraints can hamper this involvement, such as cultural restrictions, lack of female staff, lack of time for the staff or the village women, etc.
- As a conclusion, go trough the transparency sheet of hand out 1 A.
- Distribute the hand out 1 A.

#### ■ Drama "How to explain the village women that they are needed?" (20 minutes)

Introduce the drama by explaining the following:

- the village women themselves need to be convinces why we want to involve them. May be they will understand it for the hygiene education part but not for involving in site selection of hand pump and latrine
- we try to make them realize that they will be the main users of the hand pump and the latrine, so that at least they should be asked if they agree on the sites which have been chosen, how to use them etc.

Explain the drama by telling the following:

- tell the participants that you will demonstrate to them how you actually do it in the village: you being the female community organizer and the participants being the village women
- start drama, do this as life like as possible, use the same interaction with the women as you in the village do

#### ■ Closure

- ask them to read this activity in the field manual and ask if there are any questions



Involvement of women in Water Supply and Sanitation Projects is essential, because women are the most responsible persons to:

- fetch and transport water needed for the whole family
- store the water in their compounds
- wash clothes, bath children, do the dishes
- to wash and prepare food
- to help children going to the toilet
- to teach children when and how to wash their hands
- health care for their families
- cleaning of the compound, water vessels, water storage place, latrine etc.
- etc.

### Conclusions

- Women are the main users of the hand pump
- Women together with the children are the main users of the latrine
- Women are the most responsible persons for the general hygienic standard of the home

Women in our approach are involved in:

- introduction of the project policies and activities
  - site selection of the hand pump and latrines
  - design of the hand pump, by asking their need for add on facilities such as a purdah wall, a washing stand or an animal trough
  - operation and maintenance of the hand pump and the latrine
  - hygiene education about safe water use, safe latrine use and hand washing
-



## 1.2 Importance of site selection of hand pump and latrine

### ■ Introduction (5 minutes)

Now that we have talked in general about why and in what we involve women in our approach, we want to talk more in detail about some of the activities. This session we start with a case study. First I want to ask you to read this case study. After reading the case study try to answer the questions on your own. After 20 minutes we will discuss the questions together.

### ■ Case study (25 minutes + 15 minutes = 40 minutes)

- distribute the case study with the questions
- ask the ladies after 15 minutes to start with answering the questions. Try to get the ladies to finish the questions after 25 minutes
- ask one lady to answer the first question, discuss this with the others
- write final answer on the white board
- follow the same procedure for the following questions
- Answers:
  1. users of hand pump are the village men and boys, users of latrine are the quests of the village
  2. they will use the water of the old well in the orchard for drinking, cooking, etc.
  3. outside for the women in the evening and the men, in a corner of the compound for the women during the day
  4. No, because:
    - water used for all family purposes is still the old well water
    - outside the compounds there will be almost the same amount of faecesconclusion: the health situation will not improve at all
  5. involve the women in site selection of hand pump and latrine!

### ■ Closure (5 minutes)

In many WS&S projects women are only involved in hygiene education. This is much easier than involving them in site selection and design, because real important decisions need to be taken. Most men do not understand the importance of involving women in these matters. They think that site selection and design are a men's job. I do not only refer to the village men but also to the male members of your teams. Moreover sometimes you will have to convince the village women also.

Nevertheless, it is very important that you will struggle for this, at all levels. If women are not involved in site selection and design you run the risk that the women will not be able to use the hand pump and latrine at all.

The next session we will explain how we involve the women in site selection of hand pump and latrine.





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## Case study

### Where to install the hand pump and latrines?

Once upon a time a government in Jimanabad started to become worried about the health situation in the rural areas of their country. At the same time they heard that water supply and sanitary conditions were very poor in these areas.

They started a programme to supply hand pump and latrines to small villages. They did not have enough money to pay for all the costs. That is why they asked the villagers to contribute in installation costs. At the same time they realized that only the hard ware was not enough. Together with implementing the hand pump and latrine a hygiene education programme started for the women in these villages. They learned how to use the pump and latrine properly, and to carry and store the water in a safe way.

The programme became very popular and very soon many hand pumps and latrines had been installed.

After a year the government liked to see what they achieved in the villages. A team of some men and women were send to the villages to get an impression of the results. By arrival in the first village they were welcomed by the village men. Very proud they showed the government people their hand pump. The team was impressed, a very nice and clean and well maintained hand pump. It had been installed in the middle of the village near the mosque and the main road.

After seeing the pump they were showed around to see the installed latrines. Again the team got very exited, the latrines were often built in a central place between several compounds and also very clean.

After this excursion trough the village, the women of the team realized they had not seen any women yet. They asked to the village men if it would be possible to see some women as well to ask them about the hygiene education programme. After some arrangements the women were invited to go inside a compound. They were welcomed by some village women, who were very proud to show what they learned during the hygiene education sessions. The village women asked their visitors to sit down and gave them some water to drink. The team was very shocked. The water they had to drink was very dirty. "Where did you collected this water", asked one of the team women. They explained that they use an old well in the orchards. Very surprised the team asked:"But why do you not use the newly installed pump!" The village women answered that pump was only used for the men going to the mosque, they were not allowed to go there.

One of the women of the team had to go to the toilet and asked where she had to go." I can explain you, replied one of the village women, but I can not show it to you". " Why not?". "Because I am not allowed to go outside the compound during the day". But than you can not use the latrine yourself." O, no the latrines are only to be used by the guests of the village!"

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Case study questions

1. Who are the users of the hand pump and latrine in this village?
  2. What water do the family use for all the activities in the compound?
  3. Where will the men and women of the village relieve themselves?
  4. Has the programme been successful? Explain why you think so.
  5. What could have been done to prevent this situation?
-



### 1.3 Methods of involving women in site selection

#### ■ Introduction (10 minutes)

Now that we talked about how important it is to involve the women of a village in site selection of the hand pump and latrine, we would like to tell you how we do this in our approach. We have two methods one for the hand pump and one for the latrine. These are different, because the number of people involved are different. To discuss the place of the hand pump you need to reach all the village women. To discuss the site of the latrine you only need to talk with the women of one compound. That is why the method is different for both cases. To help the discussion of the site selection of the hand pump we make a village map with the women. To discuss the site of the latrines the team will visit all the compounds in the village.

#### ■ Village map (30 minutes)

- ask the women to read the activity of village map making in the manual
- show the material we use for these exercise
- ask them if they have any questions about how to carry out this activity
- ask them why it is important to do this exercise with the village women
- write the following conclusion on the white board and ask the women to write them down

**Conclusion:** it is an helpful exercise for the female community organizer as well as for the village women :

- to get an impression of the number of compounds in the village
- to get an impression of which water the women use for which activities and how far they have to walk
- to discuss the male option list of possible hand pump sites

#### ■ Compound survey (30 minutes)

- explain to the women that the most important reason of this survey is a more technical one, but at the same time it is a check for us to find out how many compounds are not represented during the women's meetings
- tell the women of your own experience how you organise and conduct the compound survey
- show the two latrine models and cotton lay out and explain how we use them in during the compound survey (if they ask more details about the technical aspects, tell them that the technicians will them about this during the cross sectional training)
- ask the women if they have any questions till so far
- ask the women to read this part in the manual
- show the compound survey form and tell them we will explain the use of this form and the others during and after the field trip
- tell them this is one of the activities they have to explain to their male team members the coming days
- ask if there are any questions how to carry out this activity



## 1.4 Organization of women

### ■ Introduction (10 minutes)

The best thing would be if our team would talk with all the women in the village. This can be done in 2 ways. One way is to gather all the women in one meeting to talk with them. Unfortunately this is impossible in the areas where we work, because most women are not allowed to leave their compounds.

The other way is to go from door to door, and visit each compound. As you can understand this will take too much time and money.

We tried to work out a way to at least try to reach as many women as possible, not direct but indirect, by asking the help of the village women. In this session we will explain how this works, with the help of role plays. We hope that by playing these roles you will get an idea how our method works in the field. First we will start with a role play. Then we will explain something about our way of organizing women and finally we end with another role play.

### ■ Role play number 1 (40 minutes)

- introduce the role play by
  - asking if they have any experience with a role play, if not explain in more detail:
  - telling the women that we made a little play/drama about the first introduction of the female community organizer to the village men
  - explaining that there are 2 roles, 1 for female community organizer and 1 for the male, the other participants will observe the play or act as village men
- distribute the different pages of hand out 1 C to the different participants
- let them read what they have to do (10 minutes)
- answer all questions with the participants individually without the other hearing anything (5 minutes)
- start the role play and observe what happens (15 minutes)
- stop the role play and ask everybody to sit down
- ask each of the participants in the role play about their first reaction (5 minutes):
  - ask the female community organizer why it had been so difficult to get a good introduction
  - ask the male community organizer why you did not want to spend too much time on introducing the female community organizer
- Conclusions:
  - it is very important to win the confidence from the village men from the very first beginning
  - prepare your male members that they will introduce you in a correct way and make time for what you have to tell to the village men

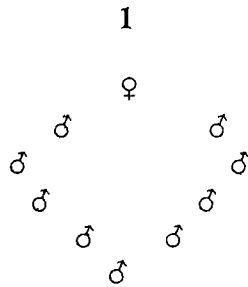
### ■ Explanation about communication channel (20 minutes)

If you want to reach the women in a village the first step will be to talk with the men of the village. This is not an important step and often not an easy one. If the village men do not trust you, you will influence your relation with the women as well. We can call them a kind of gatekeepers, if they do not trust you at all, they will not allow you to see the women. Then the activities of the whole team are over for this village, because without

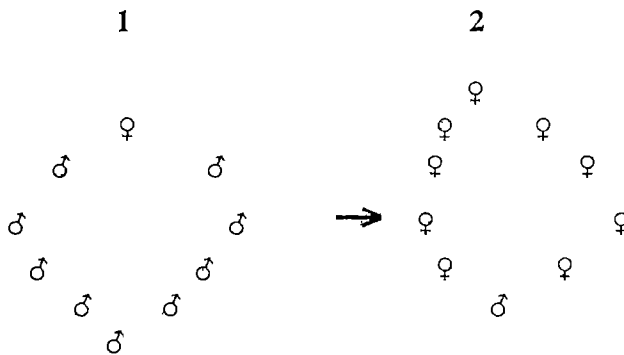




women we will not work. Because the men know that this is part of the deal they will probably let you to see the women, but they will be very suspicious. Very likely they will send a young boy to accompany you, and he will stay all meeting, just to see if you do not talk about family planning etc. As soon as they realize you do nothing harmful with the women you can start building a good relation with the women. That is why I call them gatekeepers, they decide if you can go into the compounds and they decide how much freedom the village women will get to talk with you.

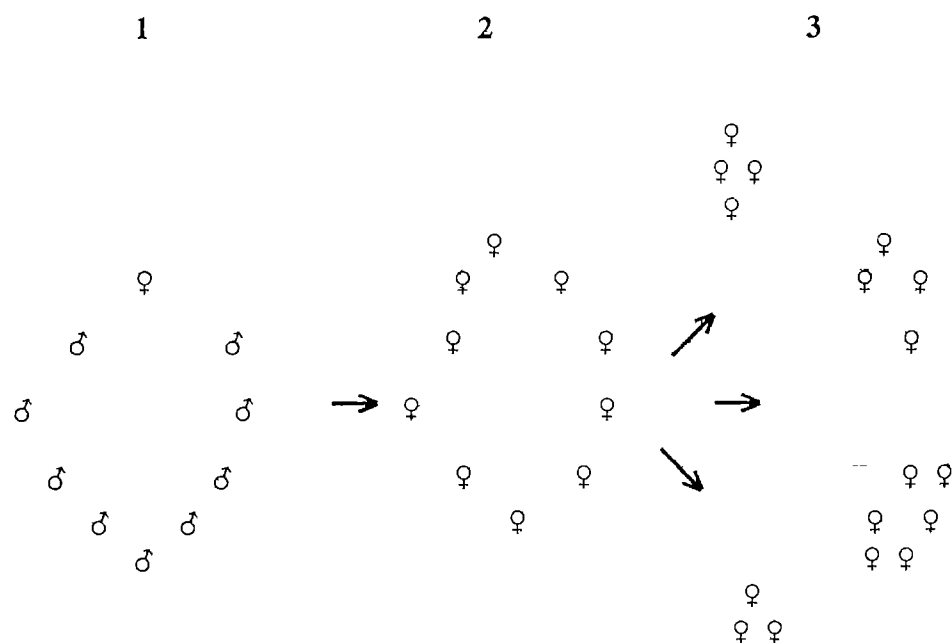


Second step is building a good relation with the women. Do not expect them to be very happy to see you the first time. They will also be suspicious, because why do you need to see them. It will probably be the first time in their life that outsiders from a programme want to speak with them. They will not be ready to listen to you, because their husbands have instructed them to tell to you that the village needs so many hand pumps and latrines. Listen to them take them serious. But at a certain moment you can say: "okay, now I have listened to you, I heard your points. Now you should listen to me as well". Introduce yourself and explain about the project.



Now that you reached the first women in the village. The project has asked to send representatives (at least 1, but 2 is better) from each compound. Probably these will be the younger or elder women of a compound, those who are allowed to go outside. It would be better to reach more women, but the team has no time to do a door to door visit. That is why you ask the women to help you. Ask them to tell everything they heard during the meeting to the other women of their compound. They will finalize the communication channel with you, they take the third step.





To check if they really tell the other women we do a little exercise with the women. This is described in the field manual.

Please read this for yourself before we start the second role play, in which we will do this exercise.

- Role play number 2 (40 minutes)
  - distribute the different pages of hand out 1 E to the different participants
  - let them read what they have to do (10 minutes)
  - answer all questions with the participants individually without the other hearing anything (10 minutes)
  - start the role play and observe what happens (20 minutes)
  - ask everybody to sit down to draw some conclusions
  - stop the role play and ask each of the participants about their first reaction (5 minutes):
    - ask the female community organizer why it was so difficult to let the village woman draw the card by herself
    - ask the village woman why she did not like to draw the compound card on her own
  - Conclusions:
    - it is very important to give the women confidence in what they can or what they can learn
    - take your time, it is a big step to hold a pencil for the first time in your life!
    - try to choose somebody of which you think she can do it
- Closure of the day
  - thank the participants for all their input during this day about women involvement
  - tell them that the next day will be about hygiene education

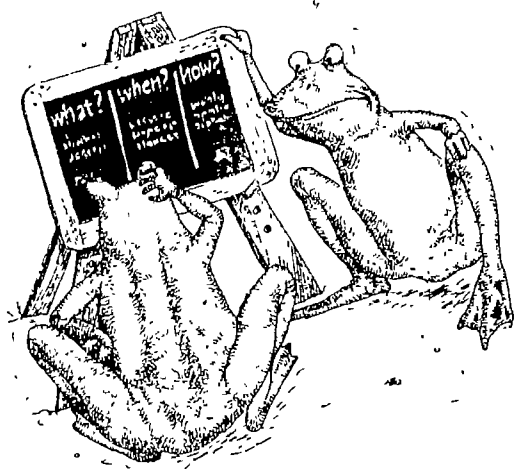


**Role play Introduction to village men**  
**Female community organizer**

You just arrived in a village to start the programme. From rumours you know that the men in this village are very reluctant to let you talk with their wives. They think that you will talk about family planning.

You know that is very important to convince the village men that you will only talk about matters related to the hand pump and the latrine.

The first meeting with the village men is bound to start and you will ask your male team members to introduce you to the village men to explain the programme of the village women.



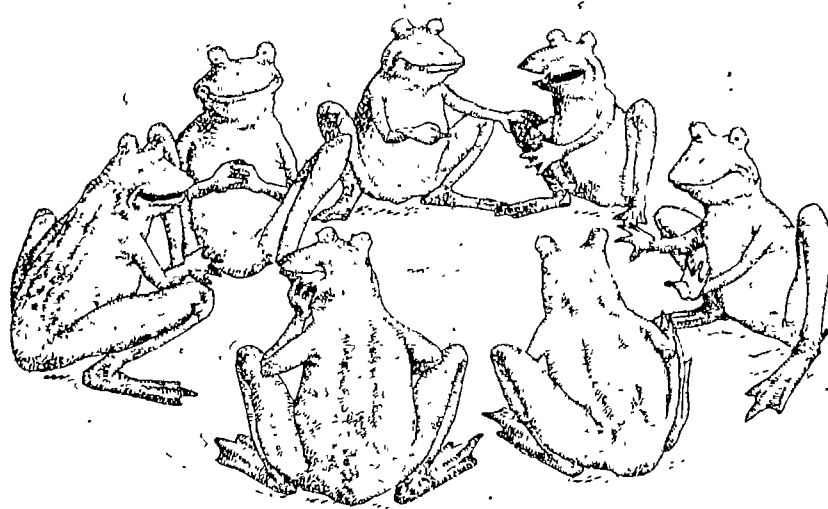
Work planning together



**Role play Introduction to village men**  
**Male community organizer**

You just arrived in a village to start the programme. It is already late and you expect many problems with the site selection of the hand pump. The village consists of very scattered compounds and it will be difficult to find a central place.

You want to start as soon as possible with this site selection to settle this problem. But just before you want to start your female team member approaches you.



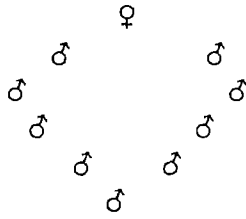




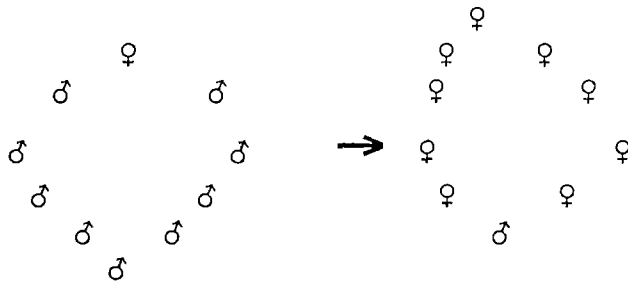
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**Communication Channel**

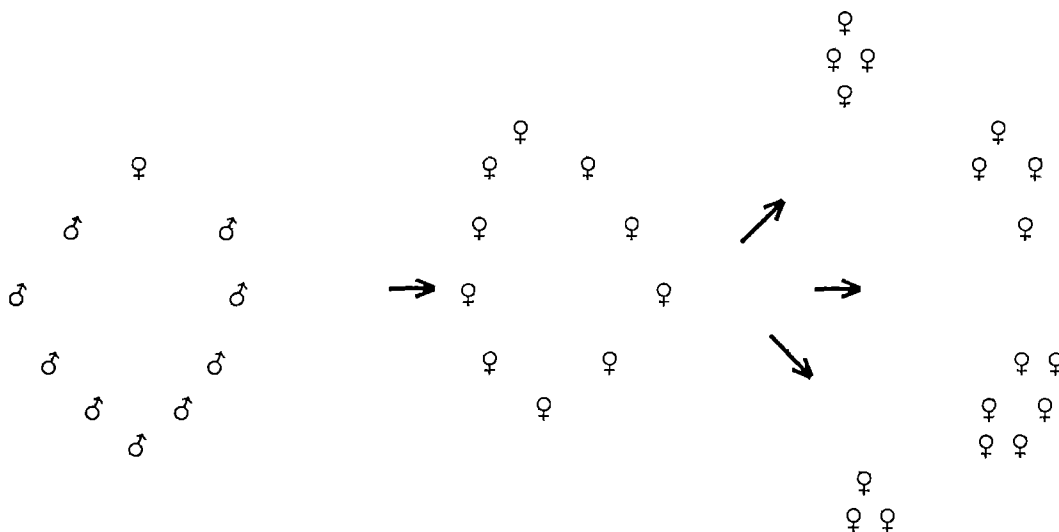
**Step 1: talk with the village men**



**Step 2: talk with representatives of village women**



**Step 3: female representatives talk with the women of their compounds:**





**Role Play communication channel**  
**Female community organizer**

You are at the end of the first meeting with the village women. You had a hard time making them listening to you. The village women were instructed by their men to tell that they at least need one hand pump in each compound.

Only after 20 minutes you were able to start with your programme. You tried to win their confidence, by telling them who you are and where you come from and so on.

You spend much time with explaining why it is so important to get the help of the women in site selection and telling the other women in the compound about it.

It is now the time to start drawing the compound cards. You know that your team members are already waiting for you. But at the same moment you know that it is important to let the women draw the compound cards themselves.



Participatory training is important



## Part 2 Hygiene Education

### 2.1 What is hygiene education, why is it important and for whom?

#### ■ Introduction (5 minutes)

It is important to start with some basic questions about hygiene education. Not only for those of you which do not have a background in hygiene education. It is good to know what we exchange our ideas of; what hygiene education is, why it is important in a water supply and sanitation programme and for whom it is important.

#### ■ Brainstorm (50 minutes)

- show the women the three newspaper prints, which the titles:
  1. what is hygiene education?
  2. why is hygiene education important in a WS&S project?
  3. for whom is it important?
- ask the women to sit together and start brainstorming about these questions for 10 minutes
- ask them to write the final outcome on the newspaper print
- hang the news paper prints on the wall, and ask for each paper one women to explain it
- using the transparency sheet from hand out 2 A, show them the definition, the conclusion and the possible target groups
- link the possible target group with the actual target groups of the project (village women and men, DIT teams, MTT teams)
- show the transparency sheet from hand out 2 B, explain:
  - the meaning of the dots
  - the impact of supply of safe water source
  - the impact of supply of safe latrine
  - the impact of hygiene education
- Conclusion: it appears from the outcome several researches, that hygiene education is the most essential part of a water supply and sanitation projects in terms of improving health
- distribute the hand outs A and B

#### ■ Closure (5 minutes)

Now we are all on the same line about what hygiene education is and why it is so important, we can continue with more detailed topics about hygiene education. During this day we will not talk about specific diseases and their transmission cycles, because that we take to much time. If you want to know more about it we can show you some literature about it.

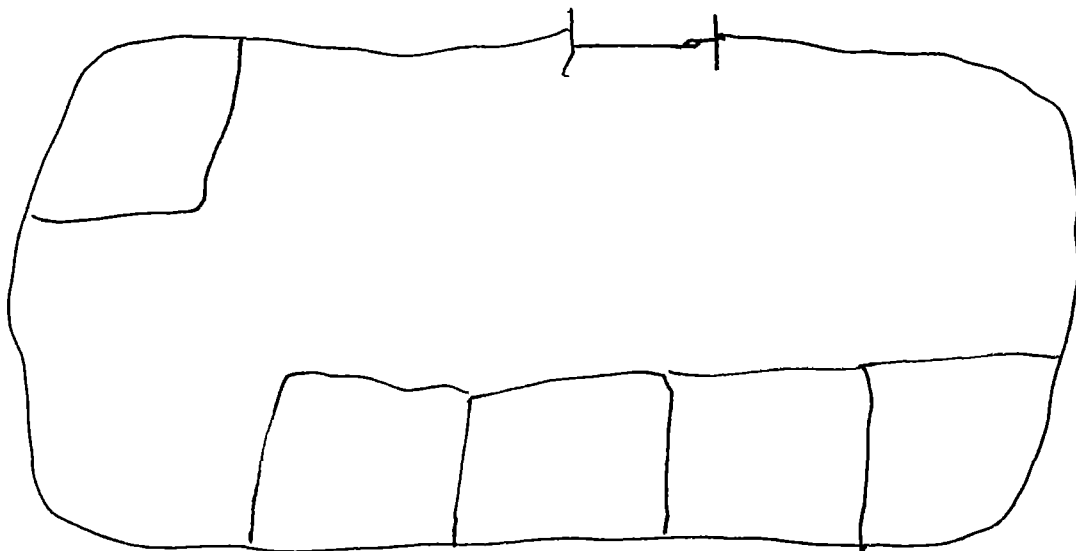


**Role play Communication channel**  
**Elder village woman**

You have been listening to a female outsider for more than an hour. She seems to have no patience and is not really interested in what you have to tell her. You think she is too young to do this kind of work, and she does not know enough about what it means to live the life in a village without gas, water and electricity.

At the same time you feel embarrassed because the young women of the village seem to understand this outsider better than you do.

All of a sudden she asks you to take a piece of paper and a pencil to draw your compound. You never had the chance before to use a pencil, you do not know how to hold it, how to use it, how to draw, etc. You feel to shy to do this in front of all the other women.







## Part 2 Hygiene Education

### 2.1 What is hygiene education, why is it important and for whom?

#### ■ Introduction (5 minutes)

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  - the meaning of the dots
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  - the impact of supply of safe latrine
  - the impact of hygiene education
- Conclusion: it appears from the outcome several researches, that hygiene education is the most essential part of a water supply and sanitation projects in terms of improving health
- distribute the hand outs A and B

#### ■ Closure (5 minutes)

Now we are all on the same line about what hygiene education is and why it is so important, we can continue with more detailed topics about hygiene education.

During this day we will not talk about specific diseases and their transmission cycles, because that we take to much time. If you want to know more about it we can show you some literature about it.



## What is hygiene education?

Hygiene education is defined as, all activities to encourage behaviour and conditions which help to prevent water and sanitation-related diseases.

## Why is it important?

Installing hand pumps and latrines without a proper hygiene education programme is like selling radios without a proper users manual.

In other words: to maximize the benefits of water supply and sanitation projects, technical and behaviour measures must go hand in hand. Benefits of hand pump will easily be lost if water is not collected and handled in such a way that it is still clean by the time it is drunk. And latrines can become a source of diseases when they are not used and cleaned properly.

## Possible target groups

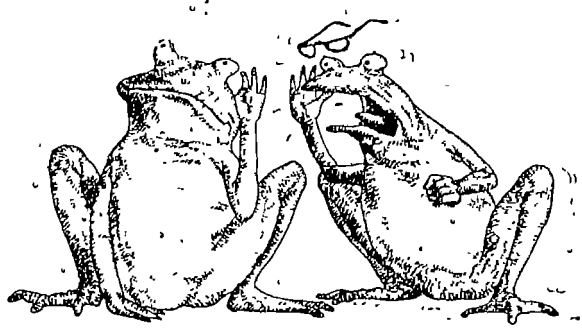
\* = target groups of our programme

### At village level:

actual users: village men \*, women \*, children  
 caretakers \*  
 mistries \*  
 school teachers  
 religious leaders  
 traditional birth attendants  
 etc.

### At several levels:

male community organizers \*  
 female community organizers \*  
 engineers \*  
 health extension workers  
 government staff  
 etc.



..... More is needed to promote hygiene behaviour .....

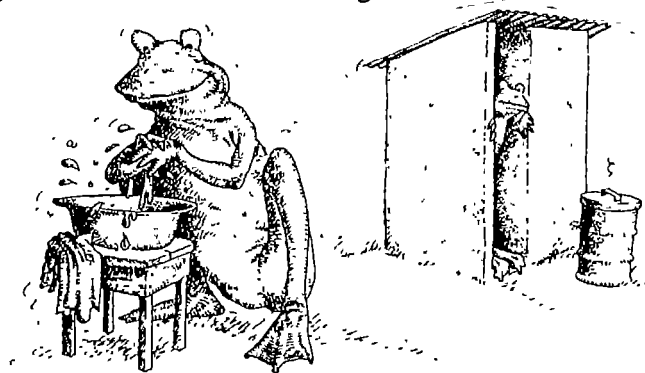


## Prevention of transmission of water and sanitation-related diseases

<i>Disease</i>	Hand Pump	Latrine	Hygiene Education		
	<i>safe drinking water</i>	<i>safe excreta disposal</i>	<i>personal and domestic hygiene</i>	<i>food hygiene</i>	<i>wastewater disposal/drainage</i>
Diarrhoeas	●●	●●●	●●●	●●●	-
Poliomyelitis and hepatitis A	●	●●	●●●	●●	-
Worm infections:					
ascaris, trichuris	●	●●●	●●●	●●	●
hookworm	-	●●●	●	-	-
pinworm, dwarf tapeworm	-	●●	●●●	●	-
other tapeworms	-	●●●	●	●●●	-
schistosomiasis	-	●●●	●●●	-	●
guinea worm	●●●	-	-	-	-
Skin infections	-	-	●●●	-	-
Eye infections	-	●	●●●	-	●
Insect-transmitted diseases:					
malaria	-	-	-	-	●
urban yellow fever, dengue	-	-	●	-	●●
bancroftian filariasis	-	●●●	-	-	●●●

Based on: WHO (1983), Esrey et al (1990) and Cairncross and Ouano (1991).

Importance of preventing disease transmission: ●●● high ●● medium ● low to negligible



Hand washing and safe excreta disposal are important practices to help prevent water and sanitation-related diseases.



## 2.2 Relation between water, sanitation and health

### ■ Introduction (5 minutes)

People get sick through all kinds of different reasons, and they stay healthy because of all kinds of different reasons. We are interested in those reasons which are related to water and sanitation. To get a clear picture about the interrelations between water, sanitation and health is very difficult. However it is very important, because your project activities are based on these relations. That is why we will do an exercise which tries to give a simplified picture of these relations.

### ■ Mouth-Faeces exercise (30 minutes)

- draw a mouth on the white board
- ask what items one can put in the mouth which can make you sick (use hand out as checklist)
- ask which and how these items can be contaminated by faeces
- draw linkages between the different items which affect each other
- explain that in a WS&S project we try to interrupt one or more of these linkages between mouth and faeces
- ask which interventions they can think of to interrupt these contamination linkages
- write the interventions down with arrows to the related linkage (see hand out)
- draw the following conclusions:
  - it is a very complicated system of how people get sick through contamination
  - it is impossible to carry out all interventions at the same time
  - it is a very complicated matter of choosing interventions which will be most effective
- distribute hand out 2 D

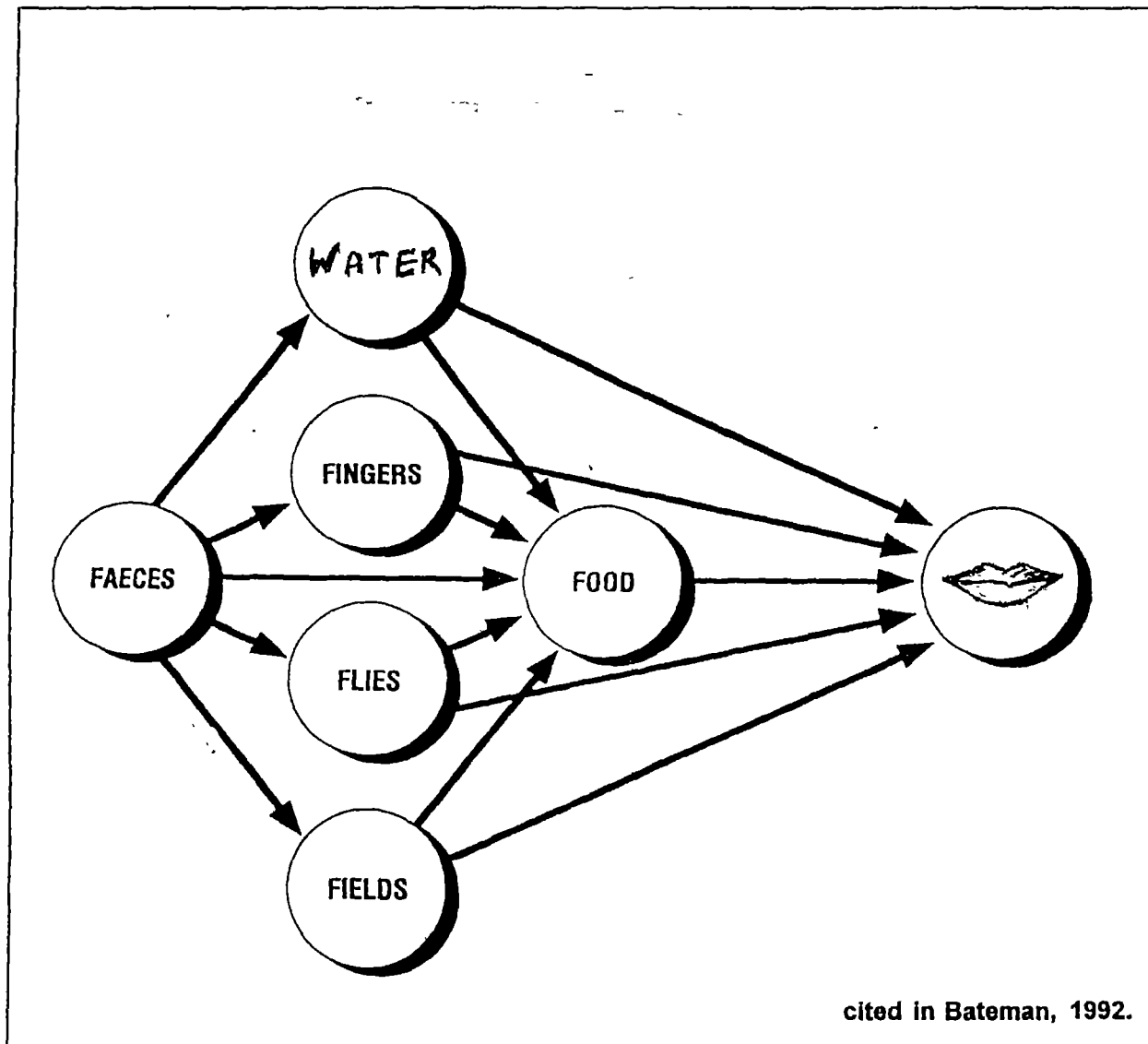
### ■ Closure (5 minutes)

tell the women that the project had to make a selection of interventions, but about these choices we will talk later on.





Transmission routes of Diseases from Excreta and possible interventions



 **Conclusion**

- it is a very complicate system of how people get sick through contamination
- it is impossible to carry out all interventions at the same time
- it is very complicated matter of choosing interventions which will be most effective



## 2.3 Difficulties of changing hygiene behaviour

### ■ Introduction (5 minutes)

Many times community organizers, whether male or female, get blamed by other team members because the villagers do not what they have been motivated to do. Especially with trying to change hygiene behaviour you have to prepare yourself for many disappointments. At least it will help you if you realize how complex it is for people to change their behaviour. We will first start with a role play, after that we will analyze this role play to sort what is needed before somebody will actually change her/his behaviour.

### ■ Role play (50 minutes)

- distribute the different pages of hand out E to the different participants
- let them read what they have to do (10 minutes)
- answer all questions with the participants individually without the other hearing any thing (10 minutes)
- start the role play and observe what happens (20 minutes)
- stop the role plays and thank the actors with a nice applause (15 minutes)
- ask everybody to sit down to start the analysis

### ■ Analysis (20 minutes)

- ask each of the participants about their first reaction (10 minutes):
  - ask the female community organizer why she was so disappointed in the results of the hygiene education programme
  - ask the village woman what she all tried to do and why she felt a lack of understanding from the side of the female community organizer
- explain that: most people think that as soon as the villagers understood why they have to change their hygiene behaviour, they will actually change it. Unfortunately this is not the case. Let us try to put down some general obstacles for villagers why they do not change their behaviour.
- start brainstorm and write the outcome on the white board: general obstacles, lack of in this role play:
  - money
  - time
  - power

but in other cases it can also be:

- lack of skills
- no consensus in the village concerning communal actions which need to be taken
- no facilities
- wrong believes
- what will my mother (in law)/ father/ husband/ neighbours/ etc. think of it
- tell the participants that it can happen that:
  - women will only use pump water for drinking and cooking purposes not because they do not know, but because it will take too much time (the pump is further away than the old well)
  - women will not improve their water storage place not because they do not want but because they do not get the money from their husbands to pay for mud pots with nice lids



- women will not take the small children to the latrine and wait until they are ready not because they do not understand that this is necessary but because they simply have not the time to do this
- etc.
- show the transparency of hand out 2 F, and explain the differences between the three groups:
  1. point 1 is about motivation of the people
  2. point 2 is about enabling of the people
  3. point 3 is about reinforcement of this changing process
- **Conclusion:** to change your own hygiene behaviour, often knowledge, attitude and motivation are not enough. Many other obstacles need to be taken before hygiene behaviour can be put into practise, obstacles which you cannot remove.
- distribute hand out 2 F

■ **Closure (5 minutes)**

Do not see it as your own failure if people do not follow your advice or suggestions, because there may be so many reasons out of our control. The only thing you can do is to link your messages as much as possible with the existing situation in the village, with the prevailing beliefs, with the possibilities the women have, etc. The next session will deal about the intervention priorities, main messages, target group and methods of our hygiene education programme.



**Role play Changing Hygiene Behaviour  
Female Community Organizer**

You are a female community organizer from the Water and Sanitation Cell of the Local Government and Rural Development. You started your hygiene education programme in the Union Council Viala Duki 2 months ago. The women of the village Ponga were very enthusiastic. They were very interested in everything you told them. They promised to use only drinking water for cooking and drinking purposes and to improve their water storage place.

You have just arrived in Ponga and by observation you have come to the conclusion that the women do not use the water for cooking purposes, and they did not improve their water storage place at all.

You are about to meet the women representative. You want to tell her how disappointed you are. You also want to say to her that she has to change this situation as soon as possible.





**Role Play Changing Hygiene Behaviour**  
**Village woman representative**

**You are the eldest women representative in Ponga. You and the other women have worked very hard to prepare for the arrival of the female community organizer. You have cleaned the hand pump area with a sweeper. Although the pump is rather far from your compound and your family is rather big, you take only water from the hand pump for drinking purposes. You also have also tried to improve the water storage place, but your husband did not agree to spend money on new vessels with lids. That is why you cleaned the place and the old vessels. You have told to all the other women to gather in your compound. You have prepared tea and a meal for her.**

**You feel very proud about all these achievements. You want to tell the female community organizer about these activities.**



What is needed to change hygiene behaviour?

**1. To make people want to change hygiene behaviour:**

- knowledge about:
  - relations between water, sanitation and health
  - advantages of hand pump and latrine
- change believes about:
  - what is dirty, what is clean
  - what causes diseases

**2. To make people able to change hygiene behaviour:**

- from outside the village:
  - hand pump/ latrine programme
  - hygiene education
  - subsidies
  - supply of hard ware
- from inside the village:
  - money
  - power
  - time



Changing health behaviour is more than increasing people's knowledge.

**3. To make people more motivated to change hygiene behaviour:**

- from outside the village:
  - motivation from health campaigns
- from inside the village:
  - attitude of family members and neighbours
  - behaviour of family members and neighbours

**👉 Conclusion**

In changing hygiene behaviour many factors are involved. Most of the points under 2 and 3 you are not able to change being an outsider, only visiting the village for a short period of time.

As a community organizer you can start awareness raising, provide the people with knowledge, start discussions etc. But you cannot change time, power, money, priorities or mentality of the neighbouring villages.



## **2.4 Focus of our hygiene education programme: priorities, main messages and target groups**

- **Introduction (5 minutes)**
  - ask the women to take the hand out D page 2 in front of them
  - **Explain the following:**

All these points are important if you want to improve the overall health situation of a village. But from last session we learned that it is impossible to do everything at the same time. Not only for our team it is impossible to do everything, but also for the villages. We have to set priorities. Choose those interventions, which are:

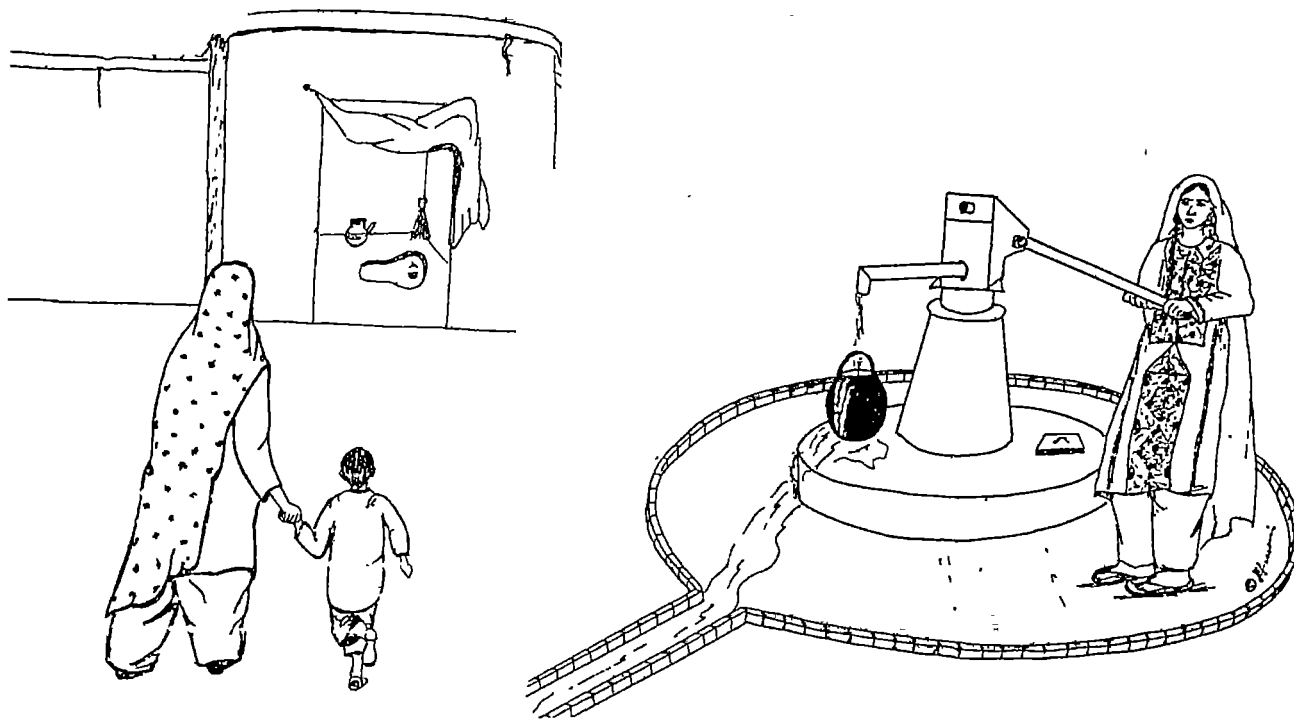
    - are most effective
    - which are most closely related to the installation of the new facilities
    - are within our scope of time, money, staff, etc.
- **Choices of the project about main interventions, messages and target groups (40 minutes)**
  - explain that the first two choices were already made a long time ago, which is the installation of hand pump and latrines. The idea behind the hardware is, if you want the people to change their behaviour you should provide them at least with the most important facilities to do this.
    - 1 **The hand pump has the following effects:**
      - the community will be able to drink not contaminated water
      - the community will use more water, because the source is nearer and the water is easier to collect

These second effect is often forgotten, but it is also very important in terms of cleaning food, kitchen utensils, children, hands etc. with more water and/or more often.
    - 2 **The latrine: from experience all over the world is learned that improving a water source without improving sanitation conditions the effects are only little. That is the reason that the installation of a hand pump should go together with installing latrines as well. This will be more difficult because in general the communities will be more interested in a hand pump than in a latrine!**
    - 3 **Safe use and maintenance of the facilities: if you provide people with new facilities, you should at least explain how they can should be used**
      - in a correct way: that the facilities will not be damaged
      - in a safe way: that they know how to keep it clean and how health risks can be avoided
      - maintenance: you want the facilities being used for a long time, so you need to learn the people how to maintain and repair them
- **Closure**
  - distribute hand out 2 G, page 1 and explain that these are the choices we made for the interventions of our programme
  - turn to page 2 of hand out G: here are the same interventions translated in the most important messages we want to put across in the communities, related to the specific target groups



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## Interventions of our programme



### Interventions

- 1 **Hand pump:**
    - the community will be able to drink not contaminated water
    - the community will use more water, because is the source is nearer and the water is easier to collect
  - 2 **Latrine:** from experience all over the world is learned that improving a water source without improving sanitation conditions the effects are only little. That is the reason that the installation of a hand pump should go together with installing latrines as well
  - 3 **Hygiene education:** if you provide people with new facilities, you should at least explain how they should be used in a safe way: that they know how to keep it clean and how health risks can be avoided
  - 4 **Operation and maintenance:**
    - use facilities in a correct way: to avoid misuse and damage
    - use facilities in a durable way: for longer lasting facilities training in maintenance and repair, supply of spare parts and tools
-





**Main hygiene education messages of our programme**

■ **For the women**

**Safe Water:**

- women will use the pump and the add-on facilities properly
- women will know why and how one should keep the pump area clean (no washing on the slab, no stagnant water in the drain, no animal dung) and will actually do it
- women will understand the difference between well/stream water and pump water and that they will only use pump water for drinking and cooking purposes
- women will store drinking water in a separate container, if they use water from other sources in the compound

**Safe latrine:**

- women and children will use the latrine during day and night, in summer and winter
- women nor children will throw stones in the latrines
- women and children will flush with enough water directly after defecation
- women will wash hands with soap after defecation and after helping little children or babies



Hygiene education will be more effective with a clear focus.

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**Main hygiene education messages of our programme****■ For the men**

Apart from the programme of hygiene education for women it is essential in this cultural context to execute a special programme dedicated to men. It is for women impossible to teach their husbands how to use a latrine or a pump in hygienic way.

Before and during construction of the pump and latrine the men should receive some hygiene messages about proper usage of both facilities. The hygiene messages should form an integrated part of the general group meetings organized by the community organizer.

**Safe water**

- men will understand that you can not use the slab or apron to wash cloth or water the animals, because it will damage the slab and contaminate the water
- men will consequently understand and are willing to discuss the need of add-on facilities if they want to use the water for their animals or if the women want to wash their clothes at pump site
- men will understand the need of a good soak-away system (soak-pit or agricultural purposes) and will build a soak-pit if necessary
- men will understand that it is also important to store the water in a save way

**Safe Latrine**

- men and elder sons will always use the latrine when they are in the village, day and night, summer and winter
- they will not throw any stones in the latrine
- they themselves will directly flush the latrine with enough water after using it, because they understand that this is important from the hygiene point of view but also because it starts smelling
- they will wash their hands after defecation with soap

**■ For the children**

The children are not a direct target group. We hope to reach them indirectly trough their parents. For the smaller children and the daughters we try to make the mother responsible. The fathers are being sensitised to convey the messages to the elder sons.

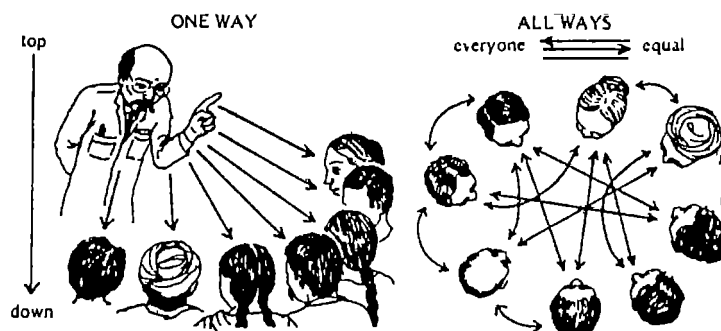
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## 2.5 Methods of our approach

### ■ Introduction (5 minutes)

Now we now on which subjects we focus, we can start the next question. What methods do we use to get this messages across. We tried to use those participatory methods. Participatory simply means that it is not a one way but a two way exercise.



Source: Teaching Aids at Low Cost.

Draw this picture on the white board and explain the difference between one and two-way communication. Two way communication is important because of several reasons:

- the community organizer can find out what the women believe, what they already know, what their problems are etc.
- the community organizer can easier check if the messages are understood or not
- it is an easier way to keep all the women concentrated

### ■ Two pile and gap method exercise (1 hour 15 minutes)

- ask the women which experiences they already have with participatory methods, if they only mention materials instead of methods try to explain the difference
- ask the women to read the pages in the manual about the two pile method (safe water use, page 12 - 14) and the gap method (safe water storage, page 24 - 26)
- if the women have no experience with this kind of methods, give a short demonstration of how we use these methods in the village
- ask them if there are any questions
- distribute the questions of hand out 2 H page 2 and ask the women to answer the questions individually



- discuss the outcomes:

#### Two pile method

1. take water for drinking and cooking purposes only from hand pump  
take water for washing/bathing/cleaning from a water source which is most convenient for you
2. Women will know: that preferable they should use pump water for all activities, but if this causes too much trouble they can use other sources except for drinking and cooking purposes  
Women will do:
  - make up their mind about for which activities they will use which water
  - actually use only pump water for drinking and cooking purposes in the future
3. It is a participatory approach because the communication is two ways:
  - village women explain the difference between well/stream and hand pump (check for the community organizer if they understood former messages)
  - the village women give information about present water supply situation
  - women divide the cards themselves and present the outcome
  - women discuss their own situation and make up their own mind
4. Advantages of the women doing the sorting:
  - make use of what they already know
  - check the possibility of possible wrong beliefs
  - let them do the thinking, which makes it easier for them to remember
  - because they do it together they can help each other to make their mind clear
5. To link this exercise to their own reality, that it is not just that they know how it should be, but that they also realise what this means to their own situation, to make the gap between knowledge and practice smaller (may be they will decide to do the cleaning of clothes and children with stream water for example, because it needs much water and the stream is nearby)

#### Gap method:

1. Women understand:
  - that clean water from hand pump can get easily dirty during storage
  - the importance of clean water storage vessels and place
  - if they use different water sources, they will have to make difference between these two during storage
 Women will do:
  - keep drinking water in a separate container
2. To make the women realize:
  - how a bad storage place looks like, and why this is bad
  - how a good storage place can look like
  - what is needed to make a good storage place
3. To link this exercise to their own reality, that it is not just that they know how it should be, but that they also realise what this means to their own situation, to make the gap between knowledge and practice smaller (for example, they cannot use anything else than goatskins, but they will use these skins not more than a year and they will clean them more regularly)





- draw the following conclusions
  - during both methods the women have to think themselves
    - two pile method: is a discussion with the help of cards, making use of the knowledge they already have to help them analyze
    - gap method: is a brainstorm with the help of posters, helping them to think about possible improvements and actions need to be taken
  - at the end of both methods you transfer the general messages of what you should do and can do in general, to a very practical action plan what these women can do in their village and their compound. This is very important, because it will make it easier for them to really do something with what they just have learned.
- distribute hand out 2 I
- explain that this is the overview of all hygiene education methods for both men and women
- let the women read the overview of the male hygiene education messages and methods
- explain why these male messages have been chosen
- explain the male methods in short
- Closure of the day (5 minutes)
  - this is the end of our hygiene education day, you have heard about what the most important messages in our approach are and why we use which methods.
  - distribute hand out 2 J, and explain in short what these traps are
  - explain that we tried to avoid these traps, but some were easier to avoid than others
  - tomorrow we will prepare the teaching sessions for your male team members about female involvement and hygiene education.



■ Questions about the two pile method

1. What are the most important message you want to get across during this activity?
  
2. What is the expected output in terms of what will the women know and what will the women do?
  
3. Why can you call this a participatory method?
  
4. Why is it important to let the women themselves sort out which cards should be on which pile?
  
5. Why is it important for the women to sit together and make up their mind about their own situation?

■ Questions about the gap method

1. What is the expected output of this activity, in terms of what will the women know and what will they do?
  
  2. What is the reason of making use of two situations, one before and one after?
  
  3. Why is it important to go to the actual storage place in the compound and do the brainstorm?
-



## Methods and materials for female hygiene education

message	method	materials
keep the pump area clean (no stagnant water, no animal dung)	demonstration at pump area	
drink only water of the pump	two pile method	<ul style="list-style-type: none"> <li>- 12 cards with pictures of all possible activities for which you use water</li> <li>- hand out: paper with on one side pump with related activities and on other side well/stream with related activities</li> </ul>
separate storage of drinking water	gap method	<ul style="list-style-type: none"> <li>- two pictures of water storage: a good way and a bad way</li> </ul>
women and children should always (day and night, summer and winter) use the latrine	explanation by speech and asking questions and demonstration at a latrine site	<ul style="list-style-type: none"> <li>- flip chart with drawings and trainer notes</li> <li>- hand out: little poster to hang on a wall with how to use the latrine</li> </ul>
never throw stones in the latrine	as above	<ul style="list-style-type: none"> <li>- plastic model of the latrine with the pits</li> </ul>
flushing with enough water directly after defecation	as above	<ul style="list-style-type: none"> <li>- the flip chart and demonstration</li> </ul>
clean the latrine	as above	<ul style="list-style-type: none"> <li>- flip chart and demonstration</li> </ul>
wash your hands and the hands of your children after defecation with soap	demonstration	<ul style="list-style-type: none"> <li>- local materials</li> </ul>



## Methods and materials for male hygiene education

message	methods	materials
do not use the slab or apron to wash cloth or water the animals, because it will damage the slab and contaminate the water	discussion with help of posters with wright and wrong situations	<b>Posters showing:</b> <ul style="list-style-type: none"> <li>- pump with woman washing cloth on slab</li> <li>- pump with woman cleaning mud pot on the slab</li> <li>- boy with animals near the pump to water them</li> <li>- pump with cracked slab and stagnant water and no drainage system</li> <li>- woman washing the drainage with a sweeper</li> <li>- boy with donkey near the slab to fill his water vessels</li> <li>- safe water storage place</li> <li>- risky water storage place</li> </ul>
if you want to use the water for your animals or if ♀♀ want to wash clothes you need to build an animal trough or wash stand		
you need of a good soak-away system (soak-pit or agricultural purposes)		
it is important to store the water in a save way		
use the latrine always when they are in the village, day and night, summer and winter	flip chart with drawings and trainer notes	<b>Posters showing:</b> <ul style="list-style-type: none"> <li>- man working in orchard near to village with feeling he has to go to latrine</li> <li>- man walking in compound walking towards latrine</li> <li>- latrine with closed curtain</li> <li>- man flushing latrine</li> <li>- lotas with needed water for flushing and cleaning</li> <li>- man washing hands with soap</li> <li>- man sending son to latrine</li> <li>- man telling his son to wash hands with soap after defecation</li> </ul>
do not throw any stones in the latrine		
flush the latrine with enough water directly after using it, because it starts smelling and is not hygienic		
wash your hands after defecation with soap and teach your sons to do the same	hand washing demonstration	





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## Common traps of trying to change hygiene behaviour:

- **The trap of 'doing without thinking'**

This happens when hygiene educators lose themselves in designing, planning and spreading messages without really thinking out why. This leads to being busy all the time and very tired at the end of the day, without working towards successful results.

- **The 'empty vessel' fallacy'**

This relates to the wrong idea that all you need for a successful health education programme is to pour health information into the empty minds of eagerly waiting target population.

- **The fallacy of the thinking of methods being 'always good and always bad'**

This comes into play when hygiene educators propagate only one or two methods, while rejecting the others. Thus, some educators may be enthusiastic about group processes, whereas others swear by video-clips or person-to-person communication. In fact there is nothing inherently superior or inferior about any method in hygiene education. Each has a potential, and a choice has to be made about the best mix in a particular situation.

- **The fallacy of 'the more, the better'**

This fallacy relates to the wrong idea that positive outcomes of health education will increase proportionately with more audio-visual tools, more time, more contacts, more radio coverage, etc.



Changing health behaviour is more than increasing people's knowledge.

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## Part 3 Teaching topics

### 3.1 Teaching introduction

#### ■ Introduction

Today you will prepare yourself to teach some of what you just have learned to your male team members. Before telling which topics, how and by whom, I first want to tell something about teaching in general.

#### ■ Explanation

Explain the following with the help of transparency sheet of hand out 3 A:

- each teaching topic should consist out of three parts:
  1. an introduction
  2. an execution
  3. a closure
- the introduction consist of:  
an introduction to the topic, a motivation of telling about the topic, mentioning the methods and time
- the execution: is the main part in which the topic is treated, this can be in the form of a lecture, an exercise, a role paly a case study, a brainstorm etc.
- the closure: is a short summary in which the main messages and conclusions are repeated

#### ■ Closure

- distribute hand out 3 A
- tell the participants to follow this set up, it will make it easier for you as trainer and it will be more effective for the participants.



Set up of a teaching session:

- **Introduction:**  
introduction to topic, link with former sessions  
reasons why this topic will be covered  
procedure, methods being used  
what is expected from participants  
time needed
  
- **Execution:**  
lecture, brainstorm, role play, case study, demonstration, etc.
  
- **Closure:**  
conclusions  
summary of most important messages  
link with coming session  
distribution of hand outs





What topics do you have to teach to your other team members?

	Topics	Methods	Requirements
	1. introduction: overview of female activities in the first 6 steps	lecture	transparency 3 B hand out 3 B
	2. Why is women involvement important in site selection of hand pump and latrine?	Case study with questions and discussion about why it is important Lecture about how: option list and compound survey	hand out 3 C answers
	3. Why does hygiene education play an important role in our programme, and why are also the men involved?	Exercise about the relation between project interventions and the impact on health	white board hand out 3 D
	4. Why is changing hygiene behaviour so difficult?	Brainstorm about what is needed to change hygiene behaviour	newspaper sheets transparency 3 E hand out 3 E
	5. Some examples of hygiene education methods	Demonstration and explanation of the gap method and two pile method	hand out 2 F 2 pile cards gap method posters flip chart

Topics from the technical section:

1. Parts, functions and operation of the Afridev hand pump, signs of non-functioning
2. Parts, functions and operation of the two latrine options, selection criteria
3. Technical site selection criteria for hand pump and latrine

Topics from our male community organizers:

1. overview of male activities, highlighting the first meeting and village walk
2. Why is the contract so important and what is the contract about?
3. What can the female community organizers expect from their male team members in terms of support in site selection of hand pump and latrine?
4. What can the female community organizers expect from their male team members in terms of support in hygiene education, what methods do the male use.





## 3.2 Introduction: overview of female activities

- **Introduction (5 minutes)**
  - we want to tell you something about what we have learned in the last 2 days
  - the time is too short to tell you everything, that is why we made a selection of topics
  - first we will show you an overview of the female activities in our approach, linked to the activities of the technical and the male section
  - next we will highlight some of those activities
  
- **Overview (25 minutes)**
  - take transparency sheet 3 B and explain the following:
  - step 1 for the women has 3 main topics
    - site selection from male option list; to make this easier we make a village map with the women (show some of the pictures, which we use with village map exercise)
    - safe water use; to explain to the women to use only pump water for drinking and cooking purposes, but we will show you this later on
    - establish communication channel; not all the women can join our meetings that is why we ask the village women to help us. First we ask them to draw their compound (show compound cards), then we ask the women to go to each family in their compound to brief them about what they heard at the meeting, for step 1 this means that they will ask the opinion from the other women about the best option for the hand pump
  - step 2 for the women has again 3 main topics
    - feedback of on siting discussions; we ask each female representative to tell what the women of her compound selected as the best option, to come to a final agreement
    - introduction of add-on options; we show this poster to the women and ask if they are interested in any of these facilities, stressing the point that their husbands have to pay for it, if they are we will tell our male team members
    - safe water storage; to explain the women how they can store the water in a safe way, but we will show you this later on
  - step 3 for the women has 1 main topic:
    - introduction of latrine concept and policies: this is about the same as for the men, we introduce at the same time the coming compound survey
  - step 4: is the compound survey in which we gather the following information:
    - we check if the women of the compound attend our meeting, if they don't we ask for the reason and try to find a solution
    - we ask the number of households and family members
    - we check if there is a compound well in use
    - we measure the size of the compound using our footsteps
    - we ask the women how many latrines they want and where, using the cotton lay-out
    - after we have done this for all compounds which showed interest in the latrine programme we will hand the form over to our male team members
  - step 5: we organise a visit to pump area to show how to use the pump, how to clean the pump area, we explain the sign of non-functioning and we tell about the caretaker
  - step 6: we organise a demonstration at the site of a just constructed latrine to show



(use the flip chart while telling) how to use it, how to clean it, how to wash your hands.

- **Timing:** I would like to compare our activities with those of the other 2 sections in terms of timing. As you can see step 1 in our list of steps has biggest number of activities and will take much more time than the rest of the steps. This in contrast with the technical and male involvement section. From step 3 on it is the other way around. A major problem between the section will be the timing. We with the women in step 1 probably need more time than you do, it is very important that you wait for us, before moving to another step with the men. End with conclusion on transparency.
- distribute hand out 3 B
- **Closure (5 minutes)**
- these are the main activities of our programme in short, we will discuss the following activities in detail:
  - site selection of hand pump and latrine, why it is important
  - hygiene education; why is it important and why are men involved
  - hygiene behaviour; why is it so difficult to change
  - hygiene education methods; two pile and gap method
- any questions?



## Major activities of female involvement:

### Step 1

- site selection
- safe water use
- communication channel

### Step 2

- feedback site selection discussion
- add-on options
- safe water storage

### Step 3

- latrine concept and policies

### Step 4

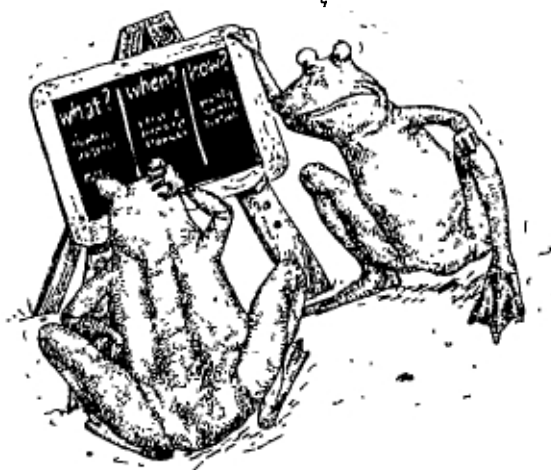
- compound survey

### Step 5

- visit to hand pump

### Step 6

- visit to latrine



Work planning together.



## Conclusion

Because the time needed to finish each step differ for each sections. Timing between the sections will be difficult, the women will probably need more time in the first step, the men in the second and the technicians in the following. Let us all take in mind that we need to wait for each other!



### 3.2 Why is women involvement important in site selection of hand pump and latrine?

#### ■ Introduction (5 minutes)

After this general overview of the female activities, we want to talk with you in more detail why to involve women in site selection of hand pump and latrine. This is not an easy task. Not for men, neither for the women. In this society women are not involved in issues like this. Just because it will take much time and energy from all sides, we want to talk about why it is needed. We like to discuss this with the help of a case study.

#### ■ Case study (50 minutes)

- distribute the case study with the questions (hand out 1 B, page 1 and 2)
- ask the participants after 15 minutes to start answering the questions individually
- ask the participants after 15 minutes to finish
- ask one participants to answer the first question, discuss this answer and write the answer on the white board
- do the same for the following questions

#### ■ Closure (5 minutes)

In many WS&S projects women are only involved in hygiene education. This is much easier than involving them in site selection of design. Most men do not understand the importance of involving women in these matters. They think that site selection and design is a men's job. Moreover, sometimes we have to convince the village women also. Nevertheless it is very important that you will struggle for this, at all levels. If women are not involved in site selection and design you run the risk that the women will not be able to use the hand pump and the latrine at all.



Our aim: hygienic practices, sustained over time.





### **3.3 Hygiene education, why is it important?**

#### **■ Introduction ( 5 minutes)**

The overall objective of our program is to improve the health situation of the people in rural Baluchistan. People get sick for trough all kind of different reasons, and they stay healthy because of all kind of different reasons. A hand pump and latrine can help to stay healthy but it is not enough. To show you this we will do an exercise to show how water is related to sanitation and health.

#### **■ Mouth - Faeces exercise (30 minutes)**

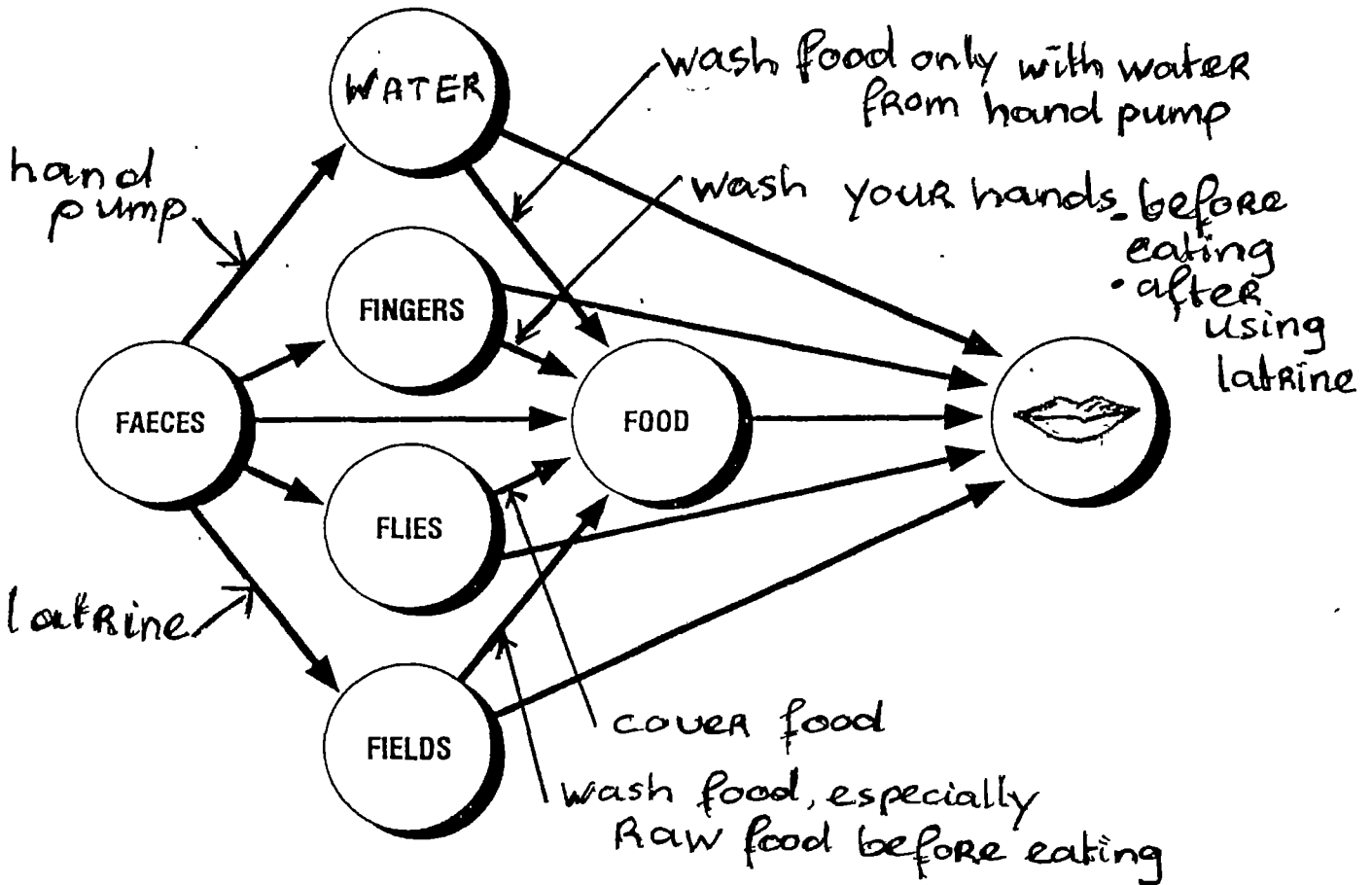
- draw a mouth on the white board, and ask what kind of items you put in your mouth which can you make sick (use hand out as checklist)
- ask which if and how, these items can be contaminated by faeces
- draw linkages between the different items which effect each other
- ask which interventions are required to interrupt these contamination linkages
- draw the following conclusions:
  - it is a very complicate system of how people become sick trough contamination of water
  - therefore it is also very complicated matter of choosing those interventions which will be most effective
  - installing a hand pump and a latrine will stop only a few of these linkages
- conclusion: to maximize the benefits of water supply and sanitation projects, technical and behaviour measures must go hand in hand. Benefits of hand pump will easily be lost if water is not collected and handled in such a way that it is still clean by the time it is drunk. And latrines can become a source of diseases when they are not used and cleaned properly. Hygiene education is meant to help establish the link between improved facilities and user practices.

#### **■ Closure**

- distribute the hand out 3 C
- explain page 2: the outcome of several researched showed that hygiene education has a very big impact on the prevention of sanitation related diseases



Transmission routes of diseases and possible interventions



**Conclusion**

To maximize the benefits of water supply and sanitation projects, technical and behaviour measures must go hand in hand. Benefits of hand pump will easily be lost if water is not collected and handled in such a way that it is still clean by the time it is drunk. And latrines can become a source of diseases when they are not used and cleaned properly.

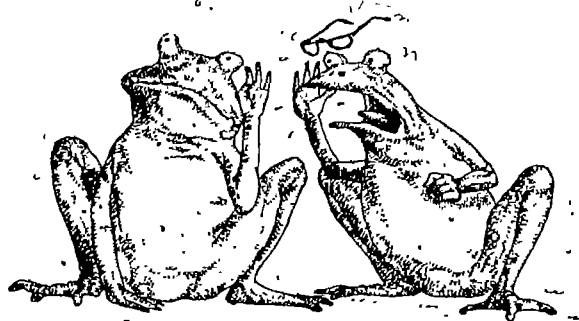


**Prevention of transmission of water and sanitation related diseases**

Disease	Pump	Latrine	Hygiene	Education	wastewater disposal/drainage
	safe drinking water	safe excreta disposal	personal and domestic hygiene*	food hygiene	
Diarrhoeas	●●	●●●	●●●	●●●	-
Poliomyelitis and hepatitis A	●	●●	●●●	●●	-
Worm infections:					
ascaris, trichuris	●	●●●	●●●	●●	●
hookworm	-	●●●	●	-	-
pinworm, dwarf tapeworm	-	●●	●●●	●	-
other tapeworms	-	●●●	●	●●●	-
schistosomiasis	-	●●●	●●●	-	●
guinea worm	●●●	-	-	-	-
Skin infections	-	-	●●●	-	-
Eye infections	-	●	●●●	-	●
Insect-transmitted diseases:					
malaria	-	-	-	-	●
urban yellow fever, dengue	-	-	●**	-	●●
bancroftian filariasis	-	●●●	-	-	●●●

Based on: WHO (1983), Esrey et al (1990) and Cairncross and Ouano (1991).

Importance of preventing disease transmission: ●●● high ●● medium ● low to negligible



..... More is needed to promote hygiene behavior .....



### 3.4 Why is changing hygiene behaviour so difficult?

#### ■ Introduction

Now we all know that hygiene education is very important, we want to show to you why it is so difficult to change hygiene behaviour.

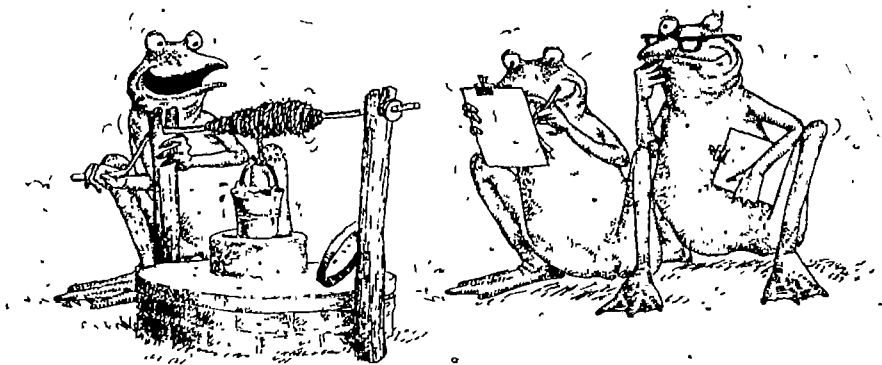
#### ■ Exercise (15 minutes)

- ask how many people in the room are smokers
- ask how many are former smokers
- ask why smokers continue to smoke, write these down on a news paper print titled 'Why people continue'
- take another newsprint entitled 'Why stop' and ask what are the reasons for stopping, and write the answers down (make sure the smokers have a chance to contribute to the 'Why stop' list)
- point out that even smokers know why they should stop
- ask the whole group if knowledge is enough to make people change a harmful health behaviour and why/why not
- ask the group to think of some harmful hygiene behaviours
- ask for one or two examples from the group
- lead a brief discussion on how easy or difficult it would be to change that behaviour
- show transparency of hand out 2 F, and explain the different factors needed to change hygiene behaviour
- ask if there are any questions
- distribute hand out 2 F

#### ■ Closure (5 minutes)

Please remind this exercise the time you enter a village and you see that the slab and drainage are not cleaned, or that women do their washing on the platform, or that the women do not use hand pump water for drinking and cooking purposes.

Do not blame the female community organizer for this!



Observation and communication for sharing of information.





### 3.5 Hygiene education methods

#### ■ Introduction (5 minutes)

Two methods which we use need some extra explanation. The best way to do this, is to take you to a female meeting not only to show them how we use them, but also to show you the input of the village women. Unfortunately you are not allowed to join these meetings. That is why we will do this in a classroom training, simulating that you are the village women.

We did not invent these methods on our own. These methods are used world wide in water supply and sanitation projects. These are developed to help community organizers to communicate in 2 ways in stead of 1. They look very simple, and they should be very simple because the village women should understand them. Nevertheless, at the same time the methods are carefully developed based on years of experience to make complicate matters understandable for people who can neither read, nor write.

#### ■ Explanation of the gap method: tell the following (15 minutes)

- the gap method we use to let the women think about their water storage
- we tell them a story from a village where the water storage place looked like this one (show first poster), we ask the women if they like this storage place or not, and why not
- after this we show this storage place (show second poster), and ask if they like this storage place, and why
- we start brainstorming what is needed to change the first storage place in the second
- if there are other water sources in the village as near as the hand pump we will ask the women how they will distinct the water from these different sources in their compound
- in the end we go to the water storage place of the compound where we are, and we do the same brainstorm again, keeping in mind the possibilities of this specific village

#### ■ Demonstration of the two pile method (30 minutes)

Instruct the participants that for this method you ask them to be village women, and you will act as a female community organizer in a village

- mention that last time you explained to them that pump water is safer than well water or stream water, can somebody of you repeat why pump water is safer
- tell them that it is easy to say;" use only pump water for all purposes." Because if a woman has to walk 15 minutes to the pump and she to wash very heavy clothes and the stream is next to her house it will be easier to use the stream, but is it safe?
- tell the participants that today you want to think together which water you can use for which activities, like cooking, drinking, cleaning and bathing.
- show the cards one by one to the women and ask which activity is on the picture, explain if necessary
- divide the women in groups of maximum of 6 women and ask each group to divide the cards in two piles. One pile for which you can only use pump water and one pile for which you also can use stream or well water (15 minutes).
- ask the women of one group to present and explain the outcome card by card, ask the other groups if they have the same outcome. If not, why not. Start discussion.



- draw conclusion with each card and hang them on the board under pump stream or well

Go back to your role as master trainer and

- explain to the participants in the classroom: that after this exercise you ask the women of one compound to sit together and discuss their situation:
  - how far is my compound from well/stream/pump
  - how much water do I need for the different activities
  - what water will I use for bathing/cleaning/drinking/cookingshow hand out and explain the message: use pump water for all drinking and cooking purposes
- tell the participants that you end this exercise in the village with distributing the hand out (show this hand out), and that you ask the women to hang the hand out in the compound, to remind them and the other people in the compound.

■ Closure (5 minutes)

We made an overview of the main messages of our hygiene education programme, together with the methods we use, which I will distribute right now (hand out 2 I, page 1)



## Part 4 Field assignments

### 4.1 Introduction: objective and organization of the field trip

#### ■ Introduction

During this session I want to prepare you for the field trip, explaining objectives, organization and assignments. As you may be already aware of, it will not be a holiday trip. No it will be your first introduction to the field, but at the same time we expect from you to assist as much as possible and to work out some specific assignments.

#### ■ Objective

- tell the women that this field trip week in between two classroom training weeks, is to give you an impression how our approach in real looks like. After this week we hope that you come back with an idea how the activities work out in reality, to get more feeling what we are talking about here in the classroom.

#### ■ Organization

- explain the women that we will go to villages where the implementation process is ongoing
  - tell them that in these villages you ask them to observe, assist in or execute the following implementation activities (distribute hand out 4 A)
    - introduce yourself to village men in a first meeting
    - do a hygiene education session about safe water: two pile method
    - observe hand pump installation by your male team members
    - prepare and execute a visit to pump area with village women
    - go to a few compounds, as an example, to gather data for the compound survey
    - observe a latrine installation by your male team members
    - prepare and execute a demonstration of proper latrine use and hand washing
  - tell the women that apart from this programme we will go to a village, where the implementation activities have been finished, to do some for some specific assignments, more related to their final task being a master trainer
    - go to a caretaker and ask him to show his spare parts, skills and knowledge
    - observe a pump area
    - observe a compound
    - organise a women's meeting to interview them about users satisfaction of hand pump and latrine
  - tell the women that as far as the implementation activities are concerned, you will ask them each night to read the activities for the following day in the field manual, as much as possible they will do these activities on their own
  - explain the women that specific assignments will be partly explained in classroom and partly in the field
- #### ■ Closure
- stress to the women to take the field manual to this and the following field trips



## Overview of field assignments

### On-going implementation activities:

- introduce yourself to village men in a first meeting
- do a hygiene education session about safe water: two pile method
- observe hand pump installation by your male team members
- prepare and execute a visit to pump area with village women
- go to a few compounds, as an example, to gather data for the compound survey
- observe a latrine installation by your male team members
- prepare and execute a demonstration of proper latrine use and hand washing

### Specific assignments: more related to your final task being a master trainer

- go to a caretaker and ask him to show his spare parts, skills and knowledge
  - observe a pump area
  - observe a compound
  - organise a women's meeting to interview them about users satisfaction of hand pump and latrine
-





**Question list for technicians during pump installation**

Ask your technician during installation the following questions:

1. Which parts can cause trouble and how do the village women notice this (strange noise or feeling, no water or little water etc.?)
2. After how long one can expect the first brake down?
3. What maintenance is needed and how often?
4. How much time does the whole installation take?
5. What is the maximum amount of people using one hand pump?

Other observation notes:

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**Question list for technicians during latrine installation**

Ask your technician during installation the following questions:

1. What is the maximum amount of people using one latrine?
  2. After how many years do the people have to change pits?
  3. How can you change pits?
  4. Which parts does the LGRDD supply?
  5. Which materials do the villagers have to buy?
  6. How much does it cost for a family to buy these materials?
  7. How much time does it take to:
    - dig the pits:
    - line pits:
    - make pit covers:
    - install latrine pan:
    - build junction box:
-



## 4.2 Implementation activities

### ■ Introduction

This paragraph is meant as guidelines for the trainers of the master trainers, to help them during the field trip.

### ■ Guidelines

#### Feedback of the day

You can give this feedback any time: in the village before leaving, in the car driving home, at the guest house, as long as it is the same day

- ask about the impressions of the day
- give each woman feedback about the way she did an activity (positive and critical points)

Prepare your women at the end of each day for the coming activities by:

- let them read the pages in the field manual about the activities you will do the next day
- ask them if there are any questions
- ask them who will want to do which activity in the village
- divide the activities and give if needed some extra instructions

### ■ Conclusion

Let them do as much as possible, prepare them well and guide and assist them if necessary.



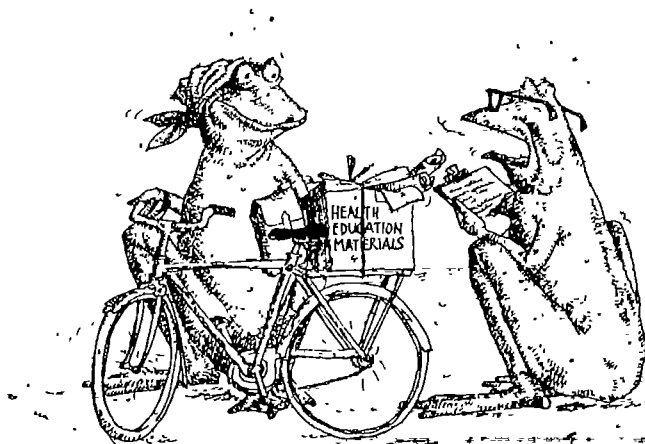
### 4.3 Specific assignments

#### ■ Introduction

These assignments are different from the ones about the implementation activities. The implementation activities will finally be carried out by the District Implementation Teams (DITs), which you will train in the near future. But apart from training these DITs you will also start to gather data about the impact of our programme in villages where the pump and the latrine have already been installed. During this training field trip we will go to one old village to gather some data. This will be a training opportunity for you, but at the same time it will be a test of our forms.

#### ■ Specific assignments

- Explain the women the following procedure:
    - first we will visit the pump area, each of you will fill in the first form, which is called 'Observation list pump area'
    - secondly we will ask the caretaker to show us his spare parts, to tell about what he learned, and what he can repair
    - thirdly we will go to the compound where some women are gathered to answer our questions, but first each of you will fill in the form which is called 'Observation list compound'
    - finally we will ask the women to answer some questions about their satisfaction
      - with the pump: like the water, the slab, the walking distance
      - with the latrine: the use, the cleaning, the amount of extra water to carryThe answers are filled in on the users satisfaction form of hand pump and latrine
  - Distribute hand out 4 B, and explain each form
- #### ■ Closure
- ask the women to bring these notes along on the field trip
  - ask if there are any other questions about the field trip







**Observation list pump area      Female community organizer**

Village:	UC:	Pump No:	yes	no
<ul style="list-style-type: none"> <li>• Add on facilities</li> </ul>				
animal trough				
wash stand				
purdah wall				
other:				
<ul style="list-style-type: none"> <li>• On/around slab or drainage</li> </ul>				
mud				
stagnant water				
animal dung or animals				
<ul style="list-style-type: none"> <li>• At the moment of observation any people:</li> </ul>				
cleaning pump area				
fetching water				
bathing children				
washing clothes				
other:				
<ul style="list-style-type: none"> <li>• Other Observations:</li> </ul>				



## Observation list compound      Female community organizer

Village:	Compound No:	UC:			
<ul style="list-style-type: none"> <li>• Water storage</li> </ul>		yes	no		
separate (place or vessels) storage for drinking water					
water vessels closed					
animal dung near water storage place					
clean storage place					
chickens fenced					
animals pinned					
<ul style="list-style-type: none"> <li>• Latrine</li> </ul>		latrine number			
		1	2	3	4
number of latrines					
number of household members per latrine					
male (♂) female (♀) or mixed (♀/♂)					
water in latrine house					
water container in latrine house					
soap (or substitute) in latrine house					
sweeper in latrine house					
latrine used					
latrine clean					
in or around compound human excreta		yes		no	
Other observations:					






### Question list for caretaker of hand pump

Ask the caretaker the following questions and write the answers down.

1. Can you show us the spare parts and the tools you got to maintain and repair the pump?
  2. What are your responsibilities in maintaining the hand pump?
  3. Who will tell you if something is wrong with the hand pump?
  4. What can you repair yourself?
  5. When do you need to ask the help from experts?
  6. Where will you go to find an expert?
-






**Users satisfaction form of hand pump and add-on facilities**

Village:                  District:		Number of women			Need of
UC:	Female CO:				
pump site in the village					
distance to walk					
amount of water					
quality of water (taste, sight)					
place to put bucket on apron (see poster)					
drainage					
purdah wall					
washing stand					
animal trough					
other:					
<p>Most women are unsatisfied with:</p> <p>Because of:</p>					





### Users satisfaction form of latrine

Compound No:	Union Council:	Number of women		
Village:	District:			
Type of latrine: one pit/ two pits	Female CO:			
How do children like the use of latrine?				
How do the man like the use of latrine?				
How do the women themselves like the use of the latrine?				
<u>Easiness of flushing the latrine</u>				
<u>Easiness of cleaning the latrine</u>				
Amount of water they need to carry extra estimation: .... goatskins/mud pots/other.....				
Smell				
<p>What are the most important advantages of using a latrine?</p> <p>1</p> <p>2</p> <p>3</p> <p>4</p>				
<p>What are the most important disadvantages of using a latrine?</p> <p>1</p> <p>2</p> <p>3</p> <p>4</p>				



## USE OF INFRASTRUCTURE (existing)

### 7. Water Sources (%):

	Inside/Adjacent Project Area	Outside project Area	Any reasons
Public Tap	100	—	—
Handpump	—	—	—
Well	—	—	—
Any other	—	—	—

### 8. Sanitation (%):

	Inside Project Area			Outside Project Area			Any reasons
	Male	Female	Children	Male	Female	Children	
Public latrine	100	100	100	—	—	—	—
Private latrine	—	—	—	—	—	—	—
Open air	—	—	—	—	—	—	—

### 9. Garbage Disposal (%):

	Inside Project Area	Outside Project Area	Any reasons
Outside house	—	—	—
Communal dump	100	—	—
Open drains	—	—	—
Low lying areas	—	—	—
Any other	—	—	—

## SLUM UPGRADING / IMPROVEMENTS

### 10. Appreciation of provided infrastructure (%):

	Satisfied	Not satisfied	Any reasons
Standposts/Public tap	100	—	—
Handpumps	—	—	—
Public latrines	67	33	—
Gutters	100	—	—
Garbage Collection	100	—	—
Pavement	100	—	—
Private latrines	—	—	—

11. Expressed additional needs for slum improvement:

	%
Dispensary, Hospital	—
Primary School	—
Park, Recreation facilities	—
Tapstands (Private)	—
Handpumps	—
Public latrines	50
Private latrines	—
Community Hall	—
Community dump/collection	—
Housing (Improvement/reconstruction)	100
Others	—

12. Knowledgeable about Project      87% yes      13% no  
 Capacity to explain project      87% well informed      13% less informed
13. Knowledgeable about      80% well informed      20% less informed  
 implementing agencies      20% do not know
14. Satisfied with the      \_\_\_ % yes      \_\_\_ % no  
 quality of work

15. Responsibilities for maintenance of infrastructure (%):

Agency Duties	House hold	Neighbourhood	Municipal Corp.	Remarks
1. Repair of tap	—	100	—	
2. Repair of handpump	—	—	—	
3. Repair of tapfloor	—	100	—	
4. Repair of waterline	—	80	20	
5. Clean latrines	—	87	13	
6. Repair latrines	—	100	—	
7. Empty tanks	—	—	—	
8. Clean gutters	—	87	13	
9. Repair gutters	—	100	—	
10. Sweep pavement	—	100	—	
11. Repair garbage dump	—	87	13	
12. Repair ret. wall	—	—	—	
13. Repair pavement	—	100	100	

16. Capability of neighbourhood committee to carry out duties:

100% yes      Any reasons: work well, are interested and able  
 \_\_\_% no      Any reasons:

Suggested alternatives:

17. Present contribution to installation and/or maintenance of infrastructure facilities:

\_\_\_ % pays                      \_\_\_ Rs. per month p.h.                      \_\_\_ % considers reasonable  
\_\_\_ % pays                      10 Rs. per month p.h.                      100% considers reasonable

18. Other payment that households have to incur:

	%	Remarks
Lease rent	—	
Housing loan repayment	—	
Electricity/Water	—	
Income generating	—	
Loan repayment	—	

19. Project aims at not overburdening households:

100% agrees                      \_\_\_ % does not agree.

Reasons mentioned :

Did not benefit from project

# HUMAN SETTLEMENT MANAGEMENT INSTITUTE

## IHSP HOUSEHOLD SURVEY QUESTIONNAIRES PUBLIC-PRIVATE PARTNERSHIP IN THE EFFECTIVE MANAGEMENT OF INFRASTRUCTURE

### SUMMARY SHEET RESULTS

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#### GENERAL

City : Chembur, Bombay  
Name Settlement : Suswagatam Nagar  
Survey Dates : 3.3.89; 4.3.89  
No. of Questions : 26  
Sample Size : 12%  
Serial No.'s quest : 117 to 120; 126 to 147

---

#### SOCIO – ECONOMIC DATA

(No.'s refers to no.'s of questions in questionnaire)

3. a. House Ownership: 100 % owned \_\_\_% rented  
b. Leasehold Plot : \_\_\_ % have 100% have not

4. Duration of residence : \_\_\_ % < 10 yrs. 100% > 10 yrs.

5. Households : 5.04 p.p.h. 51% male 49% female  
Age-structure : 12% 0-6 yrs 32% 7-17 yrs 56% > 18 yrs.  
Education : 35.3% illiterate 64% school 0.7 % college  
Occupation (Nos.) : 23 persons 12 persons 6 persons  
req. service self. empl. other  
Total Employment : \_\_\_ p.p.h.  
Income (Stated) : 1339 Rs. per month per household

6. Expenditures (Stated) : \_\_\_ Rs. per month per household  
Income brackets : 19% < 700  
Average Income and expenditure in Rs. : 46% 701 – 1500  
per month per household : 35% 1501 – 2500  
\_\_\_ > 2500

## USE OF INFRASTRUCTURE (existing)

### 7. Water Sources (%):

	Inside/Adjacent Project Area	Outside project Area	Any reasons
Public Tap	100	—	—
Handpump	—	—	—
Well	—	—	—
Any other	—	—	—

### 8. Sanitation (%):

	Inside Project Area			Outside Project Area			Any reasons
	Male	Female	Children	Male	Female	Children	
Public latrine	100	100	100	—	—	—	—
Private latrine	—	—	—	—	—	—	—
Open air	—	—	—	—	—	—	—

### 9. Garbage Disposal (%):

	Inside Project Area	Outside Project Area	Any reasons
Outside house	—	—	—
Communal dump	100	—	—
Open drains	—	—	—
Low lying areas	—	—	—
Any other	—	—	—

## SLUM UPGRADING / IMPROVEMENTS

### 10. Appreciation of provided infrastructure (%):

	Satisfied	Not satisfied	Any reasons
Standposts/Public tap	100	—	—
Handpumps	—	—	—
Public latrines	88	12	—
Gutters	69	31	—
Garbage Collection	92	8	—
Pavement	100	—	—
Private latrines	—	—	—

11. Expressed additional needs for slum improvement:

	%
Dispensary, Hospital	—
Primary School	—
Park, Recreation facilities	—
Tapstands (Private)	—
Handpumps	—
Public latrines	40
Private latrines	—
Community Hall	—
Community dump/collection	30
Housing (Improvement/reconstruction)	100
Others	—

12. Knowledgeable about Project      73% yes                      27% no  
 Capacity to explain project      73% well informed      27% less informed
13. Knowledgeable about              81% well informed      19% less informed  
 implementing agencies              19% do not know
14. Satisfied with the                  \_\_\_ % yes                      \_\_\_ % no  
 quality of work

15. Responsibilities for maintenance of infrastructure (%):

Agency Duties	House hold	Neighbourhood	Municipal Corp.	Remarks
1. Repair of tap	—	100	—	
2. Repair of handpump	—	—	—	
3. Repair of tapfloor	—	100	—	
4. Repair of waterline	—	96	4	
5. Clean latrines	—	73	27	
6. Repair latrines	—	92	8	
7. Empty tanks	—	—	—	
8. Clean gutters	—	65	35	
9. Repair gutters	—	85	15	
10. Sweep pavement	—	100	—	
11. Repair garbage dump	—	73	27	
12. Repair ret. wall	—	—	—	
13. Repair pavement	—	100	—	

16. Capability of neighbourhood committee to carry out duties:

100% yes      Any reasons: work well, are interested and able  
 \_\_\_% no      Any reasons:

Suggested alternatives:



17. Present contribution to installation and/or maintenance of infrastructure facilities:

\_\_\_ % pays                      \_\_\_ Rs. per month p.h.                      \_\_\_% considers reasonable  
\_\_\_ % pays                      10 Rs. per month p.h.                      100% considers reasonable

18. Other payment that households have to incur:

	%	Remarks
Lease rent	—	
Housing loan repayment	—	
Electricity/Water	—	
Income generating	—	
Loan repayment	—	

19. Project aims at not overburdening households:

100% agrees                      \_\_\_% does not agree.

Reasons mentioned :

Did not benefit from project

# HUMAN SETTLEMENT MANAGEMENT INSTITUTE

## IHSP HOUSEHOLD SURVEY QUESTIONNAIRES PUBLIC-PRIVATE PARTNERSHIP IN THE EFFECTIVE MANAGEMENT OF INFRASTRUCTURE

### SUMMARY SHEET RESULTS

#### GENERAL

City : Chembur, Bombay  
Name Settlement : Rajaram Nagar  
Survey Dates : 28.2.89; 1.3.89  
No. of Questions : 11  
Sample Size : 15%  
Serial No.'s quest : 009; 026 to 035

#### SOCIO - ECONOMIC DATA

(No.'s refers to no.'s of questions in questionnaire)

3. a. House Ownership: 100 % owned    \_\_\_ % rented  
b. Leasehold Plot : \_\_\_ % have    100% have not

4. Duration of residence : \_\_\_ % < 10 yrs.    100% > 10 yrs.

5. Households : 5.1 p.p.h.    50% male    50% female

Age-structure : 9% 0-6 yrs    29% 7-17 yrs    62% > 18 yrs.

Education : 28 % illiterate    69% school    \_\_\_ % college

Occupation (Nos.) : 7 persons req. service    7 persons self. empl.    8 persons other

Total Employment : \_\_\_ p.p.h.

Income (Stated) : 1340 Rs. per month per household

6. Expenditures (Stated) : \_\_\_ Rs. per month per household

Income brackets : 9% < 700

Average Income and expenditure in Rs. per month per household : 64% 701 - 1500  
18% 1501 - 2500  
9% > 2500

## USE OF INFRASTRUCTURE (existing)

### 7. Water Sources (%):

	Inside/Adjacent Project Area	Outside Project Area	Any reasons
Public Tap	100	—	—
Handpump	—	—	—
Well	—	—	—
Any other	—	—	—

### 8. Sanitation (%):

	Inside Project Area			Outside Project Area			Any reasons
	Male	Female	Children	Male	Female	Children	
Public latrine	100	100	100	—	—	—	—
Private latrine	—	—	—	—	—	—	—
Open air	—	—	—	—	—	—	—

### 9. Garbage Disposal (%):

	Inside Project Area	Outside Project Area	Any reasons
Outside house	—	—	—
Communal dump	—	73	—
Open drains	—	—	—
Low lying areas	—	—	—
Any other	—	27	—

## SLUM UPGRADING / IMPROVEMENTS

### 10. Appreciation of provided infrastructure (%):

	Satisfied	Not satisfied	Any reasons
Standposts/Public tap	91	9	—
Handpumps	—	—	—
Public latrines	100	—	—
Gutters	91	9	—
Garbage Collection	—	100	—
Pavement	100	—	—
Private latrines	—	—	—

11. Expressed additional needs for slum improvement:

	%
Dispensary, Hospital	—
Primary School	—
Park, Recreation facilities	—
Tapstands (Private)	70
Handpumps	—
Public latrines	—
Private latrines	—
Community Hall	60
Community dump/collection	100
Housing (Improvement/reconstruction)	100
Others	—

12. Knowledgeable about Project Capacity to explain project

___ % yes	___ % well informed	___ % no	___ % less informed
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13. Knowledgeable about implementing agencies

___ % well informed	___ % less informed	___ % do not know
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14. Satisfied with the quality of work

___ % yes	___ % no
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15. Responsibilities for maintenance of infrastructure (%):

Agency Duties	House hold	Neighbourhood	Municipal Corp.	Remarks
1. Repair of tap	—	82	18	
2. Repair of handpump	—	—	—	
3. Repair of tapfloor	—	82	18	
4. Repair of waterline	—	—	100	
5. Clean latrines	—	36	64	
6. Repair latrines	—	36	64	
7. Empty tanks	—	—	—	
8. Clean gutters	—	36	64	
9. Repair gutters	—	64	36	
10. Sweep pavement	—	73	27	
11. Repair garbage dump	—	64	36	
12. Repair ret. wall	—	—	—	
13. Repair pavement	—	100	100	

16. Capability of neighbourhood committee to carry out duties:

100% yes	Any reasons: work well, are interested and able
___% no	Any reasons:

Suggested alternatives:

17. Present contribution to installation and/or maintenance of infrastructure facilities:

\_\_\_ % pays                      \_\_\_ Rs. per month p.h.                      \_\_\_% considers reasonable  
\_\_\_ % pays                      10 Rs. per month p.h.                      100% considers reasonable

18. Other payment that households have to incur:

	%	Remarks
Lease rent	—	
Housing loan repayment	—	
Electricity/Water	—	
Income generating	—	
Loan repayment	—	

19. Project aims at not overburdening households:

73% agrees                      27% does not agree.

Reasons mentioned :

Did not benefit from project

# HUMAN SETTLEMENT MANAGEMENT INSTITUTE

## IHSP HOUSEHOLD SURVEY QUESTIONNAIRES PUBLIC-PRIVATE PARTNERSHIP IN THE EFFECTIVE MANAGEMENT OF INFRASTRUCTURE

### SUMMARY SHEET RESULTS

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#### GENERAL

City : Chembur, Bombay  
Name Settlement : Ameer Baug  
Survey Dates : 5.3.89; 6.3.89; 8.3.89  
No. of Questions : 20  
Sample Size : 11%  
Serial No.'s quest : 161 to 179 & 185

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#### SOCIO – ECONOMIC DATA

(No.'s refers to no.'s of questions in questionnaire)

3. a. House Ownership: 100 % owned \_\_\_ % rented  
b. Leasehold Plot : \_\_\_ % have 100% have not

4. Duration of residence : 10 % < 10 yrs. 90% > 10 yrs.

5. Households : 4.6 p.p.h. 52% male 48% female  
Age structure : 6% 0-6 yrs 48% 7-17 yrs 46% > 18 yrs.  
Education : 12 % illiterate 83 % school 5 % college  
Occupation (Nos.) : 15 persons req. service 5 persons self. empl. \_\_\_ persons other

Total Employment : \_\_\_ p.p.h.  
Income (Stated) : 1740 Rs. per month per household

6. Expenditures (Stated) : \_\_\_ Rs. per month per household  
Income brackets : \_\_\_ < 700  
Average Income and expenditure in Rs. : 65% 701 – 1500  
per month per household : 20% 1501 – 2500  
15% > 2500

## USE OF INFRASTRUCTURE (existing)

### 7. Water Sources (%):

	Inside/Adjacent Project Area	Outside Project Area	Any reasons
Public Tap	100	—	—
Handpump	—	—	—
Well	—	—	—
Any other	—	—	—

### 8. Sanitation (%):

	Inside Project Area			Outside Project Area			Any reasons
	Male	Female	Children	Male	Female	Children	
Public latrine	100	100	100	—	—	—	—
Private latrine	—	—	—	—	—	—	—
Open air	—	—	—	—	—	—	—

### 9. Garbage Disposal (%):

	Inside Project Area	Outside Project Area	Any reasons
Outside house	—	—	—
Communal dump	100	—	—
Open drains	—	—	—
Low lying areas	—	—	—
Any other	—	—	—

## SLUM UPGRADING / IMPROVEMENTS

### 10. Appreciation of provided infrastructure (%):

	Satisfied	Not satisfied	Any reasons
Standposts/Public tap	—	100	—
Handpumps	—	—	—
Public latrines	—	100	—
Gutters	—	100	—
Garbage Collection	—	100	—
Pavement	100	—	—
Private latrines	—	—	—

11. Expressed additional needs for slum improvement:

	%
Dispensary, Hospital	—
Primary School	—
Park, Recreation facilities	—
Tapstands (Private)	100
Handpumps	—
Public latrines	100
Private latrines	—
Community Hall	—
Community dump/collection	100
Housing (Improvement/reconstruction)	100
Others	—

12. Knowledgeable about Project      100 % yes                      \_\_\_ % no  
 Capacity to explain project      100 % well informed      \_\_\_ % less informed
13. Knowledgeable about                      100 % well informed      \_\_\_ % less informed  
 implementing agencies                      \_\_\_ % do not know
14. Satisfied with the                      \_\_\_ % yes                      100 % no  
 quality of work

15. Responsibilities for maintenance of infrastructure (%):

Agency Duties	House hold	Neighbourhood	Municipal Corp.	Remarks
1. Repair of tap	—	100	—	
2. Repair of handpump	—	—	—	
3. Repair of tapfloor	—	100	—	
4. Repair of waterline	—	100	—	
5. Clean latrines	—	100	—	
6. Repair latrines	—	100	—	
7. Empty tanks	—	—	—	
8. Clean gutters	—	100	—	
9. Repair gutters	—	100	—	
10. Sweep pavement	—	100	—	
11. Repair garbage dump	—	100	—	
12. Repair ret. wall	—	—	—	
13. Repair pavement	—	100	—	

16. Capability of neighbourhood committee to carry out duties:

100% yes                      Any reasons: work well, are interested and able  
 \_\_\_% no                      Any reasons:

Suggested alternatives:



17. Present contribution to installation and/or maintenance of infrastructure facilities:

\_\_ % pays                      \_\_ Rs. per month p.h.                      \_\_ % considers reasonable  
\_\_ % pays                      10 Rs. per month p.h.                      100% considers reasonable

18. Other payment that households have to incur:

	%	Remarks
Lease rent	—	
Housing loan repayment	—	
Electricity/Water	—	
Income generating	—	
Loan repayment	—	

19. Project aims at not overburdening households:

95% agrees                      5% does not agree.

Reasons mentioned :

Did not benefit from project

# HUMAN SETTLEMENT MANAGEMENT INSTITUTE

## IHSP HOUSEHOLD SURVEY QUESTIONNAIRES PUBLIC-PRIVATE PARTNERSHIP IN THE EFFECTIVE MANAGEMENT OF INFRASTRUCTURE

### SUMMARY SHEET RESULTS

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#### GENERAL

City : Mulund West, Bombay  
Name Settlement : Nahur Gaothan  
Survey Dates : 4.3.89; 8.3.89  
No. of Questions : 17  
Sample Size : 17%  
Serial No.'s quest : 143 to 160; 196 to 200

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#### SOCIO – ECONOMIC DATA

(No.'s refers to no.'s of questions in questionnaire)

3. a. House Ownership: 100 % owned    \_\_\_ % rented  
    b. Leasehold Plot :    \_\_\_ % have    100% have not

4. Duration of residence :    11 % < 10 yrs.    89% > 10 yrs.

5. Households :    5 p.p.h.    47 % male    53% female  
    Age-structure :    7% 0-6 yrs    33% 7-17 yrs    60% > 18 yrs.  
    Education :    12 % illiterate    73 % school    15 % college  
    Occupation (Nos.) :    14 persons req. service    6 persons self. empl.    4 persons other  
    Total Employment :    \_\_\_ p.p.h.  
    Income (Stated) :    2026 Rs. per month per household

6. Expenditures (Stated) :    \_\_\_ Rs. per month per household  
    Income brackets :    \_\_\_ < 700  
    Average Income and expenditure in Rs. :    42% 701 – 1500  
    per month per household :    29% 1501 – 2500  
    :    29% > 2500

## USE OF INFRASTRUCTURE (existing)

### 7. Water Sources (%):

	Inside/Adjacent Project Area	Outside Project Area	Any reasons
Public Tap	100	—	—
Handpump	—	—	—
Well	—	—	—
Any other	—	—	—

### 8. Sanitation (%):

	Inside Project Area			Outside Project Area			Any reasons
	Male	Female	Children	Male	Female	Children	
Public latrine	100	100	100	—	—	—	—
Private latrine	—	—	—	—	—	—	—
Open air	—	—	—	—	—	—	—

### 9. Garbage Disposal (%):

	Inside Project Area	Outside Project Area	Any reasons
Outside house	—	—	—
Communal dump	71%	29%	—
Open drains	—	—	—
Low lying areas	—	—	—
Any other	—	—	—

## SLUM UPGRADING / IMPROVEMENTS

### 10. Appreciation of provided infrastructure (%):

	Satisfied	Not satisfied	Any reasons
Standposts/Public tap	71	29	—
Handpumps	—	—	—
Public latrines	41	59	—
Gutters	65	35	—
Garbage Collection	—	100	—
Pavement	100	—	—
Private latrines	—	—	—

11. Expressed additional needs for slum improvement:

	%
Dispensary, Hospital	25
Primary School	—
Park, Recreation facilities	—
Tapstands (Private)	35
Handpumps	—
Public latrines	30
Private latrines	—
Community Hall	75
Community dump/collection	100
Housing (Improvement/reconstruction)	100
Others	—

12. Knowledgeable about Project Capacity to explain project     88% yes     12% no  
        88% well informed     12% less informed
13. Knowledgeable about implementing agencies     94% well informed     6% less informed  
        6% do not know
14. Satisfied with the quality of work     47% yes     53% no

15. Responsibilities for maintenance of infrastructure (%):

Agency Duties	House hold	Neighbourhood	Municipal Corp.	Remarks
1. Repair of tap	—	100	—	
2. Repair of handpump	—	—	—	
3. Repair of tapfloor	—	100	—	
4. Repair of waterline	—	82	18	
5. Clean latrines	—	88	12	
6. Repair latrines	—	94	6	
7. Empty tanks	—	—	—	
8. Clean gutters	—	88	12	
9. Repair gutters	—	100	—	
10. Sweep pavement	—	100	—	
11. Repair garbage dump	—	65	35	
12. Repair ret. wall	—	—	—	
13. Repair pavement	—	100	—	

16. Capability of neighbourhood committee to carry out duties:

100% yes     Any reasons: work well, are interested and able  
 —% no     Any reasons:

Suggested alternatives:

17. Present contribution to installation and/or maintenance of infrastructure facilities:

\_\_\_ % pays                      \_\_\_ Rs. per month p.h.                      \_\_\_% considers reasonable  
\_\_\_ % pays                      10 Rs. per month p.h.                      100% considers reasonable

18. Other payment that households have to incur:

	%	Remarks
Lease rent	___	---
Housing loan repayment	___	---
Electricity/Water	___	---
Income generating	___	---
Loan repayment	___	---

19. Project aims at not overburdening households:

100% agrees                      \_\_\_% does not agree.

Reasons mentioned :

Did not benefit from project

# HUMAN SETTLEMENT MANAGEMENT INSTITUTE

## IHSP HOUSEHOLD SURVEY QUESTIONNAIRES PUBLIC-PRIVATE PARTNERSHIP IN THE EFFECTIVE MANAGEMENT OF INFRASTRUCTURE

### SUMMARY SHEET RESULTS

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#### GENERAL

City : Mulund East, Bombay  
Name Settlement : Gavanpada  
Survey Dates : 28.2.89; 1.3.89; 2.3.89; 3.3.89; 4.3.89  
No. of Questions : 49  
Sample Size : 11%  
Serial No.'s quest : 010 to 025; 051 to 076; 116; 143; 046 to 050

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#### SOCIO – ECONOMIC DATA

(No.'s refers to no.'s of questions in questionnaire)

3. a. House Ownership: 100 % owned \_\_\_ % rented  
b. Leasehold Plot : \_\_\_ % have 100% have not  
4. Duration of residence : 10 % < 10 yrs. 90 % > 10 yrs.  
5. Households : 5.1 p.p.h. 55 % male 45% female  
Age-structure : 8% 0-6 yrs 35% 7-17 yrs 57% > 18 yrs.  
Education : 12 % illiterate 79 % school 6 % college  
Occupation (Nos.) : 36 persons req. service 21 persons self. empl. 13 persons other  
Total Employment : \_\_\_ p.p.h.  
Income (Stated) : 1914 Rs. per month per household  
6. Expenditures (Stated) : \_\_\_ Rs. per month per household  
Income brackets : 4% < 700  
Average Income and expenditure in Rs. : 33% 701 – 1500  
per month per household : 43% 1501 – 2500  
20% > 2500

## USE OF INFRASTRUCTURE (existing)

### 7. Water Sources (%):

	Inside/Adjacent Project Area	Outside Project Area	Any reasons
Public Tap	61	—	
Handpump	—	—	
Well	—	—	
Any other	39	—	Private tap connection within house

### 8. Sanitation (%):

	Inside Project Area			Outside Project Area			Any reasons
	Male	Female	Children	Male	Female	Children	
Public latrine	90	90	88	10	10	12	Too few
Private latrine	—	—	—	—	—	—	
Open air	—	—	—	—	—	—	

### 9. Garbage Disposal (%):

	Inside Project Area	Outside Project Area	Any reasons
Outside house	4	—	Due to lack of space
Communal dump	—	84	
Open drains	—	—	
Low lying areas	—	—	
Any other	—	12	

## SLUM UPGRADING / IMPROVEMENTS

### 10. Appreciation of provided infrastructure (%):

	Satisfied	Not satisfied	Any reasons
Standposts/Public tap	100	—	
Handpumps	—	—	
Public latrines	45	55	
Gutters	88	12	
Garbage Collection	45	55	
Pavement	100	—	
Private latrines	—	—	

11. Expressed additional needs for slum improvement:

	%
Dispensary, Hospital	—
Primary School	—
Park, Recreation facilities	25
Tapstands (Private)	—
Handpumps	—
Public latrines	100
Private latrines	—
Community Hall	20
Community dump/collection	50
Housing (Improvement/reconstruction)	100
Others	—

12. Knowledgeable about Project      59% yes      41% no  
 Capacity to explain project      59% well informed      41% less informed
13. Knowledgeable about      65% well informed      35% less informed  
 implementing agencies      35% do not know
14. Satisfied with the      80% yes      20% no  
 quality of work

15. Responsibilities for maintenance of infrastructure (%):

Agency Duties	House hold	Neighbourhood	Municipal Corp.	Remarks
1. Repair of tap	6	94	—	
2. Repair of handpump	—	—	—	
3. Repair of tapfloor	4	96	—	
4. Repair of waterline	—	39	61	
5. Clean latrines	—	57	43	
6. Repair latrines	—	86	14	
7. Empty tanks	—	—	—	
8. Clean gutters	2	69	29	
9. Repair gutters	—	100	—	
10. Sweep pavement	14	86	—	
11. Repair garbage dump	—	59	41	
12. Repair ret. wall	—	—	—	
13. Repair pavement	—	100	—	

16. Capability of neighbourhood committee to carry out duties:

100% yes      Any reasons: work well, are interested and able  
 \_\_\_% no      Any reasons:

Suggested alternatives:



17. Present contribution to installation and/or maintenance of infrastructure facilities:

\_\_\_ % pays                      \_\_\_ Rs. per month p.h.                      \_\_\_% considers reasonable  
\_\_\_ % pays                      10 Rs. per month p.h.                      100% considers reasonable

18. Other payment that households have to incur:

	%	Remarks
Lease rent	—	
Housing loan repayment	—	
Electricity/Water	—	
Income generating	—	
Loan repayment	—	

19. Project aims at not overburdening households:

84% agrees                      16% does not agree.

Reasons mentioned :

Did not benefit from project

# HUMAN SETTLEMENT MANAGEMENT INSTITUTE

## IHSP HOUSEHOLD SURVEY QUESTIONNAIRES PUBLIC-PRIVATE PARTNERSHIP IN THE EFFECTIVE MANAGEMENT OF INFRASTRUCTURE

### SUMMARY SHEET RESULTS

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#### GENERAL

City : Mulund West, Bombay  
Name Settlement : Kadampada  
Survey Dates : 3.3.89  
No. of Questions : 20  
Sample Size : 11%  
Serial No.'s quest : 096 to 115

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#### SOCIO - ECONOMIC DATA

(No.'s refers to no.'s of questions in questionnaire)

3. a. House Ownership: 100 % owned \_\_\_ % rented  
b. Leasehold Plot : 100 % have \_\_\_ % have not

4. Duration of residence : 5 % < 10 yrs. 95% > 10 yrs.

5. Households : 5.2 p.p.h. 48 % male 52 % female  
Age structure : 11% 0-6 yrs 29 % 7-17 yrs 60 % > 18 yrs.  
Education : 23 % illiterate 73 % school 4 % college  
Occupation (Nos.) : 16 persons 8 persons 10 persons  
req. service self. empl. other  
Total Employment : \_\_\_ p.p.h.  
Income (Stated) : 1395 Rs. per month per household

6. Expenditures (Stated) : \_\_\_ Rs. per month per household  
Income brackets : 35% < 700  
Average Income and  
expenditure in Rs. : 30% 701 - 1500  
per month per  
household : 20% 1501 - 2500  
15% > 2500

## USE OF INFRASTRUCTURE (existing)

### 7. Water Sources (%):

	Inside/Adjacent Project Area	Outside Project Area	Any reasons
Public Tap	100	—	
Handpump	—	—	
Well	—	—	
Any other	—	—	for bathing 50% used well water

### 8. Sanitation (%):

	Inside Project Area			Outside Project Area			Any reasons
	Male	Female	Children	Male	Female	Children	
Public latrine	100	100	100	—	—	—	
Private latrine	—	—	—	—	—	—	
Open air	—	—	—	—	—	—	

### 9. Garbage Disposal (%):

	Inside Project Area	Outside Project Area	Any reasons
Outside house	—	—	
Communal dump	—	75	
Open drains	—	—	
Low lying areas	—	—	
Any other	—	25	

## SLUM UPGRADING / IMPROVEMENTS

### 10. Appreciation of provided infrastructure (%):

	Satisfied	Not satisfied	Any reasons
Standposts/Public tap	100	—	
Handpumps	—	—	
Public latrines	100	—	
Gutters	95	5	
Garbage Collection	50	50	
Pavement	100	—	
Private latrines	—	—	

11. Expressed additional needs for slum improvement:

	%
Dispensary, Hospital	—
Primary School	—
Park, Recreation facilities	—
Tapstands (Private)	—
Handpumps	—
Public latrines	—
Private latrines	—
Community Hall	—
Community dump/collection	—
Housing (Improvement/reconstruction)	100
Others	—

12. Knowledgeable about Project      75 % yes      25 % no  
 Capacity to explain project      75 % well informed      25 % less informed
13. Knowledgeable about      90 % well informed      10 % less informed  
 implementing agencies      10 % do not know
14. Satisfied with the      100 % yes      — % no  
 quality of work

15. Responsibilities for maintenance of infrastructure (%):

Agency Duties	House hold	Neighbourhood	Municipal Corp.	Remarks
1. Repair of tap	—	100	—	
2. Repair of handpump	—	—	—	
3. Repair of tapfloor	—	100	—	
4. Repair of waterline	—	70	30	
5. Clean latrines	—	75	25	
6. Repair latrines	—	100	—	
7. Empty tanks	—	—	—	
8. Clean gutters	—	80	20	
9. Repair gutters	—	95	5	
10. Sweep pavement	—	100	—	
11. Repair garbage dump	—	65	35	
12. Repair ret. wall	—	—	—	
13. Repair pavement	—	100	—	

16. Capability of neighbourhood committee to carry out duties:

100% yes      Any reasons: work well, are interested and able  
 — % no      Any reasons:

Suggested alternatives:

17. Present contribution to installation and/or maintenance of infrastructure facilities:

\_\_\_ % pays                      \_\_\_ Rs. per month p.h.                      \_\_\_% considers reasonable  
\_\_\_ % pays                      10 Rs. per month p.h.                      100% considers reasonable

18. Other payment that households have to incur:

	%	Remarks
Lease rent	___	
Housing loan repayment	___	
Electricity/Water	___	
Income generating	___	
Loan repayment	___	

19. Project aims at not overburdening households:

90% agrees                      10% does not agree.

Reasons mentioned :

Did not benefit from project

# HUMAN SETTLEMENT MANAGEMENT INSTITUTE

## IHSP HOUSEHOLD SURVEY QUESTIONNAIRES PUBLIC-PRIVATE PARTNERSHIP IN THE EFFECTIVE MANAGEMENT OF INFRASTRUCTURE

### SUMMARY SHEET RESULTS

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#### GENERAL

City : Vishakhapatnam  
Name Settlement : Amarnagar (205 huts)  
Survey Dates : 2.3.89  
No. of Questions : 60  
Sample Size : 29%  
Serial No.'s quest : 1-60

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#### SOCIO - ECONOMIC DATA

(No.'s refers to no.'s of questions in questionnaire)

3. a. House Ownership: 100 % owned \_\_\_ % rented  
b. Leasehold Plot : 47% have 53 % have not

4. Duration of residence : 0 % < 10 yrs. 100 % > 10 yrs.

5. Households : 4.5 p.p.h. 54 % male 46 % female  
Age structure : 15 % 0-6 yrs 29 % 7-17 yrs 56 % > 18 yrs.  
Education : 43 % illiterate 40 % school 2 % college  
Occupation (Nos.) : 4% persons req. service 3% persons self. empl. 37% persons other  
Total Employment : 2.0 p.p.h.  
Income (Stated) : 947 Rs. per month per household

6. Expenditures (Stated) : 993 Rs. per month per household  
Income brackets : 22% < 700  
Average Income and expenditure in Rs. : 73% 701 - 1500  
per month per household : 5% 1501 - 2500  
0% > 2500

## USE OF INFRASTRUCTURE (existing)

### 7. Water Sources (%):

	Inside/Adjacent Project Area	Outside project Area	Any reasons
Public Tap	—	—	—
Handpump	100%	—	—
Well	—	—	—
Any other	—	—	—

### 8. Sanitation (%):

	Inside Project Area			Outside Project Area			Any reasons
	Male	Female	Children	Male	Female	Children	
Public latrine	—	—	—	—	—	—	—
Private latrine	—	—	—	—	—	—	—
Open air	—	—	8%	100%	100%	92%	—

### 9. Garbage Disposal (%):

	Inside Project Area	Outside Project Area	Any reasons
Outside house	—	—	—
Communal dump	100%	—	—
Open drains	—	—	—
Low lying areas	—	—	—
Any other	—	—	—

## SLUM UPGRADING / IMPROVEMENTS

### 10. Appreciation of provided infrastructure (%):

	Satisfied	Not satisfied	Any reasons
Standposts/Public tap	—	100%	not working
Handpumps	42%	58%	only one: not enough
Public latrines	—	30%	not constructed; outside area
Gutters	68%	12%	kept clean; not constr.; not clean
Garbage Collection	98%	—	—
Pavement	—	—	not provided
Private latrines	—	—	not provided; constr.

11. Expressed additional needs for slum improvement:

	%
Dispensary, Hospital	82%
Primary School	65%
Park, Recreation facilities	45%
Tapstands (Private)	57%
Handpumps	—
Public latrines	18%
Private latrines	—
Community Hall	8%
Community dump/collection	—
Housing (Improvement/reconstruction)	—
Electricity	13%
Others	—

12. Knowledgeable about Project	93% yes	7% no
Capacity to explain project	82% well informed	18% less informed
13. Knowledgeable about implementing agencies	82% well informed	18% less informed 0% do not know
14. Satisfied with the quality of work	100% yes	0% no

15. Responsibilities for maintenance of infrastructure (%):

Agency Duties	House hold	Neighbourhood	Municipal Corp.	Remarks
1. Repair of tap	—	8%	70%	should be done by MC
2. Repair of handpump	—	3%	97%	should be done by MC
3. Repair of tapfloor	—	53%	47%	
4. Repair of waterline	—	2%	96%	
5. Clean latrines	—	15%	5%	not provided; under construction
6. Repair latrines	—	—	20%	— do —
7. Empty tanks	—	5%	15%	— do —
8. Clean gutters	—	63%	23%	
9. Repair gutters	—	13%	77%	
10. Sweep pavement	—	55%	27%	not applicable; under construction
11. Repair garbage dump	—	12%	88%	
12. Repair ret. wall	—	—	—	not applicable
13. Repair pavement	—	—	7%	not applicable; under construction

16. Capability of neighbourhood committee to carry out duties:

97% yes      Any reasons: work well, are interested and able  
 0% no        Any reasons:

Suggested alternatives: 43% suggest to report to MC (in case of major repair)



17. Present contribution to installation and/or maintenance of infrastructure facilities:

97 % pays                      10 Rs. per month p.h.                      100 % considers reasonable  
\_\_ % pays                      \_\_ Rs. per month p.h.                      \_\_% considers reasonable

18. Other payment that households have to incur:

	%	Remarks
Lease rent	—	
Housing loan repayment	—	70% is going to pay after construction
Electricity/Water	—	
Income generating	—	3% has completed
Loan repayment	—	repayment

19. Project aims at not overburdening households:

100% agrees                      0% does not agree.

Reasons mentioned :

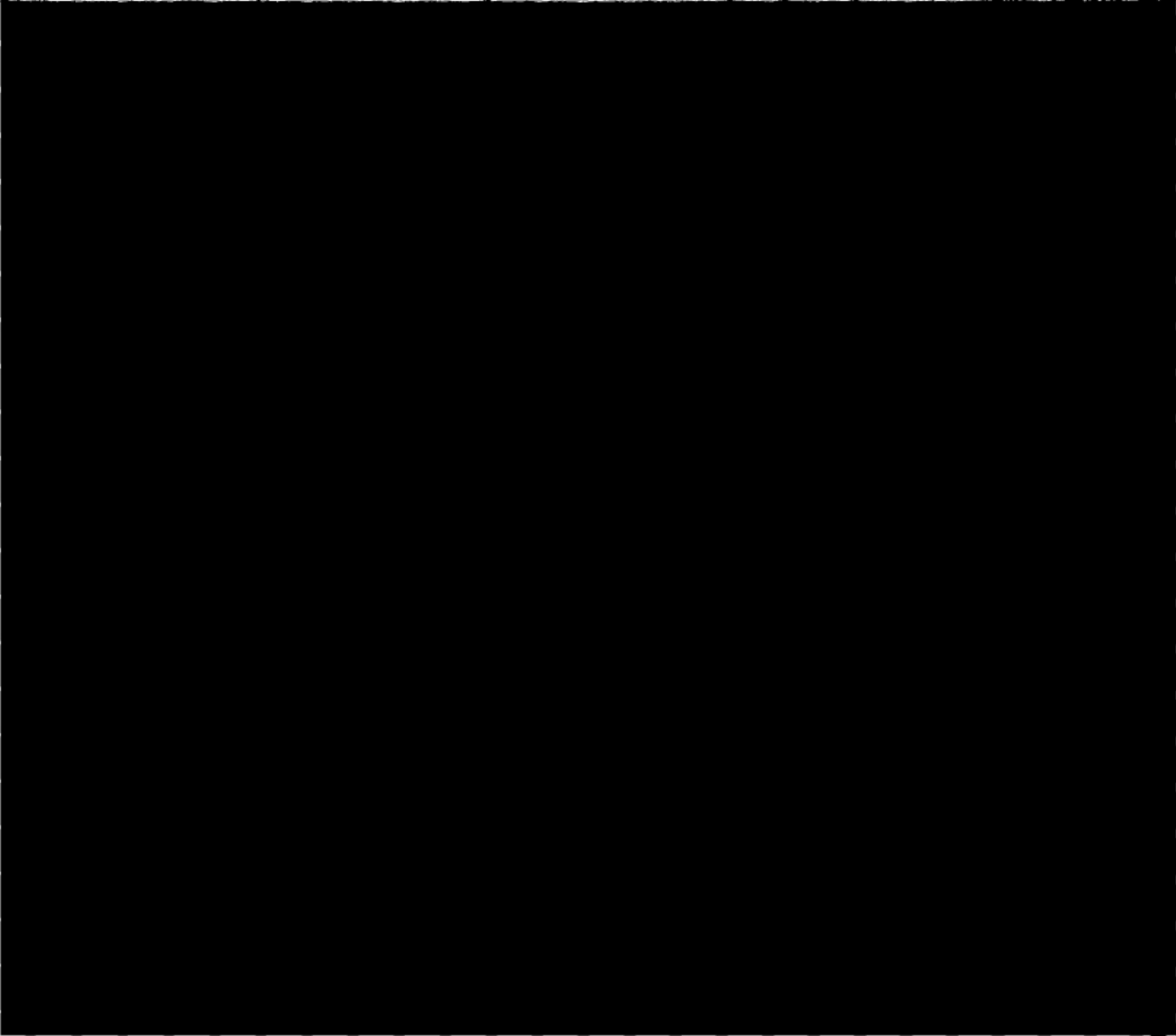
**HUMAN SETTLEMENT MANAGEMENT INSTITUTE**

**IHSP HOUSEHOLD SURVEY QUESTIONNAIRES  
PUBLIC-PRIVATE PARTNERSHIP IN THE EFFECTIVE  
MANAGEMENT OF INFRASTRUCTURE**

**SUMMARY SHEET RESULTS**

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**GENERAL**



## USE OF INFRASTRUCTURE (existing)

### 7. Water Sources (%):

	Inside/Adjacent Project Area	Outside Project Area	Any reasons
Public Tap	100%	90%	Inside area does not provide suffic. outside water for drinking
Handpump	75%	1%	
Well	40%	—	
Any other	—	—	

### 8. Sanitation (%):

	Inside Project Area			Outside Project Area			Any reasons
	Male	Female	Children	Male	Female	Children	
Public latrine	62	33	47	9	1	—	Inside area very congested
Private latrine	2	4	—	1	—	—	
Open air	1	1	24	27	10	31	

### 9. Garbage Disposal (%):

	Inside Project Area	Outside Project Area	Any reasons
Outside house	10	—	no dump avail. inside
Communal dump	57	—	
Open drains	8	—	
Low lying areas	—	—	
Any other	—	24	

## SLUM UPGRADING / IMPROVEMENTS

### 10. Appreciation of provided infrastructure (%):

	Satisfied	Not satisfied	Any reasons
Standposts/Public tap	6	92	not provided, irregular supply; bad smell, low pressure
Handpumps	27	73	not functioning well; rust; salty
Public latrines	4	96	not working; not clean; bad smell; only one, too small
Gutters	68	25	not cleaned
Garbage Collection	93	4	broken; not cleaned
Pavement	57	17	not cleaned
Private latrines	—	—	not applicable

11. Expressed additional needs for slum improvement:

	%
Dispensary, Hospital	4
Primary School	—
Park, Recreation facilities	100
Tapstands (Private)	43
Handpumps	—
Public latrines	1
Private latrines	4
Community Hall	7
Community dump/collection	27
Housing (Improvement/reconstruction)	4
Others	2

12. Knowledgeable about Project 76% yes 24% no  
 Capacity to explain project 35% well informed 65% less informed
13. Knowledgeable about 32% well informed 51% less informed  
 implementing agencies 17% do not know
14. Satisfied with the 70% yes 30% no  
 quality of work

15. Responsibilities for maintenance of infrastructure (%):

Agency Duties	House hold	Neighbourhood	Municipal Corp.	Remarks
1. Repair of tap	—	5	86	
2. Repair of handpump	—	—	89	
3. Repair of tapfloor	—	3	80	
4. Repair of waterline	—	—	89	
5. Clean latrines	—	—	89	
6. Repair latrines	—	—	89	
7. Empty tanks	—	—	100	
8. Clean gutters	1	7	81	
9. Repair gutters	—	2	87	
10. Sweep pavement	1	4	83	
11. Repair garbage dump	—	1	87	
12. Repair ret. wall	—	—	—	not applicable
13. Repair pavement	—	—	87	

16. Capability of neighbourhood committee to carry out duties:

- 0% yes Any reasons: there is no neighbourhood committee due to pol. reasons, no support by community
- 0% no Any reasons:

Suggested alternatives: Make Mun. Corpn. responsible (24%) more participation reqd. more truthful neigh. committee.

17. Present contribution to installation and/or maintenance of infrastructure facilities:

0 % pays                      0 Rs. per month p.h.                      \_\_\_ % considers reasonable

\_\_\_ % pays                      \_\_\_ Rs. per month p.h.                      \_\_\_ % considers reasonable

18. Other payment that households have to incur:

	%	Remarks
Lease rent	—	
Housing loan repayment	6	
Electricity/Water	25	20% has completed repayment
Income generating	1	Rs.18-25 per month
Loan repayment	—	

19. Project aims at not overburdening households:

76% agrees

18% does not agree.

Reasons mentioned :

# HUMAN SETTLEMENT MANAGEMENT INSTITUTE

## IHSP HOUSEHOLD SURVEY QUESTIONNAIRES PUBLIC-PRIVATE PARTNERSHIP IN THE EFFECTIVE MANAGEMENT OF INFRASTRUCTURE

### SUMMARY SHEET RESULTS

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#### GENERAL

City : Vishakhapatnam  
Name Settlement : Sivanagar (79 huts)  
Survey Dates : 6.3.89  
No. of Questions : 24  
Sample Size : 30%  
Serial No.'s quest : 217-240

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#### SOCIO – ECONOMIC DATA

(No.'s refers to no.'s of questions in questionnaire)

3. a. House Ownership: 100% owned 0% rented  
b. Leasehold Plot : 0% have 100% have not

4. Duration of residence : 4% < 10 yrs. 96% > 10 yrs.

5. Households : 3.3 p.p.h. 55% male 45% female  
Age structure : 9% 0-6 yrs 15% 7-17 yrs 76% > 18 yrs.  
Education : 45% illiterate 46% school 0% college  
Occupation (Nos.) : 9% persons req. service 5% persons self. empl. 45% persons other  
Total Employment : 1.9 p.p.h.  
Income (Stated) : 933 Rs. per month per household

6. Expenditures (Stated) : 822 Rs. per month per household  
Income brackets : 29% < 700  
Average Income and expenditure in Rs. : 67% 701 – 1500  
per month per household : 4% 1501 – 2500  
0% > 2500

## USE OF INFRASTRUCTURE (existing)

### 7. Water Sources (%):

	Inside/Adjacent Project Area	Outside Project Area	Any reasons
Public Tap	—	—	—
Handpump	46	—	—
Well	100	—	—
Any other	—	—	—

### 8. Sanitation (%):

	Inside Project Area			Outside Project Area			Any reasons
	Male	Female	Children	Male	Female	Children	
Public latrine	—	—	—	—	—	—	no public latrine
Private latrine	21	21	22	—	—	—	not yet constr.
Open air	—	—	45	79	79	92	open area available

### 9. Garbage Disposal (%):

	Inside Project Area	Outside Project Area	Any reasons
Outside house	8	—	—
Communal dump	—	—	—
Open drains	—	—	—
Low lying areas	—	—	—
Any other	—	92	open area available

## SLUM UPGRADING / IMPROVEMENTS

### 10. Appreciation of provided infrastructure (%):

	Satisfied	Not satisfied	Any reasons
Standposts/Public tap	—	—	not provided (yet)
Handpumps	96	—	out of use
Public latrine	—	—	not provide; not reqd.
Gutters	—	—	not reqd.
Garbage Collection	63	—	not reqd.
Pavement	100	—	—
Private latrine	21	—	not constructed (yet)

11. Expressed additional needs for slum improvement:

	%
Dispensary, Hospital	—
Primary School	13
Park, Recreation facilities	—
Tapstands (Private)	13
Handpumps	21
Public latrines	79
Private latrines	—
Community Hall	—
Community dump/collection	—
Housing (Improvement/reconstruction)	—
Others	—

12. Knowledgeable about Project      100% yes      0% no  
 Capacity to explain project      100% well informed      0% less informed
13. Knowledgeable about      100% well informed      0% less informed  
 implementing agencies      0% do not know
14. Satisfied with the      100% yes      0% no  
 quality of work

15. Responsibilities for maintenance of infrastructure (%):

	Agency Duties	House hold	Neighbourhood	Municipal Corp.	Remarks
1.	Repair of tap	—	—	—	not applicable
2.	Repair of handpump	—	4	96	
3.	Repair of tapfloor	—	—	—	not applicable
4.	Repair of waterline	—	—	—	not applicable
5.	Clean latrines	—	—	13	not constructed
6.	Repair latrines	—	4	8	— do —
7.	Empty tanks	—	—	13	— do —
8.	Clean gutters	—	—	—	not applicable
9.	Repair gutters	—	—	—	not applicable
10.	Sweep pavement	—	100	4	
11.	Repair garbage dump	—	—	54	not applicable
12.	Repair ret. wall	—	—	100	
13.	Repair pavement	—	29	71	under construction

16. Capability of neighbourhood committee to carry out duties:

100% yes      Any reasons: work well, are interested and able  
 0 % no      Any reasons:

Suggested alternatives:



17. Present contribution to installation and/or maintenance of infrastructure facilities:

100 % pays	1 Re. per month p.h.	100 % considers reasonable
__ % pays	__ Rs. per month p.h.	100% considers reasonable

18. Other payment that households have to incur:

	%	Remarks
Lease rent	__	
Housing loan repayment	__	repayment did not start yet (96%)
Electricity/Water	58	only for electricity
Income generating	__	
Loan repayment	__	

19. Project aims at not overburdening households:

100% agrees	0% does not agree.
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Reasons mentioned :

# HUMAN SETTLEMENT MANAGEMENT INSTITUTE

## IHSP HOUSEHOLD SURVEY QUESTIONNAIRES PUBLIC-PRIVATE PARTNERSHIP IN THE EFFECTIVE MANAGEMENT OF INFRASTRUCTURE

### SUMMARY SHEET RESULTS

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#### GENERAL

City : Vishakhapatnam  
Name Settlement : Lakshminarayanapuram (121 huts)  
Survey Dates : 5-7.3.89  
No. of Questions : 32  
Sample Size : 26%  
Serial No.'s quest : 185-216

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#### SOCIO – ECONOMIC DATA

(No.'s refers to no.'s of questions in questionnaire)

3. a. House Ownership: 97 % owned 3 % rented  
b. Leasehold Plot : 0 % have 31 % have not

4. Duration of residence : 25 % < 10 yrs. 75 % > 10 yrs.

5. Households : 4.0 p.p.h. 57 % male 43 % female  
Age structure : 13 % 0-6 yrs 24 % 7-17 yrs 63 % > 18 yrs.  
Education : 48 % illiterate 38 % school 2 % college  
Occupation (Nos.) : 4 % persons req. service 4 % persons self. empl. 26 % persons other  
Total Employment : 1.3 p.p.h.  
Income (Stated) : 790 Rs. per month per household

6. Expenditures (Stated) : 738 Rs. per month per household  
Income brackets : 53 % < 700  
Average Income and expenditure in Rs. : 47 % 701 – 1500  
per month per household : 0 % 1501 – 2500  
0 % > 2500

## USE OF INFRASTRUCTURE (existing)

### 7. Water Sources (%):

	Inside/Adjacent Project Area	Outside Project Area	Any reasons
Public Tap	—	34%	no tap inside area
Handpump	100%	—	
Well	—	—	
Any other	—	—	

### 8. Sanitation (%):

	Inside Project Area			Outside Project Area			Any reasons
	Male	Female	Children	Male	Female	Children	
Public latrine	—	—	—	—	—	—	under constr. in housing scheme
Private latrine	10	3	5	—	—	—	
Open air	—	—	16	100	100	79	

### 9. Garbage Disposal (%):

	Inside Project Area	Outside Project Area	Any reasons
Outside house	—	—	
Communal dump	6%	13%	there is no communal dump
Open drains	—	31%	
Low lying areas	—	—	
Any other	—	50%	in gedda

## SLUM UPGRADING / IMPROVEMENTS

### 10. Appreciation of provided infrastructure (%):

	Satisfied	Not satisfied	Any reasons
Standposts/Public tap	—	—	not provided
Handpumps	94	6	
Public latrines	—	19	not provided
Gutters	—	—	not provided
Garbage Collection	0	100	
Pavement	66	—	not provided
Private latrines	—	—	under constr.

11. Expressed additional needs for slum improvement:

	%
Dispensary, Hospital	—
Primary School	9
Park, Recreation facilities	6
Tapstands (Private)	100
Handpumps	3
Public latrines	38
Private latrines	—
Community Hall	9
Community dump/collection	66
Housing (Improvement/reconstruction)	—
Electricity	—
Others	9

12. Knowledgeable about Project      100 % yes      0 % no  
 Capacity to explain project      97 % well informed      3 % less informed
13. Knowledgeable about      97 % well informed      3 % less informed  
 implementing agencies      0 % do not know
14. Satisfied with the      100% yes      0 % no  
 quality of work

15. Responsibilities for maintenance of infrastructure (%):

Agency Duties	House hold	Neighbour- hood	Municipal Corp.	Remarks
1. Repair of tap	—	63	6	not provided
2. Repair of handpump	—	69	31	
3. Repair of tapfloor	—	66	3	not provided
4. Repair of waterline	—	56	13	not provided
5. Clean latrines	—	3	66	— do —
6. Repair latrines	—	—	69	— do —
7. Empty tanks	—	—	69	— do —
8. Clean gutters	—	13	25	— do —
9. Repair gutters	—	—	32	— do —
10. Sweep pavement	31	66	—	— do —
11. Repair garbage dump	—	44	19	— do —
12. Repair ret. wall	—	66	—	— do —
13. Repair pavement	—	59	41	— do —

16. Capability of neighbourhood committee to carry out duties:

- 91% yes      Any reasons: interested, working well, capable  
 9 % no      Any reasons: not collectively working members; political reasons; not united

Suggested alternatives:

17. Present contribution to installation and/or maintenance of infrastructure facilities:

66% pays 2 Rs. per month p.h. 100% considers reasonable

25% pays 0 Rs. per month p.h. 100% considers reasonable

18. Other payment that households have to incur:

	%	Remarks
Lease rent	—	Only office construction
Housing loan repayment	—	
Electricity/Water	—	
Income generating	—	Some have completed repayment
Loan repayment	—	(10%)

19. Project aims at not overburdening households:

100% agrees 0% does not agree.

Reasons mentioned :

# HUMAN SETTLEMENT MANAGEMENT INSTITUTE

## IHSP HOUSEHOLD SURVEY QUESTIONNAIRES PUBLIC-PRIVATE PARTNERSHIP IN THE EFFECTIVE MANAGEMENT OF INFRASTRUCTURE

### SUMMARY SHEET RESULTS

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#### GENERAL

City : Vishakhapatnam  
Name Settlement : Bupeshnagar (181 huts)  
Survey Dates : 4-7.3.89  
No. of Questions : 40  
Sample Size : 22%  
Serial No.'s quest : 145-184

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#### SOCIO – ECONOMIC DATA

(No.'s refers to no.'s of questions in questionnaire)

3. a. House Ownership: 90% owned 10% rented  
b. Leasehold Plot : 0% have 58% have not

4. Duration of residence : 8% < 10 yrs. 92% > 10 yrs.

5. Households : 3.2 p.p.h. 52% male 48% female  
Age structure : 10% 0-6 yrs 23% 7-17 yrs \_\_\_ % > 18 yrs.  
Education : 43% illiterate 31% school 0% college  
Occupation (Nos.) : 3% persons req. service 6% persons self. empl. 33% persons other  
Total Employment : 1.4 p.p.h.  
Income (Stated) : 673 Rs. per month per household

6. Expenditures (Stated) : 659 Rs. per month per household  
Income brackets : 65% < 700  
Average Income and expenditure in Rs. : 35% 701 – 1500  
per month per household : 0% 1501 – 2500  
0% > 2500

## USE OF INFRASTRUCTURE (existing)

### 7. Water Sources (%):

	Inside/Adjacent Project Area	Outside Project Area	Any reasons
Public Tap	100%	55%	supply in slum not suffic. salty taste of water
Handpump	98%	15%	
Well	—	—	
Any other	—	—	

### 8. Sanitation (%):

	Inside Project Area			Outside Project Area			Any reasons
	Male	Female	Children	Male	Female	Children	
Public latrine	29	26	19	—	—	—	constr. but not opened yet
Private latrine	—	—	—	—	—	—	
Open air	—	—	48	74	74	33	

### 9. Garbage Disposal (%):

	Inside Project Area	Outside Project Area	Any reasons
Outside house	45	—	
Communal dump	—	2.5	comm. dump inside
Open drains	—	—	
Low lying areas	—	—	
Any other	2.5	50	rail road track. open area

## SLUM UPGRADING / IMPROVEMENTS

### 10. Appreciation of provided infrastructure (%):

	Satisfied	Not satisfied	Any reasons:
Standposts/Public tap	2.5	97.5	irregular, insuffic. supply
Handpumps	2.5	97.5	salty taste water
Public latrine	23	10	under construction, rd.
Gutters	85	13	clean themselves
Garbage Collection	48	52	no dump, come only 1 per week on Saturday
Pavement	80	—	
Private latrine	—	—	no applicable; not provided

11. Expressed additional needs for slum improvement:

	%
Dispensary, Hospital	8
Primary School	10
Park, Recreation facilities	3
Tapstands (Private)	100
Handpumps	—
Public latrines	—
Private latrines	—
Community Hall	40
Community dump/collection	40
Housing (Improvement/reconstruction)	35
Electricity	—
Others	8

12. Knowledgeable about Project      77% yes      23% no  
 Capacity to explain project      75% well informed      25% less informed
13. Knowledgeable about      74% well informed      8% less informed  
 implementing agencies      18% do not know
14. Satisfied with the      80% yes      20% no  
 quality of work

15. Responsibilities for maintenance of infrastructure (%):

Agency Duties	House hold	Neighbourhood	Municipal Corp.	Remarks
1. Repair of tap	—	33	63	
2. Repair of handpump	—	28	65	
3. Repair of tapfloor	—	48	52	some consider it shared response
4. Repair of waterline	—	10	90	
5. Clean latrines	—	3	50	
6. Repair latrines	—	—	50	
7. Empty tanks	—	—	50	
8. Clean gutters	—	33	67	
9. Repair gutters	—	28	72	
10. Sweep pavement	—	90	10	
11. Repair garbage dump	—	20	80	
12. Repair ret. wall	—	—	—	not applicable
13. Repair pavement	—	38	60	

16. Capability of neighbourhood committee to carry out duties:

95% yes      Any reasons: work well, are interested and able  
 \_\_\_% no      Any reasons:

Suggested alternatives:



17. Present contribution to installation and/or maintenance of infrastructure facilities:

95 % pays                      2 Rs. per month p.h.                      95 % considers reasonable  
\_\_ % pays                      \_\_ Rs. per month p.h.                      \_\_ % considers reasonable

18. Other payment that households have to incur:

	%	Remarks
Lease rent	__	not applicable
Housing loan repayment	__	__
Electricity/Water	__	not applicable
Income generating	__	8% have completed repayment
Loan repayment	__	__

19. Project aims at not overburdening households:

93% agrees                      3% does not agree.

Reasons mentioned :

Did not benefit from project

**DETAILED DESCRIPTIONS: 11 CASE STUDIES –  
BOMBAY**

**1. Subhash Nagar, Navjagruti Society, Goregaon West**

***General***

The slum of Subhash Nagar consists of approximately 200 dwelling units. The settlement is the result of a re-settlement scheme. Before SUP a local Housing Society had been established. Under SUP a spontaneous initiative from 37 Gujarati residents has led to the establishment of the "Navjagruti Society". This Society is the second Society that has signed the Lease Agreement and, therefore, has been selected for this survey. In the adjacent areas of Subhash Nagar, two other Societies have been formed but Lease Agreements has not been signed. Navjagruti Society has a regulated lay-out with dwellings built of semi-permanent materials. The residents have lived approximately 20 years in this area and are of Gujarati origin. Most of them find employment with the Indian Railways. From the survey it appears that the average income per household is the highest: Rs.2467/- per month. The level of education as compared to other slums is quite high. Hence, Navjagruti Society is a settlement above the average. At present, the residents are quite satisfied with the existing quality of the dwellings. At a later stage they aim at dwelling expansion and improvements.

***Community Organisation***

The eligibility for SUP has stimulated an enthusiastic response from a small group of residents towards implementation. The Society has been able to strengthen their ethnic identity and social homogeneity. The remaining residents of Subhash Nagar have been grouped into two separate Societies based on individual preferences and infrastructure provision. Here construction was near completion and finalization of the Lease Agreement was still underway.

The members of the Navjagruti Society are unwilling to share the usage of the facilities as well as its maintenance services with other non-member residents of Subhash Nagar. The segregated position of this Society and the achieved progress are viewed with feelings of envy and malice by residents of the other Societies. Since the boundaries of the respective Cooperative Societies are only notional and the Society's aim is to exclude non-members from using their facilities there is a high potential for conflict.

The occasion of the signing of the Lease Agreement was taken to organise a ceremony and celebration that proved the strong community sense and their desire for improvement. The presence of community control within the society was proven by forcing a member to dismantle a disputed dwelling extension through threatening to pursue the matter in court. In the end the matter was resolved peacefully.

## *Infrastructure*

Under the SIP the entire settlement of Subhash Nagar has been provided with communal tap stands, public latrines, gutters and pavement. This existing infrastructure has been improved considerably under the SUP. By the effort of the residents nice details, such as ceramic tiles on the latrine floor have been added. A major work under SUP has been construction of a Community Hall.

The survey shows that all residents use the water and sanitation facilities inside their area. Garbage is dumped at municipal sites across the road. Respondents are unanimously satisfied with the facilities of water, sanitation, pavement and gutters. However, garbage disposal is unsatisfactory to all respondents, mainly due to the irregular collection by the Municipality. When asked what additional needs exist for the improvement of the slum area, all respondents stated answers relating to housing improvement, communal solid waste collection and disposal and private water connections.

The households are by the large well informed about the project components and the implementing agencies. Moreover, the respondents are aware of the responsibilities of the Society for maintaining the provided facilities. However, all respondents consider the BMC responsible for cleaning of latrines and cleaning of gutters, which is not according to the Agreement of Lease. It has been observed that cleaning of gutters and pavements is done on an individual household basis, creating problems at the slum boundary points. Garbage is also dumped by the individual households across the road on the municipal dump sites. Latrines and water taps are locked when not in operation, so as to ensure strict user-control.

Although the Cooperative Society does not have a prominent role in the maintenance of the infrastructure, residents are unanimously confident in the Society of being able to do so.

At present, all Society members pay Rs.10/- per month for maintenance services. Overall, the respondents consider the SUP-project payments as affordable (100%).

In conclusion, the Navjagruti Society has succeeded in securing for its members distinct advantages by reason of their segregation from other resident groups in Subhash Nagar and their collective strength, but might be endangered by the difficulty in excluding deprived and envious non-members that make use of the facilities.

## **2. New Shivaji Nagar, Ambivali, Andali West**

### *General*

New Shivaji Nagar is a low-lying area, that has existed since 1963. All residents are either of Maharashtrian origin or belong to the Konkan region. The settlement comprises

of 89 dwelling units, of which 75 have been eligible for SUP. Reasons for the exclusion of 14 dwelling units are the settlement after 1985, and the location on an area meant for an Access Road Development Plan. A third of the houses are built of permanent materials ("pucca"), while the rest is built of semi-permanent materials (bamboo, tin sheets, etc.). The arrangement of plot is fairly regular, enclosing an intimate courtyard. The level of income is relatively low (Rs.1350/- per month). Employment is a mixture of self-employed, regular service and daily-wage workers. At the time of the survey a Cooperative Society has been established, but a Lease Agreement is still outstanding.

### *Community Organisation*

The New Shivaji Nagar Society has a fairly cohesive community structure. The community has one local committee and another youth organisation which are both moderate active. The residents are particularly protective over the excellent common courtyard space which is filled with greenery. The settlement gives an organised and clean impression, decorated with plants and furnished with seats suspended from the eaves.

There has been very little community involvement in the planning and implementation of the SUP. Desires and demands of the residents have been ignored or not been considered valid enough. This has resulted in discontentment over some elements of the infrastructure provided, which is likely to cause further delay and will hamper the establishment of maintenance routines after the infrastructure has been transferred to the Cooperative Society. Another contradictory matter is the exclusion of 14 households from the community by the rigid application of the SUP eligibility criteria. It may frustrate the latent community resources (financial and organisational) in the project.

### *Infrastructure*

Before the SUP, the infrastructure facilities were inadequate in quality and quantity. Under SUP, a water tap has been added and existing water taps have been redistributed more equally throughout the area. Asbestos covering has been provided. There existed three sanitation blocks, of which two have been upgraded under SUP. One block has been excluded as it's entry faced a neighbouring slum. Gutters and drainage have been improved considerably. However, the garbage is dumped in an adjoining space ("no-man's land"), which creates unhealthy conditions. Other slum residents also make use of this dump site. During rains the garbage flows down the slope and blocks the drains. At the time of the survey the construction of an access road and a multi-purpose community centre was under way.

The survey reveals that all residents use the water and sanitation facilities inside their area. Respondents are unanimously satisfied with the facilities of water, sanitation, pavement and gutters. During meetings residents expressed some discontent with the quality of the works, as well as with the few hours of water supply at low pressure. During discussions with the residents the exclusion of the third sanitation block was over-ruled by the project engineers, causing considerable disappointment. Moreover, the control of the Society over the use of facilities by non-members has been creating

disputes. These non-members have been using these facilities ever since, but do not show any willingness to contribute to the maintenance of the facilities. Therefore, Society members have been pressing for a boundary wall to solve the problems. This again has led to increasing hostility between members and non-members. Garbage is dumped at the adjoining space. It is considered unsatisfactory to all of the respondents, due to the reason mentioned above. When asked what additional needs exist for the improvement of the slum area, all respondents stated answers relating to housing improvement, and communal solid waste collection and disposal.

The households are well informed about the project components (88%) and the implementing agencies (94%). Also, the respondents are reasonably aware of the responsibilities of the Society for maintaining the provided facilities. However, a majority of the respondents consider the BMC responsible for cleaning of gutters and for repairing of water pipes in the area, which is not according to the Agreement of Lease. At the present stage of implementation maintenance routines could not be observed.

Although the Cooperative Society has not yet developed a prominent role in the maintenance of the infrastructure, residents are unanimously confident in the Society's capability to do so.

At present, all Society members pay Rs.10/- per month for maintenance services. Overall, a majority of the respondents (81%) consider the SUP-project payments as affordable.

In conclusion, the New Shivaji Nagar Society has succeeded in achieving some advantages for its residents. However, discontentment among the members and conflicts with excluded non-members are emerging, which might affect the success of SUP after completion of the works.

### **3. Prabhat Colony, Santa Cruz East**

#### ***General***

Prabhat Colony is a low-lying pocket surrounded by an area with multi-storey buildings for middle and high income. A suburban railway station, a market and a road network are nearby. The history of this slum pocket goes back to the early forties. About 90% of the residents have lived here more than 10 years. Most residents originate from Goa. The settlement comprises of 64 dwelling units. half of the houses are built of permanent materials ("pucca"), while the rest are built of semi-permanent materials (bamboo, tin sheets, etc.). The level of income is relatively low (Rs.1395/- per month). Employment is mostly found in regular services. At the time of the survey, a Cooperative Society has been established, but a Lease Agreement is still outstanding.

#### ***Community Organisation***

In Prabhat Colony there is one voluntary organisation that undertakes all kinds of social, cultural and other activities, and has taken up responsibilities of a Cooperative Society to maintain the provided infrastructure. Under SUP a Balwadi (Creche) has been provided,

which will give further impetus to initiatives, for meeting the needs of children. The residents have expressed willingness to go ahead with shelter consolidation as early as possible. Although the financial resources seem limited. The small settlement size, the absence of any disputes, and the established group cohesion should make sustained development feasible. However, at the time of the survey, the progress of works had been delayed by clearances of dues and other procedural requirements.

### *Infrastructure*

Before the SUP, two public water taps and a public latrine (4 seats) have been provided by the BMC under SIP. Private latrines also exist. Under SUP, four extra tap stands, tap stand roofing, an extension of the latrine by two seats, drainage and pavement were provided. An existing well has been integrated in the environmental improvement works. The well is being used for washing and cleaning purposes. The quality of the water is suspect due to the nearby sanitation block. The environmental impact of SUP has been considerable.

The survey reveals that all residents use the water and sanitation facilities inside their area. Garbage is disposed off in a municipal dump on the road, just outside the area. Respondents are unanimously satisfied with the facilities of water, sanitation, pavement and gutters. However, the supply of water is irregular and at a low pressure. The disposal of garbage is unsatisfactory to all the respondents, due to irregular collection of the waste. When asked what additional needs exist for the improvement of the slum area, all respondents stated answers relating to housing improvement, and half of the respondents mentioned "community hall".

The households are moderately informed about the project components (67%) and well informed about the implementing agencies (92%). Moreover, the respondents are reasonably aware of the responsibilities of the Society for maintaining the provided facilities. A minority of the respondents considered the BMC responsible for the repair of water pipes and garbage dumps in the area, which is not according to the Agreement of Lease. The community has continued its already established cleaning practices. The upgraded pavements, gutters and latrines could be observed in a clean and tidy condition.

The Cooperative Society continued to have a prominent role in the maintenance of the infrastructure, and residents are unanimously confident in the Society capability in future also.

At present, all Society members pay Rs.10/- per month for maintenance services. All respondents consider the present-project payments as affordable. However, this might change after the Agreement has been signed and monthly instalments of leasehold and environmental improvement charges commence.

In conclusion, the Prabhat Colony Society has succeeded in achieving distinct advantages for its residents by its sustained effort to mobilize community resources. It is therefore a

pity that progress have been delayed by project clearances and other procedural requirements, taking away much of the enthusiasm and willingness to participate actively.

#### **4. Chunnabhatti, Muktadevi Nagar, Sion**

##### ***General***

Chunnabhatti consists of about 90 dwelling units, tightly packed in a piece of land, which is surrounded by squatter areas, slums and middle income group apartments. About 70% of the residents have been living here for more than 10 years. Half of the houses are built of semi-permanent and temporary materials. The level of income is Rs.1465/- per month per household, and is considered an average among other surveyed slums. Employment among the residents is found most dominantly in regular services. The level of education is reasonably high among other slums. In Chunnabhatti a Cooperative Society has been established, but a Lease Agreement is still outstanding.

##### ***Community Organisation***

At the time of the survey, the community was in a state of turmoil as the chief promoter of the Society was heavily criticized for "inefficiency" by some of the other society members. The chief promoter viewed the situation as external political factors with vested interests who were trying to deliberately fragment the community. Timely intervention by MHADA's Community Development staff has helped to relieve the tension and evoke new interest in SUP. The various stages that involve intricate procedures and interaction with several officials has confused the community. A single-window approach would have benefited this small community.

##### ***Infrastructure***

Before the SUP, a few public water taps and a public latrine had been provided by the BMC under SIP. Under SUP, the existing tap stands and pavement have been improved. The sanitation block has also been upgraded, but is not operational as yet. Drainage has also been improved, but has already proved inadequate. Garbage disposal and collection has not been improved, and residents throw their garbage in a bin across the road.

The survey reveals that all residents use the water facilities inside their area. A serious problem is the non-availability of sanitary facilities. Adults use latrines in the neighbouring settlements, while children defecate in the open. Garbage is disposed off in a municipal bin placed across the road, or at other - not specified - places outside the area. Respondents are satisfied with the facilities of water and pavement. However, sanitation, drainage and garbage collection and disposal is of unsatisfactory quality, according to all respondents. In the field one can observe that the drainage half-section pipes are already prone to damage. Overall, the quality of the provided infrastructure does not meet reasonable standards, and leads to further erosion of the creditability of the project among the beneficiaries. When asked what additional needs exist for the improvement of the slum area, all respondents stated answers that relate to public latrines, communal solid waste collection and disposal and housing improvement.

The households are moderately informed about the project components (60%) and the implementing agencies (60%). Moreover, the respondents are reasonably aware of the responsibilities of the Society for maintaining the provided facilities. However, a considerable minority of the respondents (40%) considered the BMC responsible for cleaning and repairing of latrines, cleaning of gutters and repairing of garbage disposal units inside the area, which is not according to the Agreement of Lease. In the field, particular maintenance routines could not be observed.

The Cooperative Society has not yet developed a prominent role in the maintenance of the infrastructure, but the residents are confident in the Society capability in the future.

At present, all Society members pay Rs.10/- per month for maintenance services. All respondents consider the present SUP-project payments as affordable. However, this might also change after the Agreement has been signed and monthly instalments of leasehold and environmental improvement charges commence.

In conclusion, the Chunnabhatti Society has not succeeded in achieving distinct advantages for its residents, mainly due to the inadequate quality of the works of sanitation and garbage disposal. Thus the project has reached a point where its creditability is being questioned, and might imply problems to ensure cooperation and long-term benefits through the SUP.

## **5. Vijay Rahiwashi Sangh, Kurla East**

### ***General***

Vijay Rahiwashi Sangh occupies a well-protected pocket of land enclosed on all sides by a boundary wall. The first settlers came to this area some 30 years ago. Most residents originate from Maharashtra State. The settlement contains 115 dwelling units. In 1980 the settlement was realigned with the help of a private donor. The dwellers reconstructed their houses on aligned plots of approximately 20m<sup>2</sup>, allowing for sufficient space and ventilation between the blocks. The walls and roofs are constructed of temporary materials, such as scrap metal sheets, wooden boards and asbestos sheets, and reach a height of 5m. The settlement gives very much the impression of a well planned and designed area, and by its concealment, a secure and private habitat. Many have finished their floors with mezzanine.

The level of income is fairly low at Rs.1367/- per month per household. Employment is found at the Textile Mill Works and Kurla State Transport Depot, and - as one can observe - in home based tailoring and shoe-making. The level of education is below average with 25% of the adult household members being illiterate.

In Vijay Rahiwashi, a Cooperative Society has been registered, but a Lease Agreement is still outstanding.

### ***Community Organisation***

At the time of the survey, one local organisation was reasonably active, though on a



small scale with limited resources. The Balwadi (Creche) provided by SUP could have benefited and supported the community organisation and development, if it would have been designed to allow for community activities as well.

### *Infrastructure*

Before the SUP, public water taps, pavements and a public latrines have been provided by the BMC under SIP. Under SUP, the existing deteriorated tap stands, pavements and the public latrines have been improved. Public tap stands have been distributed more evenly and meters were installed. Gutters were provided, and in this case, covered with slabs. The pavement contributes to sufficient open space in front of the dwellings, allowing for many small-scale economic activities in the area. A dust bin has been provided near the latrines. In the rear corner of the settlement, a Balwadi (Creche) has been constructed under the SUP.

The survey reveals that all residents use water, sanitation and garbage facilities inside their area. Respondents are satisfied with the facilities of water, garbage, gutters and pavement. However, the survey reveals a partial dissatisfaction (33%) with the sanitation block, which is caused by periodic blockages and leakages in the old and damaged sewer line connections with the municipal network. Repair under SUP, before constructing the pavement, should have been done. When asked what additional needs exist for the improvement of the slum areas, respondents state answers that relate to the public latrines (50%) and housing improvements (100%).

The households are reasonably informed about the project components (87%) and the implementing agencies (80%). Moreover, the respondents are reasonably aware of the responsibilities of the Society for maintaining the provided facilities. However, a minority of the respondents (13-20%) considered the BMC responsible for cleaning and repairing of garbage disposal units inside the area, which is not according to the Agreement of Lease. In the field, one can observe that pavement sweeping and garbage disposal is performed in an organised manner. Hiring the services of a person for these duties, and for cleaning of the latrines is being considered. The wage would be Rs.300/- to Rs.400/- per month when daily service is rendered.

The Cooperative Society has not yet developed a prominent role in the maintenance of the infrastructure, but the residents are confident in the Society capability to do so.

At present, all Society members pay Rs.10/- per month for maintenance service. All respondents consider the present SUP-project payments as affordable. However, this might also change after the Agreement has been signed and monthly instalments of leasehold and environmental improvement charges commence.

In conclusion, the Vijay Rahiwashi Sangh Society did succeed in achieving distinct advantages for its residents. Favourable for sustained development are the clearly demarcated area; that prevents non-members from using the provided facilities. However, the community organisational capacities might need incentives and support by the SUP, e.g. providing a community space.

## **6. Suswagatam Nagar, Chembur**

### ***General***

Suswagatam Nagar is a large slum of 215 dwelling units. The settlement has existed for over 20 years and is located close to a suburban railway station, employment and service centre in Chembur. The residents are mostly from Maharashtra origin. The level of education is the lowest among the surveyed slums, with an illiteracy rate of 35% among adults. The level of income is also among the lowest compared to other surveyed slums: Rs.1339/- per month per household. Employment is found in various sectors of the economy, mostly in regular services.

The settlement is affected by a Road Development Plan reservation. A dozen households had to be resettled on an adjacent plot of land, in order to become eligible for the SUP. The row-housing layout pattern of equal plots (14.5m<sup>2</sup>) has been accepted by the households. Tin-sheet structures have been erected, and are a good example of 'self-help' housing.

In Suswagatam Nagar, a Cooperative Society has been registered, but a Lease Agreement is still outstanding.

### ***Community Organisation***

At the time of survey, the community showed a low level of organisation and cohesion that is evident in the poor response of the registered Society towards the SUP. By interviews and discussions, one can notice the diminished interest in pursuing the implementation of SUP and in maintaining the provided facilities. However, the construction of a Balwadi (Creche) cum Society office has triggered active participation of the residents.

### ***Infrastructure***

Before the SUP, public water taps, pavement and a public latrine had been provided by the BMC under SIP. Under SUP, the existing deteriorated public tap stands, public latrines and pavement have been improved. Public tap stands have been added, while the existing ones were provided with roofing. The quality of the repair work is below acceptable standards, while the new connections have not been connected to the BMC-network. Moreover, extended supply pipes have been laid over the existing pavement, and are prone to damage and breakage.

The connection of SUP tap stands to the city water supply network has to be provided by the BMC, and is subject to clearance of dues to the Additional Collector and Controller of Slums. This is to ensure that full recovery of arrears is done before the Lease Agreement is granted. In most settlements these arrears exist, e.g. for the monthly water consumption charges or for the pending assessment of Rs.18/- per month for availing of basic amenities provided by BMC under the SIP.

The payment of arrears is influenced by the environmental impact of SUP in the settlement. In Suswagatam Nagar this impact is marginal in many aspects, and as a result of this residents are hesitant or unwilling to fulfil the clearances.

Gutters that were provided do not drain properly to the main drainage system, as blockages occur due to linkage from a neighbouring plot. As the area is below the road, overflows and flooding will occur in the rainy season. Garbage is thrown outside the slum into a communal dump provided by the BMC.

The existing sanitation block is also not improved to an acceptable standard. The block that is located at the boundary of the settlement is, in spite of a boundary wall, accessible to the general public. Due to the lack of regular and sufficient water supply, the cleaning and flushing of the latrines is inadequate, causing smell, dirt and finally leads to misuse and abandonment. Moreover, open-air defecation can still be observed. It was observed that the sewer lines that discharges the sewage had an open manhole that contained all kinds of trash.

In the case, providing infrastructure to settlements, and expecting the Society to maintain these does imply reciprocal duties for BMC to provide sufficient and regular water supply and to ensure proper functioning of the sewerage.

The survey reveals that all residents use the water, sanitation and garbage facilities inside their area. According to the survey, respondents are satisfied with the facilities of water, garbage, gutters and pavement. However, the survey reveals a partial dissatisfaction with the sanitation block (12%) and the gutters (31%). The survey outcome contradicts with the outcome of personal interviews and observations.

When asked what additional needs exist for the improvement of the slum area, respondents state answers that relate to the public latrines (40%), communal solid waste collection and disposal (30%), and housing improvement (100%).

The households are reasonably informed about the project components (73%) and the implementing agencies (81%). The respondents are reasonably aware of the responsibilities of the Society for maintaining the provided facilities. However, a minority of the respondents (23-25%) considered the BMC responsible for cleaning and repairing of water pipes, cleaning of latrines, cleaning of gutters and repairing of garbage disposal units inside the area, which is not according to the Agreement of Lease. In the field, one can observe that there are no collectively organised maintenance routines.

The Cooperative Society has not developed a prominent role in the maintenance of the infrastructure, but the residents are confident in the Society's capability to do so.

At present all Society members pay Rs.10/- per month for maintenance services. All respondents consider the present SUP-project payments as affordable. However, this might also change after the Agreement has been signed and monthly instalments of leasehold and environmental improvement charges commence.

In conclusion, the Suswagatam Nagar Society did not succeed in achieving distinct advantages for its residents. Weak community and organisation, poor quality of the provided infrastructure, and delayed water connection by the BMC have contributed to the failure of SUP in achieving community-managed environmental improvements.

## **7. Rajaram Nagar, Chembur**

### ***General***

Rajaram Nagar is a small slum of 70 dwelling units, but is part of a larger slum area. The area is slightly elevated and gently sloping. It is densely populated and reasonably consolidated. Houses are mostly built of permanent and semi-permanent materials, such as bricks, asbestos sheets, tin sheets, and the like. The slum was established in 1958. The residents are migrants from other States. The settlement is located favourably, close to transport and institutional services. Land value is expected to be high. The level of education is low among the surveyed slums, with an adult illiteracy rate of 28%. The level of income is among the lowest compared to other surveyed slums: Rs.1340/- per month per household. Employment is found in various sectors of the economy; regular service, as well as self-employed.

In Rajaram Nagar, a Cooperative Society has been registered, but a Lease Agreement is still outstanding.

### ***Community Organisation***

At the time of the survey, the community showed a low level of organisation and cohesion, that is evident in the limited response of the registered society towards the SUP.

### ***Infrastructure***

Before the SUP, public water taps, pavement and a public latrine had been provided by the BMC under SIP, the existing deteriorated public latrine and pavement have been improved considerably. Public tap stands have not been added as the BMC did not approve an extension. However, the existing ones were provided with roofing. The quality of repairs of the existing tap stands does not reach acceptable standards. Residents have pressed for a re-connection of the supply pipe from a branch to a nearby trunk line, that provides more pressure and regular supply. The request was not approved.

The location of the sanitation block makes it difficult to control non-members from using the facility, which will have a serious impact on infrastructure maintenance and cost-recovery. Gutters were also provided, but the levelling has not been done properly causing overflows and blockages. The materials used for the gutters are of a low quality and not durable. Proper garbage disposal and collection has not been covered by the SUP. At present, residents use a vacant space nearby to dispose of their waste.

The survey reveals that all residents use the water and sanitation facilities inside their area. As observed, residents use a vacant space outside the area to dispose off domestic

wastes. According to the survey, respondents are satisfied with the facilities of water, sanitation, gutters and pavement. However, the survey reveals a clear dissatisfaction with the garbage collection and disposal. A minority (9%) is dissatisfied with the provided tap stands and gutters. The survey outcome contradicts with the outcome of personal interviews and observations, in respect of public tap stands and drainage. The general quality of the infrastructure works was perceived to be good by 73% of the respondents. The rest (27%) were not satisfied with the quality.

When asked what additional needs exist for the improvement of the slum area, respondents state answers that relate to a community hall (60%), public tap stands (70%), communal disposal and collection (100%), and housing improvements (100%). Connection to the main trunk line was also mentioned a few times.

The households are mostly not informed about the project components (73%) and the implementing agencies (73%). Moreover, the respondents are not aware of the responsibilities of the Society for maintaining the provided facilities. A majority of the respondents (64-100%) considered the BMC responsible for cleaning and repairing of water pipes, cleaning and repairing of latrines, and cleaning of gutters, which is not according to the Agreement of Lease (See Annex I). This proves that either MHADA's Community Development workers did not explain sufficiently to the Society members the details of SUP, or the Society members did not inform their residents sufficiently about the project. Another reason might be that out of resentment over the quality of the works, respondents refuse to feel any responsibility for maintenance of the provided infrastructure, and still consider BMC to be responsible. In the field, one can also observe that there are no collectively organised maintenance routines.

The Cooperative Society has not developed a prominent role in the maintenance of the infrastructure, but the residents are confident in the Society capability to do so.

At present, all Society members pay Rs.10/- per month for maintenance services. All respondents consider the present SUP-project payments as affordable. However, this might also change after the Agreement has been signed and monthly instalments of leasehold and environmental improvement charges commence.

In conclusion, the Rajaram Nagar Society did succeed in achieving for its residents. However, weak community cohesion and organisation, poor quality of some of the provided infrastructure, remaining low pressure and irregular water supply by the BMC, and the difficulty in excluding non-members from using the facilities, will strain sustained community-managed environmental improvements.

## **8. Ameer Baug, Chembur**

### ***General***

Ameer Baug is a large slum of 177 dwelling units, and is part of an even larger slum area along the railway lines. The area is a low-lying area with repeated problems of

flooding during the rainy season. It is densely populated and dwellings are built of semi-permanent materials. The slum is said to have existed for 30 years. The residents originate from different districts in the Southern States of India. The level of education is reasonably high compared to other surveyed slums, with an adult illiteracy of only 12%. The level of income is at an average level: Rs.1740/- per month per household. Employment is mainly found in regular services.

In Ameer Baug, a Cooperative Society has been registered, but a Lease Agreement is still outstanding.

### *Community Organisation*

At the time of the survey, the community showed a moderate level of organisation and cohesion, and it is evident that the response will depend on the further impact of SUP on the environmental improvement. A major difficulty is that the Society is socially and physically integrated into a greater slum area, making it difficult to secure separate benefits for the society.

### *Infrastructure*

Before the SUP, public water taps, pavement and a public latrine had been provided by the BMC under SIP to the whole slum area. Under SUP, one of the four deteriorated public latrines, water taps, gutters and pavement have been improved to a limited extent. Public tap stands have not been added. The existing ones were provided with roofing. The quality repairs of the existing tap stands does not reach acceptable standards.

The location of the sanitation block is at the edge of the Society and is part of a row of sanitation blocks. One of the blocks has been selected to be 'owned' by the Society after repair. However, in the slum, the facilities are considered public and are used by the residents indifferently. Ownership and exclusion of non-members from using this particular sanitation block is not feasible. Paid maintenance by the Society's members is therefore an idle concept. More serious is the deplorable state of the sewage discharge into aqua-privies. The whole area is inundated by overflows, even upto the front door of some dwellings. The environmental condition is absolutely unacceptable and alarming. Next to the sanitation blocks is the communal garbage dump. Ameer Baug residents also make use of this dump. The whole area is covered with waste, attracting insects, rats, dogs, pigs, etc. Proper garbage disposal and collection has not been covered by the SUP.

Just opposite this in human site, a Balwadi (Creche) was constructed under SUP. Gutters were also provided, but the levelling has not been done properly causing overflows and blockages.

The survey reveals that all residents use the water and sanitation facilities inside their area. As absorbed, residents use the garbage dump site near the sanitation blocks to dispose off domestic wastes. According to the survey, all respondents are not satisfied with the facilities of water, sanitation, gutters and garbage disposal and collection. Only

the provision of pavement has been to a satisfactory level. The general quality of the infrastructure works was perceived not acceptable by all respondents.

When asked what additional needs exist for the improvement of the slum area, all respondents state answers that relate to public tap stands, public sanitation, communal disposal and collection, and housing improvements. Improved drainage was also mentioned.

The households are mostly well informed about the project components and the implementing agencies. The respondents are aware of the responsibilities of the Society for maintaining the provided facilities. In the field, one can also observe that there are no collectively organised maintenance routines.

The Cooperative Society has not developed a prominent role in maintenance of the infrastructure, but the residents are confident in the Society capability to do so.

At present, all Society members pay Rs.10/- per month for maintenance services. All respondents consider the present SUP-project payments as affordable. However, this might also change after the Agreement has been signed and monthly instalments of leasehold and environmental improvement charges commence.

In conclusion, the Ameer Baug Society did not succeed in achieving any advantages for its residents. Although there is a weak community cohesion and organisation, and the difficulty to incur user-control over the provided facilities, it is mainly due to the failure of MHADA to achieve any environmental improvement in Ameer Baug. The standardized concepts were executed, without looking beyond the demarcated area and acknowledging the integrated problems that exist in this whole area. It needs to be feared that community-managed infrastructure and sustained development in Ameer Baug is a still-born child. It is therefore strongly recommended to approach the problems in the whole slum in an integrated manner and find solutions through the joint cooperation of several societies.

## **9. Nahur Gaothan, Mulund West**

### ***General***

Nahur Gaothan is an average slum of 100 dwelling units, and is faced on one side by the railway line and on the other sides by private property. About 90% of the residents have been living here for more than 10 years. The majority of the dwellings are semi-permanent. The area has two distinct zones; one where the land is flat and above the railway level, and the other a low-lying area, sloping towards the boundary wall of the private property, which is prone to accumulation of water flowing through the gutters. A large common space is a striking feature of this settlement. The level of education is reasonably high compared to other surveyed slums, with an adult literacy of 88%. The level of income is above average: Rs.2026/- per month per household. Employment is mainly found in regular services.

In Nahur Gaothan, a Cooperative Society has been registered, but a Lease Agreement is still outstanding.

### *Community Organisation*

At the time of the survey, the community showed a moderate level of organisation and cohesion. In the settlement a boundary dispute between the SUP settlement and the neighbouring private apartment owner exists over the occupation of land by a few residents of Nahur Gaothan. These residents, although eligible for SUP, lack protection. The Society does not have any legal means to protect these settlers, nor to evict new settlers in the area. Similarly, encroachment of its open space cannot be avoided by any legal means. Backing by SUP would serve an important goal to ensure self-control by the community. From the interviews it has become clear that residents are very eager to invest resources in the development of their dwellings. The financial situation and latent community organisation would allow such developments. Support and coordination by the SUP would be of great value in this process. Another advantage in this settlement is the fact that the issue of non-members using the same facilities is not existent. Community-based management of infrastructure and sustained self-development are very feasible and should be encouraged.

### *Infrastructure*

Before the SUP, public water taps, pavement and two public latrines had been provided by the BMC under SIP. Under SUP, the existing public latrine have been re-plastered, and water taps, gutters and pavement have been improved to a limited extent. Public tap stands have not been added, but the existing taps redistributed more uniformly throughout the settlement. The tap stands were also provided with roofing. The quality of repairs of the drainage does not reach acceptable standards. Overflows and inconveniences are still foreseen in rainy periods, especially in the lower part of Nahur Gaothan. Adequate garbage disposal and collection have not been provided.

The survey reveals that all residents use the water and sanitation facilities inside their area. Residents use the garbage dump sites inside, as well as outside that area. According to the survey, a considerable group of respondents are not satisfied with the facilities of water (29%), sanitation (59%), gutters (35%) and garbage disposal and collection (100%). Only the provision of pavement have been to a satisfactory level. The general quality of the infrastructure works was perceived not acceptable to all respondents.

There is a strong suspicion within the community that their total contribution to the SUP does work out much more per household than the project has invested in providing infrastructure in the area. This suspicion proves to be verified, the whole concept of SUP will loose much of its marketability and create vast unwillingness among societies to pay the pre-set environmental improvement charges. Secondly, it is reasonable that Cooperative Societies obtain insight in the actual expenditures in their settlement, and a Government body (MHADA or BMC) is obliged to account for their expenditures in each settlement.



When asked what additional needs exist for the improvement of the slum area, respondents stated answers that relate to public tap stand (35%), public sanitation (30%), communal disposal and collection (100%), housing improvement (100%), and also a Community Hall (75%) and a dispensary or clinic (25%).

The households are mostly well informed about the project components and the implementing agencies. The respondents are aware of the responsibilities of the Society for maintaining the provided facilities.

The Cooperatives Society has not developed a prominent role in the maintenance of the infrastructure, but the residents are confident in the Society capability, to do so.

At present all Society members pay Rs.15/- per month for maintenance services. All respondents consider the present SUP-project payments as affordable. However, this might also change after the Agreement has been signed and monthly instalments of leasehold and environmental improvement charges commence.

In conclusion, the Nahur Gaothan did succeed in achieving some advantages for its residents. However, the community is not impressed by the efforts of the SUP, and are hesitant to agree upon the conditions of the Lease. Especially where the cost-benefit balance is concerned. Furthermore, the potentials of mobilizing community resources has not been tapped sufficiently under the SUP.

## **10. Gavanpada, Mulund East**

### ***General***

Gavanpada is the largest slum among the surveyed settlements. It is located 1 km from a suburban railway station and close to a market. The settlement is surrounded by private housing colonies, belonging to middle and high income groups. The first dwellings have been erected over 25 years ago, and many residents have been living there ever since. The entire slum consists of about 700 dwelling units, out of which 445 dwelling units have been identified as eligible for SUP. Some 65-70 dwelling units have been excluded due to a Road Widening Development Plan, which has incurred the worth of the affected households, leading to some kind of impasse. The resettlement of the dwelling units has made no progress as yet. These residents are considered as part of the community, but under the SUP eligibility criteria as non-members. However, as a matter of course they still use the public facilities. For the purpose of SUP the community has been grouped in 7 Cooperative Societies, out of which 1 Society occupies private land. The survey has confined itself to the 6 Societies on public land. The majority of the dwellings are built of permanent materials, using bricks, cement blocks, wooden doors and frames, tiles, asbestos roof sheets, etc. The level of education is reasonably high compared to other surveyed slums, with an adult illiteracy of only 15%. The level of income is above average: Rs.1914/- per month per household. Employment is mainly found in regular services. This data indicates that there is a high potential for consolidation and self-managed development.

In Gavanpada, 7 Cooperative Societies have been registered, but Lease Agreements have not yet been signed.

### *Community Organisation*

At the time of the survey, the community succeeded in establishing several Societies that should function as an operational unit for the management of the provided infrastructure. Especially the chief promoters have shown dedication and pursuance to come to this stage, against the opposition of 'rebel elements'. As a result one can observe that the cooperative spirit is alive. From the interviews it has become clear that residents are very eager to invest resources in the development of their dwellings. The financial situation and latent community organisation would allow such developments. Support and coordination by the SUP would be of great value in this process. Community-based management of infrastructure and sustained self-development are very feasible and should be encouraged.

### *Infrastructure*

Before the SUP, public water taps and public latrines (40 seats) had been provided by the BMC under SIP, and through a Member of Legislative Assembly fund (State). Under SUP, the existing public latrines have been re-plastered. The number of taps has been doubled to 1 for every 10 households. Some households have formed sub-groups of 10 members and paid for an individual private connection from BMC. These taps are also provided with meters. Pavement and gutters have improved the settlement considerably. Pavement sweeping is taken care of by the individual households. Again, garbage disposal and collection had not been covered adequately under SUP.

Under SUP, a second Balwadi has been provided, which had to be located on an adjacent piece of land due to lack of space inside the area. In Gavanpada, it was not possible to create within every Society a basic package of amenities, as is conceived under SUP. Instead, the centrally located sanitation and community services were sub-divided amongst the Societies. Whether this proves a feasible arrangement for the Society-based use and maintenance of facilities, needs to be studied in future. At present, one can observe that user-control of centrally located sanitation facilities is non-existent and the maintenance is poor.

The survey reveals that all residents use the (private and public) water and facilities inside their area. In respect of the sanitation facilities, some 10% of the residents (men, women and children) go outside for their conveniences. Residents use the garbage dump sites outside the area, mostly a communal dump. According to the survey, a considerable group of respondents are not satisfied with the facilities of public latrines (55%) and garbage disposal and collection (55%). The provisions of pavement (100%), gutters (88%) and public tap stands (100%) has been to a satisfactory level. The general quality of the infrastructure works was perceived acceptable by 80% of the respondents.

When asked what additional needs exist for the improvement of the slum area,

respondents state answers that relate to public sanitation (100%), communal disposal and collection (50%), housing improvement (100%), but also a community hall (20%) and recreational facilities (25%) were mentioned.

The households are moderately informed about the project components (59%) and the implementing agencies (65%). Respondents are also moderately aware of the responsibilities of the Society for maintaining the provided facilities. Considerable groups consider BMC responsible for repairs of water pipes (61%), cleaning of latrines (43%), repair of garbage dump units (41%), and cleaning of gutters (29%) inside the area, which is not according to the content of the Lease Agreement.

The Cooperative Society has not developed a prominent role in the maintenance of the infrastructure, but the residents are confident in the Society capability to do so in future.

At present, all Society members do not pay the supposed Rs.10/- per month for maintenance services. However, 84% of the respondents consider the SUP-project payments as affordable. However, this might also change after the Agreement has been signed and monthly instalments of leasehold and environment charges commence.

In conclusion, the Gavanpada did succeed in achieving some advantages for its residents. The community has a complex structure by its size and further support of its Society members is desirable. A Community Hall could serve very well the community development and management of the provided facilities after the Lease Agreement has been signed.

## **11. Kadampada, Mulund West**

### ***General***

The slum of Kadampada consists of 177 dwelling units, and is the first slum that has signed the Lease Agreement document. Its shape is rectangular and located along a busy road and a boundary wall of middle and high income housing blocks. A small pocket of private land is enclosed in this slum, which could not be included in the SUP. Kadampada is densely populated, and houses are built of semi-permanent and permanent materials. Especially the shops, restaurants and a temple facing the road are built of permanent materials. Similarly, variations exist in the income categories of the households. Although the average income is Rs.1395/-, 35% of the households earn less than Rs.700/-, while 15% earns more than Rs.2500/-. Employment is a mixture of regular service and self-employed.

### ***Community Organisation***

Formation of a Co-operative Society has stimulated an enthusiastic response from a majority of the residents towards implementation. The Society members have played a key-role in the process of obtaining the Lease Agreement. Besides these activities the Society has been involved to set up a system of purchasing commodities in bulk from the wholesale market, and distribute the commodities such as rice, wheat, etc. to its members. Recently a Mahila Mandal has been formed that has initiated a kind of "Chit" fund, whereby monetary assistance is given to the economically weaker section.

During interviews, the Society members revealed a strong desire to re-organise their land and individual dwelling units for a more stable development. They favoured revised

layout plan, allowing for 85 units of equal size, and to construct ground plus first floor dwellings for 170-180 households. In order to realise their ambitions, the Society was willing to pay-off their "Environmental Improvement Loan" in one state, for which they could mobilise sufficient resources. As support of MHADA under the present SUP could not be obtained, they want to explore alternate resources, e.g. from HUDCO.

### *Infrastructure*

Under the SIP common tap stands and a community block were provided. This existing infrastructure was improved under the SUP. Besides drainage (gutters) and repaired pavements, extra public tap stands were added and asbestos sheet roofing was provided over all the tap stands for shelter from sun and rain. At the time of the research, the SUP-tap stands had not been connected to the BMC-network. A separate community latrine block for women was constructed. The Society members pressed for re-design of this latrine that was to face the dwellings and a blank wall towards the roadside. By collective action, an additional space of 1.5 x 3.5m was added to the building at the road-side. The additional space is being used for gatherings, meetings and storage of communal commodities. The additional construction costs were entirely sponsored by the Society.

The survey shows that all residents use the water and sanitation facilities inside the area. Garbage is dumped at sites across the road. Respondents are unanimously satisfied with the facilities of water, sanitation, pavement and gutters. However, garbage disposal is unsatisfactory for 50% of the respondents. When asked what additional needs exist for the improvement of the slum area, all respondents stated answers that relate to housing improvement.

The households are well informed about the project components (75%) and the implementing agencies (90%). Moreover, the respondents are aware of the responsibilities of the Society for maintaining the provided facilities. A minority considers the BMC responsible for cleaning of latrines (30%), repair of water pipes (25%) and dump sites for garbage (35%). The Society has appointed an authorised plumber to carry out minor repairs and maintenance works. A resident has been appointed for pavement sweeping, garbage collection, gutter and latrine cleaning inside the area. The person receives a payment of Rs.400 per month. It has been considered to purchase plastic containers for the collection of domestic garbage, to be given to the hired person to dump in the roadside municipal garbage dump.

At present, all Society members pay Rs.10/- per month for these services. In this context the residents of the excluded private land pocket are also paying Rs.10/- per month for the use of the facilities and the provided maintenance services. Thus, a potential conflict situation has been resolved in a pragmatic and efficient manner. Apart from these payments, all residents in the area pay for the water consumption based on the monthly water meter readings. Although the residents have to manage other repayments, such as housing loans, electricity income generation loans, the respondents consider the SUP-project payments as affordable (90%).

In conclusion, the Society of Kadampada has succeeded in securing for its members distinct advantages by reason of their collective strength, democratic management and equitable participation in the SUP.

## DETAILED DESCRIPTIONS: 5 CASE STUDIES – VISHAKHAPATNAM

### 1. Chilakapeta

#### *General*

Chilakapeta is located near the centre of Vishakhapatnam, very near to the dominant city conveyor belt, and is known for its fish processing activities and trade. Dust, flies, mosquitoes, dirt and smell characterize the slum. The area is densely populated. The housing is a mix of "pucca" houses as well as houses made of wood, metal sheets and mud. Roofing material also varies from concrete to thatched roofs. The area has benefited from the Weaker Section Housing scheme. Group-plus-one house was erected in several parts of the slum.

The household questionnaires have shown that the majority of the residents (87%) have stayed more than 10 years in Chilakapeta. Leaseholds of the plots have not been obtained yet.

Housing under the SIP has not been undertaken. Regarding the socio-economic programmes Mother Leaders Training, Clean Hut Competition, Childhood Disability Management Programme, Health Clinic, Food and Nutrition Programme, Study Tours to Hyderabad, a Creche, Adult Education Centre, Non-formal Education, Audio-visual Education, Craft (sewing) Training and a Revolving Fund for income generation has been provided and implemented.

#### *Community Organisation*

The community has several organisations that are affiliated with political parties, as well as non-political groups such as Mahila Mandals (Women Groups) and caste organizations that undertake welfare, social and cultural activities. The Neighbourhood Committee is linked with one of the 3 Mahila Mandals. The community is divided into several groups that are affiliated with the political factions. Communal action by the whole slum population meets many problems as the leaders of the political factions interfere regularly and create contradictions in interests. Thus, the Neighbourhood Committee is not as such a representative body that can act on behalf of the whole community. The contents of the Declaration is not known by the members of the Mahila Mandal, nor are its implications for establishing maintenance routines planned for or implemented. The community organizers of the UCD provide support to the Neighbourhood Committee to undertake the administrative and financial steps for the socio-economic programmes as most of the female members are illiterate. The community's cohesion is very scattered and only exists in sub-groups within the community.

## ***Infrastructure***

Under SIP, the slum has been provided with 440m<sup>2</sup> path pavements, 400m drains, 2 borewells with handpumps, 1 public latrine (20 seats) and 1 community hall.

The survey shows that the provided water supply does not meet the needs as the pressure is very low and the number of hours of supply is not sufficient. A majority (90%) also make use of public taps outside the area. The provided public latrine does not meet the need of the residents as 37% of the men, 11% of the women and 31% of the children make use of facilities outside the area, mostly the open areas that are available. Garbage disposal is done at sites inside the area (75%), while 25% throws its garbage outside the area.

The appreciation of the provided infrastructure is generally very low, especially the provided water supply and the public latrine is unsatisfactory to a vast majority (92% and 96%). Complaints are the low pressure and insufficient supply of water, while the public latrine is not clean, smells and has too few seats. The expressed needs in the questionnaire are water supply (100% of the respondents has mentioned water supply), public latrines (43%) and roads (27%).

From the questionnaires it appears that the residents are not very well informed about the SIP. Only 37% could mention relevant details as the implementing agencies, the O.D.A. assistance and the project components. A vast majority is not knowledgeable about the duties and responsibilities of the community in respect of maintenance of infrastructure as specified in the Declaration. Over 80% stated that the Municipal Corporation is responsible for the on-site minor maintenance.

The status of the Neighbourhood Committee is either not known or ignored/not accepted by 100% of the respondents. Some plea for a stronger Municipal Corporation involvement or another Neighbourhood Committee. Money for maintenance is not collected on a regular basis.

The financial burden at present due to the project is considered reasonable.

## **2. Bupeshnagar**

### ***General***

Bupeshnagar is a low-lying and marshy area, located near the centre of Vishakhapatnam, along the railway track and one of the main drains/open sewers, and is known for its organised prostitution, alcoholism and social instability. The area is moderately populated and is the least developed among the sampled slums. The houses are made of semi-permanent and temporary materials such as brick, wood, metal sheets and mud. For roofing, galvanized or asbestos sheets, as well as thatched roofs are used.

The household questionnaires have shown that the majority of the residents (92%) have

stayed more than 10 years in Bupeshnagar. Leaseholds of the plots have not been obtained.

Housing under the SIP has not been undertaken, due to unfavourable soil conditions. Regarding the socio-economic programmes Mother Leaders Training, Dais (Midwife) Training, Clean Hut Competition, Childhood Disability Management Programme, Food and Nutrition Programme, a Creche (Anganwadi), Adult Education Centre, Non-formal education, craft (sewing) Training and a Revolving Fund for income generation has been provided and implemented.

### *Community Organisation*

The community has no formal organisation, except for a Mahatma Gandhi Youth Group. One can notice two social groupings on each side of the access road. The Neighbourhood Committee has been established with female members only. Thus, the Neighbourhood Committee is a recently established body and its leadership capacity has to be proven yet. The contents of the Declaration is not known by the members of the Committee, nor are its implications for establishing maintenance routines planned for or implemented. Money has not been collected as no cause is seen for it, e.g. repair needing to be done. The community organizers of the UCD provides support to the Neighbourhood Committee to undertake the administrative and financial steps for the socio-economic programmes as most of the female members are illiterate. The community's cohesion can be considered moderate.

### *Infrastructure*

Under SIP, the slum has been provided with 800m<sup>2</sup> path pavements, 280m storm water drains, 520m pavement drains, 2 borewells with handpump and electric pump, 1 public latrine (20 seats) with overhead tank (not connected to borewell yet) and 2 public bathrooms. The survey shows that the provided water supply does not meet the needs as the pressure is very low and the number of hours of supply is not sufficient, and the on-site borewells give a salty taste. A majority (60%) make also use of public taps (railway station) and handpumps outside the area. The provided public latrine could not be used yet as the connection for the electric bore well pump has not been made. However, one can observe and also the questionnaires prove, that a quarter of the men, women and children do make use of it. Others go to open areas adjacent to the railway track. Children (48%) squat inside the project area at the vacant strip along the railway line. Garbage disposal is done at sites inside the area (45%), while 55% throw that garbage outside the area on the other side of the railway track.

The appreciation of the provided infrastructure is generally high in respect of the provided gutters and pavement. The appreciation of the provided water supply is however very low, especially the irregular and insufficient supply and the salty taste which creates discontentment. The expressed needs in the questionnaire are water supply (100% of the respondents has mentioned water supply), community hall (40%) and garbage disposal and collection (40%).

From the questionnaires it appears that the residents are reasonably informed about the SIP. 74% could mention relevant details as the implementing agencies, the O.D.A. assistance and the project components. The knowledge about the duties and responsibilities of the community in respect of maintenance of infrastructure as specified in the Declaration scores low, except for repair of tapfloors and sweeping of pavements. All other duties are considered as those of the Municipal Corporation.

A majority (95%) is confident in the capability of the Neighbourhood Committee. The NC is working well, shows interest in the work, the residents commented.

At the time of the household questionnaire (March 1989) Rs.2/- per month was collected for maintenance. Nobody considered this unreasonable. However during our second visit (April 1989) the collection of money has been stopped as no cause was seen for the collection.

### **3. Amarnagar**

#### ***General***

Amarnagar is located North-East of the centre of Vishakhapatnam, near the main office of the Municipal Corporation. The slum has a rectangular shape. The area is located at the foot of a hill and is sloping. The settlement is moderately populated. Formerly the houses had a semi-permanent and temporary character as material such as bricks, wood, metal sheets and mud were used. Roofing material was a mix of sheets and thatched roofs.

The household questionnaires show that all respondents (100%) have stayed more than 10 years in Amarnagar. Leaseholds of the plots have not been obtained yet.

Housing under the SIP is now undertaken and has a tremendous effect on the appearance of the settlement. Some houses (Ground-plus-one) are completed and repayment of the HUDCO-loans will start soon. Other houses are still under construction. Regarding the socio-economic programmes Mother Leaders Training, Clean Hut Competition, Health Clinic, Food and Nutrition Programme, Study Tours to Hyderabad, a Creche (Balwadi), Adult Education Centre, Non-formal Education. Audio-visual education, Craft (sewing) Training and a Revolving Fund for income generation have been provided and implemented. A Health Clinic is provided in a neighbouring SIP settlement. Neighbourhood Committee members have made a request for a clinic for Amarnagar.

#### ***Community Organisation***

The community has two schedule caste associations both for men and women. The Neighbourhood Committee has been linked with the women's organisation. However, close contact is maintained with the men's association in Amarnagar. The Neighbourhood Committee has 12 members. Except for the Secretary, all members are illiterate. The Secretary was knowledgeable about the duties and responsibilities of the



NC in respect of maintenance of infrastructure. In Balwadi one could observe a chart indicating the different responsibilities of the community. She is also the key-figure in the administrative and financial organisation of socio-economic programmes in the area. The community's cohesion can be considered as moderate.

### *Infrastructure*

As houses are still under construction the provision of infrastructure was also provided to a limited extent. Two roads were paved, while others were levelled and ready for surfacing. Similarly road side drainage is under construction. Finally, the settlement will be provided with 1000m<sup>2</sup> path pavements, 600m drains, dust bins, street lighting and borewells. Two public tapstands were provided, of which one supplied water. It is planned to install an overhead water storage tank and pump to overcome peak demands. Private connections will be provided at nominal cost by the Municipal Corporation. No public latrine is being provided, as the residents have opted for individual two-pits pour-flush latrines with HUDCO loans. A Community Hall and compound wall is still to be provided.

The survey shows that all residents make use of the on-site handpumps. As the construction is going on, all residents (men, women and children) maintain their old sanitation practices; they use open areas outside the project area to squat. Garbage disposal is done at sites inside the area (100%), which is collected by sweepers using wheelbarrows.

The appreciation of the provided infrastructure is very low in respect of the provided water supply: piped water supply is not connected and the only handpump cannot suffice the needs of the residents. Regarding the drainage and the waste disposal and collection the residents are satisfied.

From the questionnaires it appears that the residents are reasonably well informed about the SIP. More than 80% could mention relevant details such as the implementing agencies, the O.D.A. assistance and the project components. The awareness about the duties of the NC has not been established. A minority is more or less knowledgeable about the duties, but the majority considers the Municipal Corporation responsible for minor maintenance in the area. Most respondents however stated that cleaning of gutters (63%) and repair of tapfloors (53%) is the NC's duty.

The respondents' confidence in the Neighbourhood Committee is high (97%). They consider them interested, well performing and capable.

At present Rs.10/- is collected per month which is used for electrical bulbs, meeting expenses on visitors and repair of any infrastructure. All respondents consider this contribution as reasonable. However, one should consider that this opinion might change when the housing loan repayments are due. At present no one feels financially burdened due to the project.

#### **4. Lakshminarayanapuram**

##### ***General***

Lakshminarayanapuram is located North of Vishakhapatnam, not far from the National Highway No.5. The area has a rectangular shape, is located beside a deep drain (gedda) and is slightly sloping. The area is densely populated. Formerly the houses had a semi-permanent and temporary character, as material such as bricks, wood, metal sheets and mud were used. Roofing material was a mix of sheets and thatched roofs.

The household questionnaires show that a majority of the respondents (75%) have stayed more than 10 years in Lakshminarayanapuram. Leaseholds of the plots have not been obtained yet.

Housing under the SIP is now undertaken and has a tremendous effect on the appearance of the settlement. Some houses (Ground-plus-one) are completed and repayment of the HUDCO-loans will start soon. Other houses are still under construction. Regarding the socio-economic programmes Mother Leaders Training, Dais Training (Midwife), Clean Hut Competition, Health Clinic, Study Tours to Hyderabad, a Creche (Balwadi), Adult Education Centre, Non-formal Education, Audio-visual Education, Craft (Sewing) Training and a Revolving Fund for income generation have been provided and implemented. The Health Clinic is provided for Sanjay Nagar as well.

##### ***Community Organisation***

The community has two men's associations and one women's association (Mahila Mandal). The latter is very dominant in this settlement and it was a matter of course that the Neighbourhood Committee was linked with this organisation. It implies that in Lakshminarayanapuram there are several women with leadership capacities. Therefore a regular change of leading women can be observed in this community. Between our first and second visit the representative women had been replaced by others. These changes in leadership may cause problems in establishing maintenance routines in this settlements. Most of the NC's members are illiterate. The members that we met were, to a limited extent, knowledgeable about the described duties and responsibilities of the NC's in respect of maintenance of infrastructure.

The community organizers provide the administrative and organisational assistance at present. The community's cohesion could be considered reasonably strong but tensions arise regularly.

##### ***Infrastructure***

Under SIP the slum has been provided with 455m<sup>2</sup> road pavement, 360m drains, 2 borewells with handpumps, and 1 Anganwadi Building and 147m retaining wall for the gedda. Street lighting is still pending. Ultimately, no public latrine is being provided, as the residents have opted for individual two-pits pour-flash latrines with support of HUDCO loans.

The survey shows that all residents make use of the on-site handpumps, but they do not suffice the need. Thus 34% of the households make use of an outside public tap. As the construction is going on, a majority of the residents (men - 100%, women - 100% and children - 79%) maintain their old sanitation practices; they use open areas outside the project area to squat. Some adults already make use of the inside individual latrines, while small children squat inside the area at open spaces. Garbage is disposed off in the gedda by the majority of people.

The appreciation of the provided infrastructure is high in respect of the provided handpumps and pavements. Respondents are not satisfied with the garbage disposal and collection facilities. The expressed needs are in line with the earlier statements: tapstands (100%), garbage disposal and collection facilities (66%) and public latrines (38%). The latter is explained by the fact that a number of houses will be deprived of private latrines as there is lack of space.

From the questionnaires it appears that the residents are well informed about the SIP. More than 97% could mention relevant details as the implementing agencies, the O.D.A. assistance and the project components. The awareness about the duties of the NC has not been reasonably established. A majority of the respondents state repair of handpumps (69%), repair of tapfloor (66%), sweeping of pavements (66%), repair of retaining wall (66%) and repair of pavement (59%) to be the duty of the NC.

The respondents' confidence in the Neighbourhood Committee is high (91%). They consider them interested, well performing and capable. However there is a minority (9%) that has no confidence in the NC, for reasons of political bias and lack of collectivism. This reflects the earlier made observations of competing female leadership.

At present Rs.2/- is collected per month from 66% of the sampled households, while 25% do not contribute. Our second visit revealed that money is not collected on a regular basis, but only at times when repair is required. From the households they collect Rs.2/- each, while NC members contribute Rs.5/-. None of the respondents considered the contribution as unreasonable. However, one should consider that this opinion might change when the housing loan repayments are due. At present no one feels financially burdened due to the project.

## 5. Sivanagar

### *General*

Sivanagar is located at the far West of the Municipal territory of Vishakhapatnam, not far from the National Highway No.5. The area has a rectangular shape which is crossed by a deep and wide drain (gedda). The area has a low population density, which is due to its far off location. Formerly the houses had a semi-permanent and temporary character, as material such as bricks, wood, metal sheets and mud were used. Roofing material was a mix of sheets and thatched roofs. The population is known for its washing and laundry activities. In the centre a Shiva temple was built and one local leader functions as priest

and counsellor. The temple is at the same time a meeting point where different generations gather, meet, worship and relax.

The household questionnaires show that a majority of the respondents (96%) have stayed more than 10 years in Sivanagar. Leaseholds of the plots have not been obtained yet.

Housing under the SIP is now undertaken and has a tremendous effect on the appearance of the settlement. Some houses (at present only ground floor) are completed and repayment of the HUDCO-loans will start soon. Other houses are still under construction. Regarding the socio-economic programmes Mother Leaders Training, Dais Training (Midwife), Clean Hut Competition, Study Tours to Hyderabad, a Creche (Balwadi), Adult Education Centre, Non-formal Education, Audio-visual Education, Craft (Sewing) Training, Short Term Courses and a Revolving Fund for income generation have been provided and implemented. With a grant of the Vishakhapatnam Lion's Club, the Community Hall constructed under SIP has received an uplift (floor and windows).

### *Community Organisation*

The community has one men's association and one women's association (Mahila Mandal). The first is very dominant in this settlement and is involved in cultural, social and economic activities. The latter Mahila Mandal has their own set of activities in respect of welfare, social and cultural activities, but is dependent on the male counterpart association in respect of issues that effect the whole community. The Neighbourhood Committee has been linked with the Mahila Mandal. Most of the NC's members are illiterate. The members that we met were to a limited extent knowledgeable about the described duties and responsibilities of the NC in respect of maintenance of infrastructure. The Declaration has not been signed by the NC at present. A maintenance routine has not been established, except for sweeping the Balwadi (Creche).

The community organizers and members of the male organisation provide the administrative and organisational assistance at present. During our second visit the male association members took a dominant role in discussing the issues of community-based management of infrastructure.

### *Infrastructure*

Under SIP the slum will be provided with major infrastructure works. At present the construction of 836m retaining wall to the gedda, 1561m<sup>2</sup> road pavements, 750m drains and the culvert is reaching completion. One borewell with handpump and a Community Hall have been completed. Street lights and dust bins have to be provided yet. No public latrine is being provided, as residents have opted for individual two-pits pour-flush latrines with support of HUDCO loans.

The survey shows that all residents make use of the on-site handpump (46%) and open dugwells (100%). As the construction is going on, a majority of the residents (men - 79%, women - 79% and children - 33%) maintain their old sanitation practices; they use

open areas to squat. Some adults and children (21%) already make use of the inside individual latrines, while small children (45%) squat also inside the area at open spaces. Garbage is disposed off in the gedda by the majority of the people (92%).

The appreciation of the provided infrastructure is high in respect of the provided handpumps and road pavements. There are no complaints about the present disposal and collection practices.

The expressed, needs complementary to the earlier statements: a majority (79%) wants to have an individual toilet.

From the questionnaires it appears that the residents are well informed about the SIP. All respondents could mention relevant details as the implementing agencies, the O.D.A. assistance and the project components. The awareness about the duties of the NC has not been established. A majority of the respondents state repair of handpumps (96%), repair of retaining walls (100%) and repair of pavements (71%) is the duty of the Municipal Corporation. Only sweeping of pavement is conceived as a duty of the NC.

The respondents' confidence in the Neighbourhood Committee is high (100%). They consider them capable.

During our discussion with the members of the NC, it became clear that for issues of money collection and employing labour for doing repairs, the men's association needs to be consulted and their approval and sanction be obtained. The survey reveals that Re.1/- per month is collected for communal purposes, which is considered reasonable. However, during our second visit this practice had been abandoned and money will now only be collected in case of repairs. A reason that was mentioned for stopping this contribution was the increasing investments in housing at the individual household level. As it is generally known, the housing loans cover only some 50% of the total investment costs.

The repayments of the housing loan has not started, but will add to their present expenditures in housing.

**COMMUNITY BASED PUBLIC-PRIVATE PARTNERSHIP  
IN THE PROVISION OF INFRASTRUCTURE  
TO HUMAN SETTLEMENTS**

**Annotated Bibliography**

Baross Paul and Edgardo Martinezing      Upgrading Low-income Residential Areas in Developing Countries: the Social Organization of Decision-making, paper presented for the International Conference on Low-income Housing, Technology and Policy, June 7-10, 1977, AIT, Bangkok, Thailand, 28pp.

Bakdi Suchitra P      Shelter and Urban Services for Slum Dwellers and Squatters in Metropolitan Bangkok: Klong Toey Case Study, Regional Development Dialogue, Vol.8, No.4, Winter 1987, pp.108-137.

Besides describing the policies and programme in metropolitan Bangkok, the article discusses in the second half the Klong Toey Settlement and the way in which community (leaders) got involved from the early start. However participation is top-down and bargaining takes place in the arena of bureaucratic politics and is the resolution of institutional conflicts.

Birkbeck C      Self-employed Proletarians in an Informal Factory: The Case of Cali's Garbage Dump, Journal of World Development, Vol.6, No's 9/10, pp. 1173-1185, 1978.

Bromley R      Organisation, Regulation and Exploitation in the so-called "Urban Informal Sector": The Street Traders of Cali, Columbia, World Development, Vol.6, No.9, pp.1161-1171.

Chauhan Sumi Krishna      Who puts Water in the Taps?: Community Participation in Third World Drinking Water, Sanitation and Health, London, International Institute for Environment and Development, 1983, 92pp.

This book challenges some favourite Third World myths. Is "self-help" just development on the cheap? Does "motivation" only mean urging people to accept what the government thinks is good for them? One common factor among the most successful water and sanitation schemes appears to be good administration, rather than tremendous enthusiasm alone. The motivators are usually not unpaid volunteers, but dedicated salaried professionals. The key official in a South Indian scheme, for example, is haunted by a childhood memory of church bells tolling all day long for people who had died of cholera.

The book (covers Mexico, Brazil, Ghana, Guinea-Bissau, Malawi, Pakistan, India and China) was written by six Third World journalists, Sumi Krishna Chauhan, Deputy Director of Earthscan and formerly senior correspondent with the Hindustan Times. A kaleidoscope of Third World reality is given, ranging from school children collecting disease-carrying snails in China to Karachi cricket team which helped dig latrines, and from the politically-turbulent favelas of Rio de Janeiro to the Ghanian Village which gets its water from a gin distillery.

Cointreau Sandra J                      Environment of Urban Solid Wastes in Developing Countries: A Project Guide, Washington, World Bank Urban Development Department, Technical Paper No.5, 1982, 214pp.

In this book the whole range of solid waste management is covered, supported by examples from Third World countries. Especially chapter IV and V give evidence of solid waste management in Lahore, Onitsha, Cairo, Kanpur, Medellin, Bangkok, where more or less communities are involved.

\* Cointreau S J                      Kanpur, India Urban Project: Solid Waste Management Component, The World Bank, 1980, SWMD Ltd.

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The report gives an interesting but brief description of the Zabbaleen communities that involved in solid waste management in Cairo (taken from Neamatalla "Solid Waste Management in Cairo, Egypt", 1981).

Fisher Julie                      Development from Below: Neighbourhood Improvement Associations in the Latin American Squatter Settlements, Studies in Comparative International Development, 19 (1984), pp.61-85.

Fernando Marina                      New Skills for Women: A Community Development Project in Colombo, Sri Lanka, on Women, Human Settlements and Housing, Caroline Moser and Linda Peake (edit.), London, 1987, pp.88-112.

Flintoff Frank                      Solid Waste Management in Cairo and Alexandria, Egypt, The World Bank, Arab Republic of Egypt, Urban Development Project, 1978.

Gerella Veena                      Marginal Communities and Informal Settlements; Waste Collectors in a Third World City, Delhi, India, Abstract Paper presented at Conference on Urban Shelter in Developing Countries, London, 1-4 September 1987, 4pp.

Garella Veena and                      Infrastructure and Service Delivery to Informal N. S. Saini 200pp                      Settlements: Case Study Delhi, NIUA/HSMI, June 1987, (Annexes, abstract)

Gilbert A., P.Ward                      Community Action by the Urban Poor: Democratic Involvement, Community Self-help or a Means for Social Control, World Development, Vol.12, No.8, pp.769-782, 1984.

The first of two papers examine the nature and effectiveness of formal channels for encouraging community action and participation among low-income groups in Bogota (Colombia), Mexico City and Valencia (Venezuela). The authors are concerned with the forms of community participation among the poor, whose demands are channelled to the state, the formal organization links with the state, and the origins of community action programmes. Organizations to facilitate popular participation in barrio upgrading have existed since the late 1950s, most of which have been imposed from the top down, they argue that the poor have derived few benefits from these government-inspired organizations although they have sometimes given resources to local communities for the first time. The primary purpose behind these organizations is to legitimate the political system and to encourage compliance with urban policy. Greater power over decision-making has not increased among local groups.

Gilbert A., P. Ward                      Community Participation in Upgrading Irregular Settlements: The Community Response, World Development, Vol.12, No.9, pp.913-922, 1984.

This second paper on community action in Bogota, Mexico City and Valencia examines levels of direct community involvement in improving irregular settlements. The surveys reveal that family involvement in activities such as lobbying officials, attendance at community meetings or providing labour for neighbourhood schemes was quite limited - no more than two-fifths of owner households in survey barrios participated. Participation varied with tenure and the project: owners participated more than tenants and water and electricity programmes generated high levels of support. Despite these findings the authors argue that the extent and form of community participation is shaped less by local or settlement conditions than by government needs and policies.

Glennie Colin                      A Model for the Development of a Self-help Water Supply Program, World Bank Technical Paper No.1, 1982, 46pp.

Guirguis Dalal Hanry                      Strategies for Upgrading Solid Waste Management in Egypt, Directed Study ICHPB42, Inst. for Housing Studies, August/December 1983, Report No.997.



The report gives an interesting but brief description of the Zabbaleen communities that are involved in solid waste management in Cairo (taken from \* Neamatalla "Solid Waste Management in Cairo, Egypt", 1981).

Hoek-Smit Marja                      Community Participation in Squatter Upgrading in Zambia; The Role of the American Friends Service Committee in the Lusaka Housing Project, Philadelphia, AFSC, 1982, 145pp.

Community Involvement in Infrastructure Implementation and Operation and Maintenance is described in chapter 7, pp.58-84.

Hollnsteiner Mary R                      People Power: Community Participation in the Planning of Human Settlements, Carnets de l'enfance, Dossier, Vol.No.40, pp.11-47, 1976.

Following a discussion of six modes of participation and their underlying assumptions, Hollnsteiner analyzes the conditions which enable an urban community to move from minimal involvement - such as a "solid citizen" group simply legitimizing outside-planned programmes - to true participation. The latter implies effective grass roots policy making, with the community controlling the use of funds and eventually to hire its own experts.

\* Joshi M.C                                      Kanpur Urban Development, Project No.1, Solid Waste Management, Report Part II, Kanpur Nagar Mahapalika, 1980.

\* Keyes S.J. and W.J                      Manila Scavengers: The Struggle for Urban Survival, Institute of Philippine Culture, Poverty Research Series No.1, Manila University, Quezon City, Philippines, 1974, 51pp (cointreau summ.)

Laquian A.A                                      Sites, Services and Shelter; an Evaluation, Habitat International, Vol.7, No.5/6, pp.211-225, 1983.

Lawless Paul                                      Urban Development Corporations and their alternatives, Cities, August, 1988, pp.277-289.

\* Lomnitz L                                      Networks and Marginality: Life in a maxican Shanty-town, Academic Press, New York, USA, 1977.

The book describes patterns of social relationships between the shanty-towns and the informal urban economy. Field data are taken from several Mexico shanty-towns.

The industrial economy has not developed fast enough to keep pace with the demand for jobs from rural migrants. Labour union closed shops and rising educational requirements

for industrial jobs effectively bar migrants from access to skilled jobs. Two types of relationships are explored: (a) exchange among equals, and (b) patron-client relationships. Of great interest is the latter form where research shows the highest flow of reciprocal exchange in the shanty-town occurring usually between neighbours related by kinship. The kinfolk network can be organized into labour "gang" with a wide variety of wage rates, work conditions, industrial relations; e.g., partnerships, partonage, brokerage, production brokers, political brokers. This does not, however, exclude a relationship with the dominant formal economy. Thus, the shanty-towns are connected with the national system in their role as markets, as producers, and as sources of cheap labour and political resources.

Materu Jossy Sites and Services Projects in Tanzania: a Case Study of Implementation, *Third World Planning Review*, 8(2), pp.121-138, 1986.

Moser Caroline O.N Evaluating Community Participation in Urban Development Projects, Proceedings of a Workshop held by the DPU 14th January 1983, Development Planning Unit, Bartlett School of Architecture and Planning, University College London, Working Paper No.14, 67pp.

Besides dealing with the issue of evaluating community participation in a more general and methodological sense, cases are discussed of the Lusaka Squatter Upgrading Project (Carole Rakodi), Sites and Services Project Villa el Salvador in Lima (Reinhard Skinner) and Low Cost Housing in Jamaica (Jean and Oliver Cox). Finally the question "Who wants participation? The government or the community?" by Peter Ward and Alan Gilbert.

Moser Coroline O N Mobilization is women's work: struggles for infrastructure in Guayaquil, Ecuador, in *Women, Human Settlements and Housing*, Caroline Moser and Linda Peake (edit), London, 1987, pp.166-194.

Mustafa Sami Orangi Pilot Project; A Case Study in Local Participation and Community Development Karachi, n.d. (June 1984), 29pp.

The author discusses the feasibility of community participation in the implementation of a low-cost sanitation (=sewerage), provided the support of local municipal bodies. The participation was organised at the level of lanes. The author concludes that this approach in the OPP has proved to be successful and a contribution to community awareness and development.

Neamatalla Mounir Socio-economic Aspects of Solid Waste Management in Cairo, paper presented Conference on Financing Water Supply and Urban Development, January 6-9, 1986, 22pp.

The report is the outcome of a seminar held in 1985 on this issue. Community participation is approached from two angles: (a) from the wish to decentralize and to strengthen local decision-making and (b) from the need to restructure financial arrangement in response to perceived in reducing costs of providing urban services. Example of co-operatives, non-profit organisations, informal neighbourhood groups, area-based integrated service provision, voluntary social work, mutual help and self-help are described of a large number of cities in USA and the EC.

O'uchi Minoru                      The Role of Social Organizational Resources in Toshihiro  
Yogo Local-level Development and Management:  
Synthesis and Conclusions, Regional Development  
Dialogue, Vol.6, No.1, Spring 1985, pp.156-179.

Pasteur D                              Community Involvement in the Management of Squatter  
Upgrading: a Case Study of the Role of the Party and War  
Development Communities in Lausaka, Birmingham,  
Institute of Local Government Studies, 24pp.

Rakodi Carole                        Participation in Squatter Upgrading in Lusaka, Zambia,

Sarma Venkateswara                Slum Improvement through Collective Reconstruction; the  
Case of \*Vishakhapatnam, Open House International,  
Vol.1, No.1, pp.20-23, 1986.

Schoorl J.W., J.J. vander            Between Basti Dwellers and Bureaucrats; Lessons in  
Linden; K.S. Yap                      Squatter Settlement Upgrading in Karachi, Oxford,  
Pergamon, 1983, 305pp.

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\* Seldman Neil                        Report to the World bank: Solid Waste Collection and  
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Shahand A M.A. Tekie                Women's Aspiration for Improvements, in the role of  
and Karl E Welber                      Women in Slum Improvement: a Comparative Study at  
Klong Toey and Wat Yai Suphan in Bangkok, Thailand,  
Part Three, pp.45-60, 1986.

\*Taira K                                      Urban Poverty, Ragpickers, and the "Ants' Villa" in Tokyo, Economic and Cultural Change, University of Chicago, Chicago, Illinois, USA, Vol.17, No.1, 1969, pp.155-177.

This case study of Japanese ragpickers shows how they were able to organize themselves into a productive cooperative known as "Ants' Village" located near the waterfront of Tokyo Bay. Scavenging was organized on a communal basis with different teams in charge of collecting, processing, sorting, etc. The community built their own homes, restaurants and stores. By organizing themselves on a communal basis the scavengers were able to exert more control over supply and demand for their products. In addition, they gained considerable self respect for themselves and from society.

Turner, Berthe (edit.)                      Building Community: A Third World Case Book: A Summary of the Habitat International Coalition Non-Governmental Organization's Project for the IYSH, London, 1988, 190pp.

This book has gathered 20 case-studies, which proves that community-based actions for the improvement of living conditions is feasible, provided that access is made to resources and government support is given. Infrastructure related cases are given for Pakistan (53-58, 81-88), Indonesia (105-112).

UNCHS (Habitat)                              Community-based Finance Institutions: the Role Cooperatives and Credit Unions in Mobilizing Finance for the Improvement of Low-Income Human Settlements, Nairobi, 1984, 68pp.

The Study is based upon three case-studies in Jamaica, Kenya and Zambia, together with material drawn from other countries. The main significance of credit unions and cooperatives is that they (can) provide credits at 'unconventional' terms to their members. For low-income household this implies accessibility to credits at manageable and client-oriented terms. The democratic aspects is considered very important. However, these principles must be accompanied by sound financial management.

UNCHS    Low Cost Sanitation Project in Bihar, India. IYSH-Bulletin, 1987, 8pp.

UNCHS    Two Examples of Shelter Innovation in India (Sanitation), IYSH-Bulletin, 4th Issue, April 1986, pp.1-2.

UNESCAP     Improvement of Slums and Squatter Settlements: Infrastructure and Services, Bangkok, 1984 (IHS/PB contribution).

UNICEF Pakistan                      Baldia Soakpit Project; Community Participation towards Improved Health and Sanitation, 19pp. 1983.

Vogler Jon                              Work from Waste: Recycling to create Employment, London, Intermediate Technology Publication, 1981, 396pp.

This book deals with a large number of materials that are scavenged and can be recycled: papers, irons and steels, tin cans, non-ferrous metals, plastics, textiles, rubber, glass, minerals, oils, and chemicals and finally human and household wastes. While dealing with potential of recycling these materials, it gives examples from many, mainly Asian countries. In the second part of the book practical guidelines are given for the start of a waste business.

Walsh Patricia                      Community Participation in Zimbabwe, Waterlines Vol.2, No.3, October 1983, pp.14-16.

This article describes the involvement of rural communities in a water and sanitation project. Experience showed that maintenance of handpumps provided and communal sanitary facilities received little interest by the people. The author remains hopeful for future programmes when foresight and careful planning is adhered to.

White Alistair                      Community Participation in Water and Sanitation: Concepts, Strategies and Methods, IRC, Technical Paper No.17, 1981, 180pp.

Wijk-Sijbesma Chr.van              Participation of Women in Water Supply and Sanitation: Roles and Realities, The Hague, IRC, Technical Paper No.22, 1985, 191pp.

This publication identifies the role of women in the traditional tasks of water supply and sanitation, which have implications for project. Secondly it identifies the potential involvement of women in water supply and sanitation projects and finally gives realities and examples of involvement of women in the project. Of special interest is the latter part in chapters 4-8, pp.41-120.

Williamson John R                      Towards Community-managed Drinking Water Schemes in Nepal, Waterlines Vol.2, No.2, October 1983, pp.8-13.

The United Mission in Nepal is involved in rural water supply for more than a decade. Community involvement in implementation and maintenance of water supply seems quite successful, although the Mission still provides material and technical support for maintenance. A second objective is gaining momentum, i.e. in the villages, latrines are provided, that are more successful when installed for household use. Communal facilities are not successful.

De Wit Joop

Slum Dwellers, Slum Leaders and the Government Apparatus; Relations between actors in slum upgrading in Madras, Amsterdam, Free University, Institute of Cultural Anthropology/Sociology/Sociology of Development, 1985, 70pp.

This publication analyses the different actors and their (conflicting) interests in the slum upgrading project of Sandosh Nagar in Madras. Involved actors are the Government of India (HUDCO), the World Bank, UNICEF, the Govt of Tamil Nadu, Upgrading Agencies, Contractors, Politicians, Slum Lords, Leaders and Dwellers. The publication concludes that slum dwellers can bargain through their leaders as they represent a large electorate and secondly the Slum Clearance Act provides some rights to appeal to. Hence the Upgrading Project proved to benefit the slum dwellers through the provided loans and the facilities provided. However meaningful "self-help" and communication with the community remained weak spots.

Yeung Y.M., T.G. McGee      Community Participation in Delivering Urban Services in Asia, International Development Research Centre, Ottawa, 1986, 279pp.

Since 1945, the pursuit of accelerated economic growth by the market economies of Asia has led to rapid urban growth, a pattern that seems to continue. This rapid urban growth has made it difficult for city governments to deliver adequate urban services, in terms of physical services, such as providing water, garbage collection and disposal, fire protection, and human waste disposal, and social services, such as health care, child care, recreation and education. The problems are particularly acute in low-income communities. Given that government efforts to meet the need for increased urban services have not been totally effective, many urban communities in Asia have experienced with self-help and participatory mechanisms designed to improve the quality of urban life. This volume presents the highlights of a five-country study, involving Hong Kong, Indonesia, Korea, Malaysia, and the Philippines, that attempted to provide information on the development and operation of a range of basic urban services based on the principle of self-help.

\* Yunus Col. Muham      Solid Waste Management for the City of Lahore, Lahore Municipal Corporation, 1980.

\* not available at Library of Institute for Housing Studies, Rotterdam.

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HUDCO House, Lodhi Road, New Delhi-110 003