

Harry Meigs

EVALUATION OF LOW-COST SANITATION PROGRAMMES
IN SELECTED TOWNS OF ANDHRA PRADESH

(study sponsored by HUDCO)

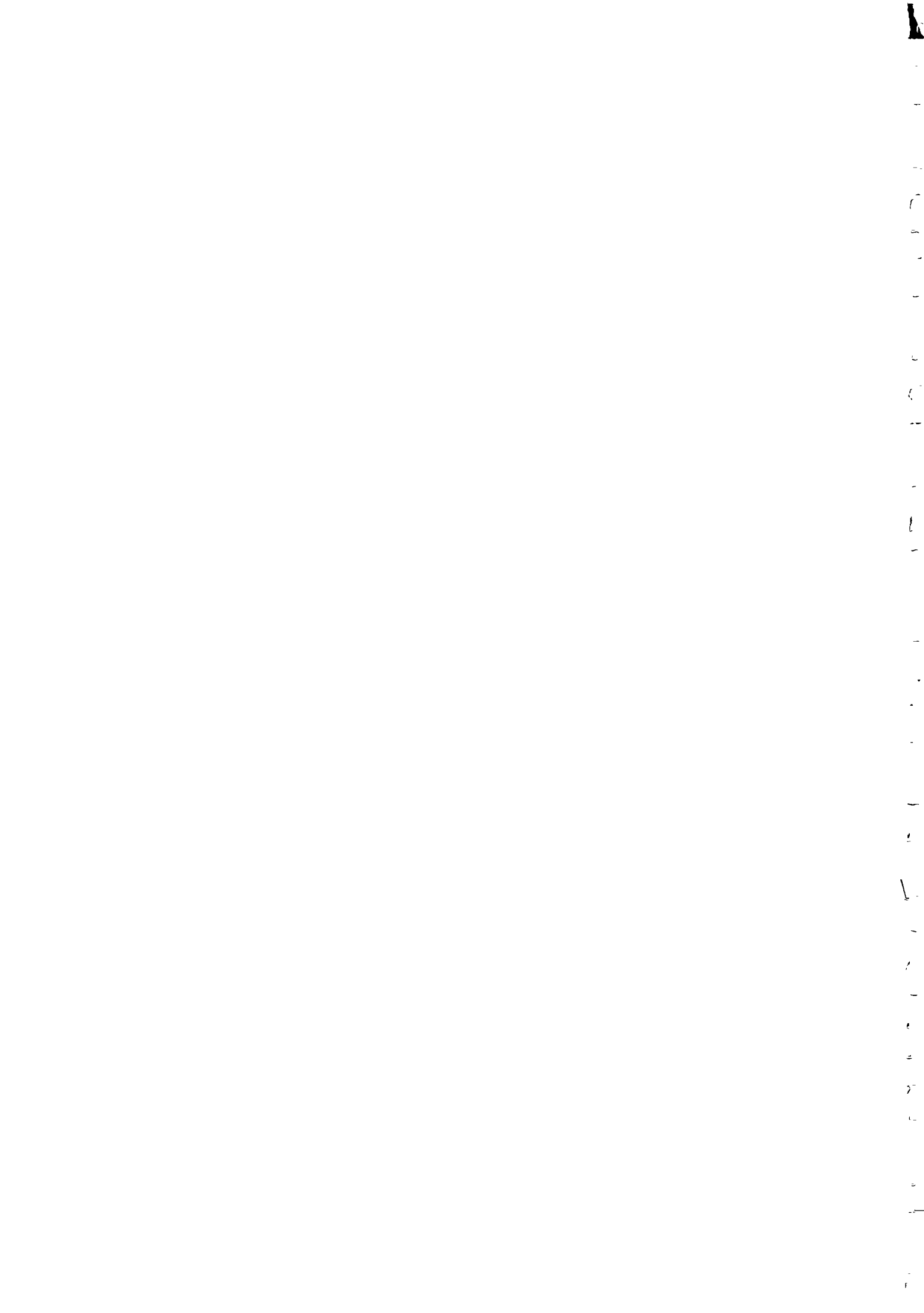
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FINAL REPORT

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HOUSING, URBAN DEVELOPMENT & MUNICIPAL AFFAIRS (HUDMA),
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PREFACE

India portrays a very dismal picture as far as sanitation is concerned. As per the mid-Decade Review of the IDWSSD, only 7.3 per cent of the population of India has been covered by safe sanitation facilities, as of the year 1985. One can thus see the magnitude of the task that lies ahead in sanitation improvement. Coupled with this problem is that of liberation and rehabilitation of scavengers who, according to 1988-89 statistics of the Ministry of Welfare, Government of India are still nearly 14 lakhs. Although untouchability has been abolished by the Article 17 of the Indian Constitution in furtherance of which the Protection of Civil Rights (PCR) Act of 1955 was promulgated, it continues to be practised even today. The problem today is therefore two-fold; provision of cheap and hygienic sanitation facilities on the one hand and liberation of scavengers and rehabilitation of their lot on the other.

Recognising this crucial aspect of development in Indian society, the Housing & Urban Development Corporation (HUDCO) under the dynamic captaincy of Shri S.K. Sharma, Chairman & Managing Director, has launched a Low-Cost Sanitation Programme way back in the year 1982.

A separate Urban Infrastructure Finance Wing has been created

by HUDCO which is headed by Shri G.R. Vishwanathan. As Chief of this Wing, he has been playing a pivotal role in providing new and firm dimensions to this aspect of engineering in the field of infrastructure, specially emphasising the role of appropriate technology.

The HUDCO Sanitation Programme has been in various stages of implementation in several towns in almost all states of the country. In several of these towns, the Programme has been very successfully completed and has brought to the needy the basic human requirement of sanitation. Almost parallel to the HUDCO's programme, the Ministry of Welfare has also been implementing its Programme of Liberation of Scavengers. It has now been felt that the efforts of the HUDCO as well as the Ministry could be integrated so as to give greater focus to the people's needs and implement this Programme more efficiently and effectively.

This novel step now being actively pursued by the HUDCO was placed before the Conference of State Ministers Incharge of Housing, Urban Development and Local Government held in New Delhi on 9-10 October 1990. We reproduce below the Scheme of Low-Cost Sanitation and Liberation of Scavengers as placed before that august body :

SCHEME OF LOW COST SANITATION AND LIBERATION OF SCAVENGERS:
BACKGROUND

1. Separate schemes had been under implementation for the elimination of scavenging through construction of low-cost sanitation units through the Ministry of Welfare, Ganga Action Plan, Integrated Development of Small and Medium Towns and loans from HUDCO. These schemes have now been integrated as part of the Action Plan of the present . for the elimination of manual scavenging to the maximum possible extent in the 8th Five Year Plan. Under this scheme, 500 towns with a population of less than 5 lakhs as per 1981 census are to be declared scavenger free annually. This would be achieved on a 'whole town' basis through urban local bodies in the State Governments/Union Territories by replacing existing dry latrines or construction of low-cost sanitation units where open defecation is resorted to and rehabilitation of the scavengers thereby liberated.

2. The scheme is being operated through the Housing and Urban Development Corporation (HUDCO) by providing a mix of subsidy from the Central Govt. and loans from the HUDCO in a synchronised manner to the State Govts/Union Territories where the problem persists as per the following financing pattern subject to availability of funds :-

| | | |
|---------|---|---|
| EWS | - | 45% subsidy, 50% loan and 5% beneficiary contribution. |
| LIG | - | 25% subsidy, 60% loan and 15% beneficiary contribution. |
| MIG/HIG | - | Nil subsidy, 75% loan and 25% beneficiary contribution. |

IMPLEMENTATION

3. The guidelines of the scheme were circulated by this Ministry to the Chief Secretaries of those States where the problem of manual scavenging persists vide D.O. letter No. Q-110221/60/86-PHE dated 16th August, 89 for implementation in towns during 1989-90. Subsequently, the guidelines with minor modifications were sent to the secretaries incharge of Sanitation in the State Govts. and Union Territories vide letter dated 30th March, 1990. The State Governments were informed that 700 towns would be taken up in 1990-91 in order to ensure coverage of 500 towns after allowing for slippages in implementation. The State Govts. were requested to select the towns on the basis of population, predominance of dry latrines, prevalence of widespread open defecation, larger scavenger population and to submit their proposals to the Central Coordination Committee in the Ministry of Urban Development for necessary approval.

PROBLEMS

4. The statewise allocation, number of towns approved by the Coordination Committee and loans sanctioned by HUDCO upto 15th Sept., 90 have been tabulated by the Ministry. It would be observed there-from that the progress of implemen-

tation is behind schedule in respect of several State Govts. and UTs, which has to be accelerated.

5. Even where proposals have been sent, the procedural requirement for sanction of loans from HUDCO have not been fulfilled. One major problem appears to be the delay in furnishing the State Govt. guarantee for the HUDCO loans. These are low interest loans for a very important social as well as environmental improvement scheme. The question of State Govt. guarantee should not, therefore, be a problem. Alternately the local authorities should be permitted to furnish a Bank guarantee. Since the financing for the scheme should be ensured in totality, it is essential to avail of the Central subsidy and HUDCO loans simultaneously. Alternately the State Govts. should indicate how they would provide the required funds in case they do not wish to make use of the HUDCO loans, which are available for this scheme at the rate of 6.25% interest repayable over 12 years with rebate of 0.25% for prompt repayment.

6. Another important aspect of the scheme, which is lagging, is amendment of the Municipal by-laws to prevent further construction of dry latrines. In this connection, the draft by-laws for regulating the construction, operation, maintenance and control of water-flush latrines have been circulated along with the guide lines of the scheme, a copy of which is available at Annexure 5.0

ACTION REQUIRED

7. The concerned State Govt. and UTs are required to take follow up action as indicated below :-

- i) To expedite selection of towns and submission of proposals on the basis of the allocation made to the Central Coordination Committee for approval.
- ii) To expedite submission of loan applications along with State guarantee/Bank guarantee to the HUDCO.
- iii) Amendment of the Municipal Bye-laws as envisaged under the Central scheme.
- iv) Completion of the work undertaken in the selected towns by 31st March 1991 and liberation of scavengers.

At this significant movement in the history of Low-Cost sanitation development by the HUDCO, its decision to promote evaluation/feedback studies is a welcome one indeed. This report on Low-Cost sanitation in Andhra Pradesh is an outcome of a study undertaken by the HUDMA Consultants for the HUDCO. The study pertains to Low-Cost sanitation in 4 selected towns in Andhra Pradesh. The objective of the study has been to evaluate the structure and performance of Low-Cost sanitation programmes in the selected towns so that the major setbacks if any could be identified to give direction to a future strategy.

Earlier to this Report, an Initial Report as well as an Interim Report have already been submitted. The observations of the HUDCO have been duly incorporated in this Report. It includes Working Papers on salient themes in the form of various chapters. It has been felt to amalgamate the Working Papers within this Report so as to integrate the different themes into one comprehensive whole since each of the themes are complementary to the other and are not mutually exclusive.

This study has been completed with the kind co-operation and valuable assistance of several people. We express our gratitude to every one of them in the following page titled 'Acknowledgements'.

October 26, 1990

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First we wish to record our gratefulness to the HUDCO for giving us an opportunity to undertake this study. We wish to thank Shri S.K. Sharma, Chairman & Managing Director, HUDCO, Shri G.R. Vishwanathan, Chief (Infrastructure Technology) and Shri R.P. Singhal, Dy. Chief (Finance) for their kind cooperation and help in this study. We also thank the following HUDCO officers viz. Mrs. Manorama Dutta, Mrs. Manju Safaya, Mr. Agarwal and Dr. John Titus for guiding and assisting us at every stage of the work.

Secondly, we wish to express our thanks to the following officers of the local implementing agencies for furnishing the relevant information and sparing their valuable time for discussions :

I. Vijayawada Municipal Corporation

- (i) Shri M.V.G.K. Bhanu, IAS, Commissioner
- (ii) Shri N. Dharma Rao, Superintending Engineer
- (iii) Shri K. Rajendra Prasad, Dy. Exec. Engineer
- (v) Shri Dinakar, Clerk.

II. Bhimavaram Municipality

- (i) Shri D. Satyanarayana, Commissioner
- (ii) Shri K. Mohan Rao, Asst. Exec. Engineer

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III. Srikakulam Municipality

- (i) Shri K. Neelakantadasu, Commissioner
- (ii) Shri K.B.V. Krishnamurthy, Municipal Engineer
- (iii) Shri V. Appa Rao, Asst. Engineer
- (iv) Shri Rambabu, Clerk

IV. Anakapalle Municipality

- (i) Shri K. Choudhary, Asst. Engineer (In-charge)
- (ii) Shri Rama Rao, Supervisor.

Last but not the least, we take this opportunity to approbate our HUDMA team members in Southern Region for carrying out the field studies in time for preparing this Report.

(H.U. BIJLANI)

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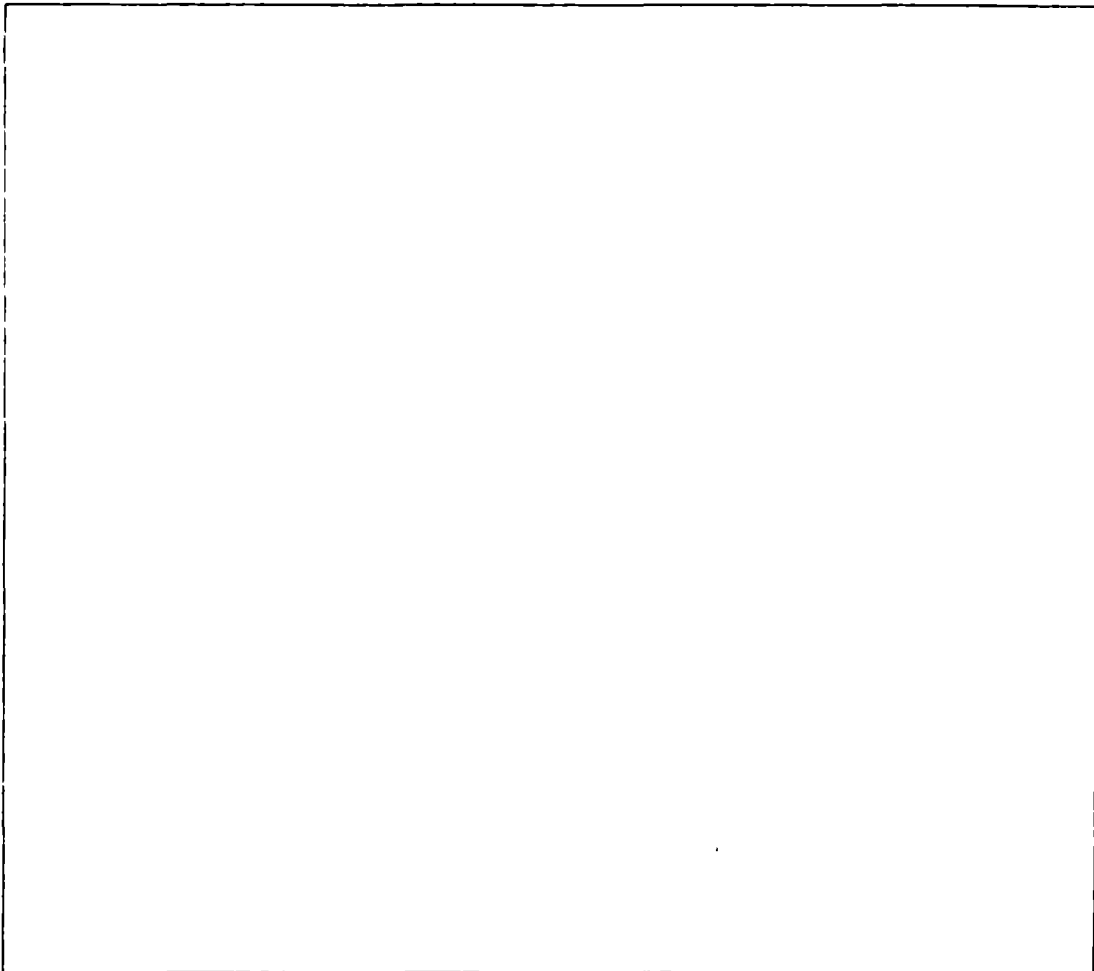
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GLOSSARY

1. HUDCO : Housing and Urban Development Corporation, an apex techno-financial organisation of the Government of India.
 2. Local Implementing Agency : Municipality/Municipal Corporation
 3. SSR : Standard Schedule of Rates
 4. HH : Household
 5. SS : Super Structure
 6. PF Latrine : Pour Flush Latrine
 7. FRP : Fibre Reinforced Plastic
 8. HDPE : High Density Poly Eurethene
 9. UNDP : United Nations Development Programme
-



CHAPTER - I

INTRODUCTION

1.1 BACKGROUND

It is a well established fact that good sanitation is a very significant component in human settlement development. In the absence of appropriate and adequate facilities for the disposal of human excreta, a variety of problems could arise viz. disease, discomfort, bad odour, visual squalor, etc. A healthy, clean,

inexpensive, socially acceptable and uninhibiting means of human excreta disposal is a primary prerequisite for the healthy and harmonious growth and development of the family and society.

Sadly, India portrays a very dismal picture as far as sanitation is concerned. By 1981, only 6.3 per cent of the total population of India had access to safe means of human excreta disposal. By 1985, the coverage increased to 7.3 per cent, recording a marginal increase of mere 1 per cent. While India boasts of giant strides in science, engineering, technology, etc., more than 90 per cent of its citizens are still unable to perform their daily ablutions in a safe, hygienic and dignified manner!

Deliberations on this important issue at the United Nations have led to the declaration of the decade 1981-90 as the International Drinking Water Supply and Sanitation Decade (IDWSSD). The Government of India had pledged its support to the Decade programme.

The Housing and Urban Development Corporation (HUDCO), an apex techno-financial organisation of the Government of India, had initiated its efforts to solve the problem of excreta disposal in the country by starting a Low-Cost Sanitation Programme. In this Programme, loans are granted to people so as to enable them to gain access to low-cost pour-flush latrines. This Programme would also enable the liberation of scavengers from their inhuman

profession of drudgery. This programme has been in various stages of implementation in several states of the country. In Andhra Pradesh, several towns have been implementing this Programme. There are some other programmes being implemented in Andhra Pradesh and these are discussed in item 1.4 of this chapter.

1.2 SCOPE OF WORK

The scope of this evaluation study, as per the requirements of HUDCO, covers the following aspects :

a) Financial and Administrative :

- project administration and management by local agency
- funding, fund utilisation and loan recovery
- publicity
- legal support measures if any
- long term requirements if any

b) Socio-economic :

- people's affordability
- beneficiary awareness of the programme
- socio-economic inhibitors for adopting the programme, using and maintaining the latrines

- user perceptions and assessment of design, construction, performance and maintenance of the latrines
- c) Technical :
- designs adopted (individual and community latrines)
 - materials
 - quality of construction
 - operational performance
 - maintenance
 - latrine utilisation
 - design, construction and functioning of community latrines, service and maintenance, nature and extent of utilisation.
- d) Possible role of NGO's, if any, in implementing Low-Cost Sanitation Programme.
- e) Outlining a strategy for the future in light of the existing situation which aims to abolish scavenging including rehabilitation of scavengers.

This evaluation covers 4 selected towns in Andhra Pradesh.

1.3 SELECTION OF TOWNS

The following four towns have been initially selected for the

evaluation in consultation with HUDCO :

- i. Vijayawada
- ii. Amalapuram
- iii. Srikakulam
- iv. Anakapalle

(i) Out of all the towns where HUDCO Low-Cost Sanitation Programme is being implemented, Vijayawada is the only town which has a Municipal Corporation. Further, population wise, it is the biggest in size and the number of units sanctioned here are nearly 20,000 while in other towns, it is in the range of 500 to 5,000 only*. Also, Vijayawada has the peculiarity of having hills within the city area. Most of the hutments where PF latrines have been constructed are along the slopes of these hills. Since this topography throws up its own peculiarities, it is a case well worth exploring.

(ii) The town of Amalapuram lies in the Krishna-Godavari river Delta. The soil is very marshy with a high ground water table. This town presents a good case for examining various technical aspects of the PF latrines viz. leaching,

* Although Visakhapatnam is bigger than Vijayawada both in terms of population as well as number of units sanctioned, the programme has been approved only in 1988 and therefore Visakhapatnam has not been chosen since evaluation of the programme will be premature.

back drawal, sand cushioning, etc. Further this town has community latrines which could also be included in evaluation.

- (iii) Srikakulam is a town located in a backward district and is a good case for evaluating the programme components with specific reference to the 'Backward' community.
- (iv) Anakapalle is a coastal town prone to frequent cyclones. This town also offers interesting peculiarities for investigation and comparison.

On visit to the field, it was observed that in the case of the town of Amalapuram, the situation in the Municipality was such that no secondary data could be collected. The reasons have been :

- (i) All the records in the Municipality were burnt during an agitation in 1988.
- (ii) The Municipality does not have a commissioner since the last one year. A Sanitary Inspector has been the Commissioner-in-charge since all the posts above his are lying vacant. No engineer in the state wishes to take charge on account of corruption and local politics at the Municipality.

- (iii) In such a situation where no records are available and no competent officer is available for discussion, it has been felt that only field observations be made in this town. Alternatively, the town of Bhimavaram which is close by has been chosen. Bhimavaram has similar ground water conditions as Amalapuram. It also has community latrines. Bhimavaram also has a good record of implementation of the Low-cost Sanitation Programme.

Therefore, the following case study towns have been finalised:

- | | | | |
|------|-----------------------------------|---|--|
| i. | Vijayawada | } | (secondary data collection, primary surveys and field observations) |
| ii. | Bhimavaram | | |
| iii. | Srikakulam | | |
| iv. | Anakapalle | | |
| v. | Amalapuram - (field observations) | | |

1.4 Low-Cost Sanitation Programme In Selected Towns of Andhra Pradesh :

A) Although there have been several programme viz. IDSMT, ODA projects, etc. in Andhra Pradesh, their emphasis has been on a variety of components of which water and sanitation form a very minute part. For example, the IDSMT has eight major components:

- a) Components eligible for central assistance on matching basis :
- i. land acquisition & development
 - ii. traffic & transportation development
 - iii. development of mandis/markets, industrial estates, etc.
- b) Components to be funded by State Governments :
- iv. urban renewal and small scale employment generation
 - v. water supply, sewerage and drainage schemes
 - vi. preventive medical & health care facilities
 - vii. parks & playgrounds
 - viii. preparation of master plans

Firstly, the sanitation component which is a part of an integrated urban development project does not specify the requirements as spelt out in the terms of reference of this study. Further, while low-cost sanitation is only a small sub-component of the water supply, sewerage and drainage component within a multi component integrated town development project, the issue of its performance or liberation of scavengers does not form a part of the IDSMT. Also, item b) (v) mentioned above receives no central assistance either.

B) Construction of PF latrines also forms part of the Scheme of Liberation of Scavengers under the Prevention of Civil Rights (PCR) Act of 1955 initiated by the Ministry of Home Affairs at the beginning of the Sixth Five Year Plan. In continuation with this, the Ministry of Welfare laid down two components of this scheme vide its circular (DD. No. BC.11014/1/86-ScBCD.III) dated 20/ January, 1986. Further details on the subject of liberation of scavengers are dealt with separately in Chapter VI. However, this Scheme covers only eight towns viz. Warangal, Eluru, Rajamundry, Siddipet, Kurnool, Hyderabad, Yemmiganur and Jagtial. Out of these, upto March 1988, only Warangal and Eluru have become scavenger free, liberating 96 and 123 scavengers respectively. (See Tables 1 & 2)

C) In light of the above two points A) and B) it becomes necessary to focus the attention of this study mainly on the evaluation of the HUDCO Low-cost Sanitation Scheme since this is the only Low-cost Sanitation Programme in the selected towns of Andhra Pradesh. Accordingly, the objectives of this study have been framed for evaluating the Low-cost Sanitation Programme bearing in mind the items a) to f) of the terms of reference issued by HUDCO.

1.5 OBJECTIVES OF THE STUDY :

Therefore, the objectives of this study are :

- to evaluate the structure and performance of Low-cost Sanitation Programme being financed by HUDCO with state government assistance in the selected towns,
- to measure the nature, extent, causes and consequences of its success/failure,
- to identify the major setbacks if any and
- to outline a strategy for the future focussing on the various aspects of not only Sanitation programme but also liberation of scavengers .

1.6 STUDY METHODOLOGY :

In view of the study objectives mentioned in section 1.5 above which form the criterion for evaluation, the Low-cost Sanitation Programme has been evaluated based on the undermentioned evaluation indicators :

- procedure of programme implementation
- scale of project
- time taken for project initiation
- time taken for project implementation
- level of progress to date

- level of fund utilisation and extent of recovery
- level of fund utilisation and technical competency of the implementing agencies
- cost to users and affordability
- nature of designs and materials adopted
- quality of construction
- level of latrine performance and quality maintenance
- level of user awareness
- extent of user satisfaction
- nature and extent of support amenities.

In order to ascertain the above, surveys at the selected towns have been undertaken. They comprise of :

- (i) Implementing Agency Survey
- (ii) User Survey

There are described hereunder :

The Implementing Agency Survey aims to collect relevant data from the local implementing agencies while the User Survey aims to get the reactions of the users. The Implementing Agency Survey Schedule and the User Survey Schedule are given in Annexures I and II respectively. In addition to these surveys, informal discussions with local community leaders, municipal

councillors. etc. have also been carried out. These have been buttressed with the field investigators' personal observations as well as the consultant's experience on evaluation of similar projects elsewhere. A representative sample survey has been conducted in the four selected towns in the month of August, 1990. Bearing in mind (i) the objectives of this evaluation, (ii) local personnel available for carrying out the surveys, (iii) time period for completing the study and (iv) funds available, the sample size has been worked. It has been presumed that the sample should be a percentage of the total number of PF latrines constructed. As per the secondary source data made available to us by the local implementing agencies in the selected towns, the following is the aggregate progress achieved upto July 1990 :

| | |
|------------|---------------------------|
| Vijayawada | - 13,787 units/households |
| Bhimavaram | - 2,833 units/households |
| Srikakulam | - 1,349 units/households |
| Anakapalle | - 1,028 units/households |

Bearing in mind the above progress, the universe of the sample has been assumed to be the number of units constructed (beneficiary households) and accordingly a three percent sampling was done. This is indicated hereunder :

| Town | Universe of Sample | Sample size |
|------------|--------------------|----------------------|
| Vijayawada | 13,787 | @ 3% = 413.61 or 400 |
| Bhimavaram | 2,833 | @ 3% = 84.99 or 85 |
| Srikakulam | 1,349 | @ 3% = 40.47 or 40 |
| Anakapalle | 1,028 | @ 3% = 30.84 or 30 |

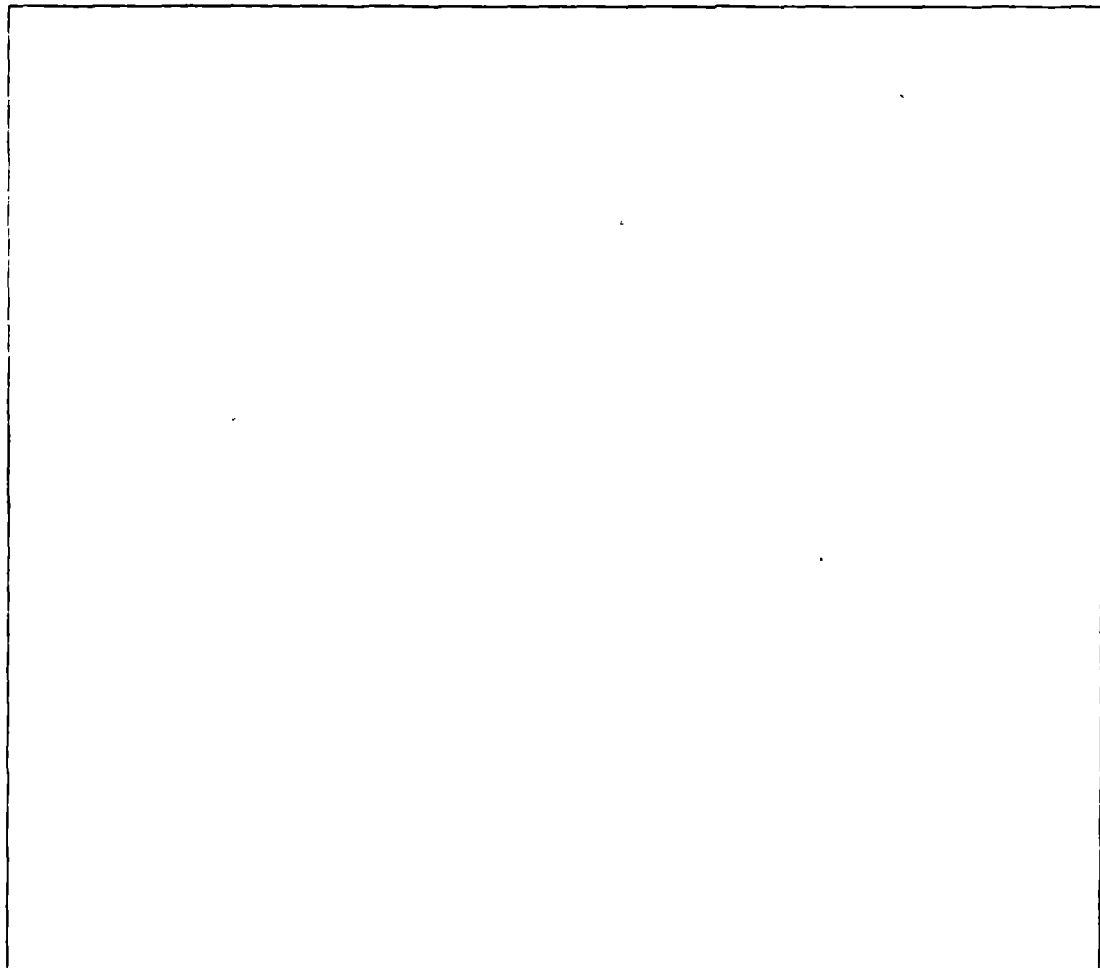
The local implementing agencies maintain only a continuous serial number record of the PF latrines sanctioned. No classified list of wardwise distribution of PF latrines is available. Thus, in the absence of disaggregate level data, a simple random sample survey was undertaken.

The sample size being a manageable one for manual analysis, use of computer has not been made. The data has been subjected to simple quantitative tests viz. student's t-test, Chi-square test, etc. as applicable, bearing in mind the nature of data and objectives of the study and the tables have been prepared accordingly.

The text of this report has been prepared by juxtaposition of the following :

- (i) secondary source data furnished by local agencies from their records.
- (ii) discussions with implementing agency officials,
- (iii) primary source data from the sample survey,
- (iv) informal discussions with local community leaders, municipal councillors, etc.
- (v) investigator's personal visual observations and
- (vi) the experience of the consultants on various similar projects of low-cost sanitation.

This report has made every endeavour to portray the varied dimensions of low-cost sanitation as vividly as possible. Some relevant sketches have been given to show the technical details. Profuse illustrations in the form of color photographs have been included so as to complete the embroidery.



CHAPTER II

FUNDING, ADMINISTRATION AND MANAGEMENT OF LOW-COST SANITATION PROGRAMME IN SELECTED TOWNS OF ANDHRA PRADESH

2.1 OPERATIONAL ASPECTS

2.1.1 Programme Initiation

Programme initiation is perhaps the first stage in the low-cost sanitation programme. The success of the low-cost sanitation

programme depends to a great extent on the manner it is envisaged. A programme has to be conceived in a wholistic and comprehensive manner so that it is financially viable, practically feasible, technologically sound and socially acceptable. A programme has to be designed in such a manner that it receives the full support and committed will of not only the state government but also the sponsoring/financing agencies as well as the implementing agencies themselves. In the case of the HUDCO financed Low-cost Sanitation Programme, the initiation has to come from the local implementing agency i.e. the Municipality or Municipal Corporation. In order to conceive a programme and operationalise it, the primary prerequisite is a local situation and needs assessment. When there is little pronounced need for a particular component of the programme, the success of the programme would apparently be limited. Same will be the case if the programme benefits cannot be afforded by the people. The results could be even worse if the local implementing agency does not have the technical competency, organisational capability or management skills to effectively conceive and implement the programme.

(i) Local Situation & Needs Assessment :

In the 4 towns surveyed in this evaluation of Low-cost Sanitation

Programme in Andhra Pradesh, it was found that programme initiation had been in a highly adhoc manner. A comprehensive local situation & needs assessment was found to be grossly absent in all the towns with the exception of Vijayawada where a survey of a very rudimentary nature was made. In 1982, the Vijayawada Municipal Corporation conducted surveys of residential houses and found that 5,530 houses and insanitary latrines and 14,113 houses had no latrines at all. It was proposed to undertake the HUDCO financed Low-cost Sanitation Programme for a total of 19,643 units which include 5,530 conversions and 14,113 new constructions. While such a survey and estimation, however rudimentary, by the Municipal Corporation of Vijayawada is laudable, the other Municipalities have made no attempt to undertake detailed surveys and only ad-hoc estimations were made. In the absence of rational needs assessment, the realities of the situation get masked and benefits would not reach the needy. It can be seen from the succeeding section how delays in project finalisation also affect adversely the assessments made.

(ii) Delay in Starting the Programme :

A delay in starting the Programme could lead to losses in many ways. Costs would escalate, needs would change and the whole Programme may have to be revised. In the case of Vijayawada, the decision to undertake the Programme was taken as early

as in 1982 when the survey was done while the Programme was sanctioned by the State Government only in 1986. The reasons have been several. The Municipal Corporation of Vijayawada did not have adequate staff to undertake the Programme at that time and it therefore did not pursue the matter with the state government for quick sanction. On the other hand, the state government also did not take any action for a long time on account of lack of funds. The proposal prepared in 1982 was sanctioned by the state government only in 1986. On account of this delay in finalisation of the Programme over a period of 4 years, the needs assessment made in 1982 became redundant. The other repercussions of the delay in finalisation have been :

- a) several house owners converted their latrines into sanitary/flush type latrines with their own resources.
- b) several houses were sub-divided into two or more portions between family members/for letting out and thereby sufficient space was not available to construct the leach pits.
- c) several house owners expanded the built space/rooms thereby leaving little space for the leach pits.
- d) several houses owners having dry latrines with temporary

superstructures have made the superstructures permanent. They do not wish to convert the dry latrines into PF latrines since the superstructure would be affected.

- e) Many existing latrines have been converted into bathrooms and therefore there is no space for constructing a PF latrine.

Table 3.0 reveals some interesting facts in this regard in the selected towns.

While in Srikakulam and Anakapalle, the state government had sanctioned the Programme in 1984 after a delay of about a year, the Programme commencement was almost without appreciable delay, in Vijayawada the delay is quite pronounced. Bhimavaram however presents a different picture. Strong initiative and pursuasion by the local implementing agency has resulted in no delay and the sanctions as well as programme commencement were in the same year.

2.1.2 Programme Targets

The programme targets in the 4 selected towns are given in Table 4.0. It is necessary to have a clear idea of the targets not only at the aggregate level but also at the disaggregate

level. The aggregate level information gives only the total number of units proposed but the disaggregate level information gives the number of units under various income categories and the unit capacities. It can be observed from Table 4.0 that only in Vijayawada, disaggregate level information on targets has been worked out. The reason for this is apparent. It has been only in Vijayawada that a survey was carried out to ascertain the needs. Thus, the number of users, latrine capacities, income groups and break-up between conversion and new constructions was possible. However, it has to be noted here that income classification here has no bearing since in this Programme, the loan amounts have not been related to income but only to the latrine capacity i.e. whether it is 5, 10 or 15 users. The concept of determining the loan amount based on people's affordability has not been applied in this Programme.

2.1.3 Costs to Users :

The cost of the PF latrine varies from around Rs.700.00 per unit to Rs.1600.00 per unit depending upon the capacity of the unit. Table 5.0 indicates the costs of the PF latrines for different capacities in 4 selected towns. The costs were originally calculated based on 1985-86 Standard Schedule of Rates (SSR). In Vijayawada, the costs have been revised based on 1988-89 SSR. In Bhimavaram, Srikakulam and Anakapalle, the revision has not yet been done.

In Anakapalle, a flat cost of Rs.1000.00 has been assumed irrespective of the capacity of the PF latrine. The actual cost to the user is however slightly higher than that indicated in the Table 5.0 since the people invariably make variations in the superstructure. However, this amount has been found to be usually about 10 per cent more than that worked out in the Programme. In Srikakulam, the Funds provided to the people are less than that indicated in the Tables 5.0 and 6.0 since part of the amount is given in terms of materials viz. cement and pan. In Vijayawada also, for every unit sanctioned, 1 FRP pan and 1 HDPE trap is given and Rs.146.00 is deducted from the cost of the PF latrine and accordingly loan is sanctioned.

2.1.4 Procedure for Implementation, Administration and Management:

The implementation procedure in all the four towns is same. House owners intending to either convert or construct new latrines have to make an application to the respective Municipal Corporation/Municipality in the prescribed form. Conversion is done in cases where a dry/bucket type latrine already exists with a superstructure. Where no latrine exists, new construction is undertaken. Alongwith the application following documents are required to be enclosed :

- a) house tax receipt or

- b) plot sale deed & door number or
- c) sugar card & door number

The applications are scrutinised by the local agency (Municipal Corporation/Municipality) and site inspection is done so as to ascertain the availability of space. The latrine is then sanctioned and proceedings are issued to the house owner alongwith a plan of the latrine and the specifications. The house owner is expected to construct the latrine by himself or through his authorised contractor. Some materials as already mentioned earlier are supplied by the local agency. The local agency does not undertake any construction activity. Its role is restricted to paper work only and as a facilitator. While the construction is being done, the local agency inspects the construction work. On completion of the construction, the loan amount is released to the house owner or his authorised contractor through cheque. Proceedings for recovery of loan are initiated by the Low-cost sanitation section of the local agency and submitted to its tax section. The bill collector look after the collection of Equated Monthly Instalments (EMI's) from the house owners.

The procedure is quite a simple one and since the people themselves are getting the latrine construction done, the quality of construction is to their satisfaction. However, since the actual cost of the latrine exceeds the loan amount, some people are unable to afford the additional amount and thereby the quality of construction has not been upto the mark. So far as the time

taken by the local agency is concerned to sanction a latrine application; it takes a week to ten days for scrutinising the application and site inspection before sanctioning. For proper implementation, an effective administration and management network is essential. In Vijayawada, Bhimavaram and Srikakulam, adequate technical staff (viz. qualified engineers) and administrative staff are available for implementing the programme. However, in Anakapalle, there has been no engineer for the past one year to look after the programme. An engineer in-charge has been posted with additional charge of this programme. The administrative and management machinery on the whole in the 4 selected towns could be termed to be satisfactory. However, the technical staff need to be trained and sensitised to the programme components since some of them are not fully conversant with the PF latrine technology.

2.2 PHYSICAL PROGRESS :

Table 7.0 indicates the physical progress of the Low-cost Sanitation Programme in the four selected towns. The progress in Vijayawada, Bhimavaram and Srikakulam has been satisfactory while in Anakapalle, it has been unsatisfactory. One of the main reasons is that of improper programme promotion which is discussed further in the succeeding sections. In Bhimavaram, the Municipality had recorded excellent progress in a short time compared to other towns.

2.3 FUNDING, FUND UTILISATION AND LOAN RECOVERY :

The Programme is funded on a matching basis by the state government and HUDCO. Table 6.0 gives the amount of funds sanctioned by both the parties for the 4 selected towns.

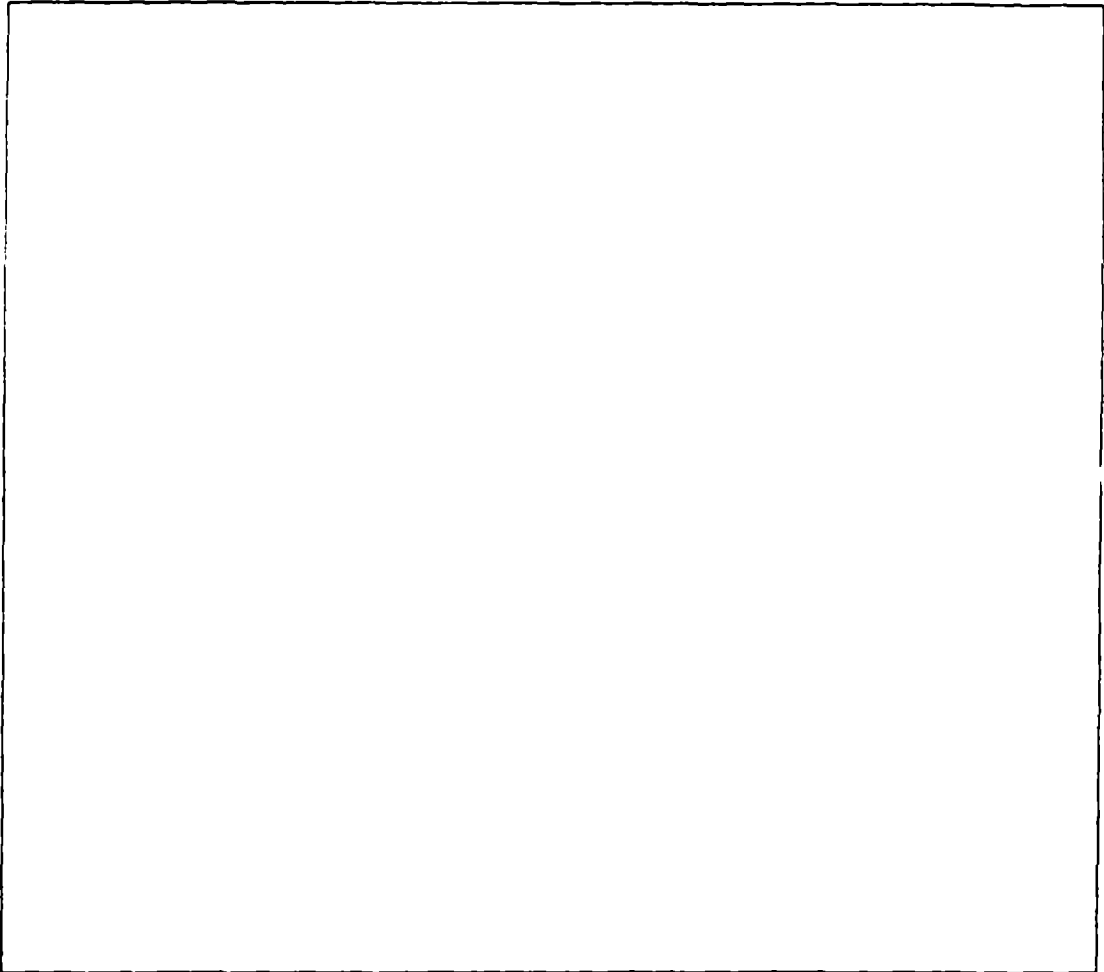
Level of fund utilisation depends on amount of funds readily available and the level at which loan applications are being cleared. In all the cases, it can be observed that the state government subsidy has been fully utilised while the HUDCO loan has not yet been fully utilised. Fund utilisation should also be viewed in conjunction with progress made. It can be observed from Table 8.0 that in the case of Bhimavaram, although only 50 per cent of the funds have been utilised and no amount from HUDCO loan has been drawn, the progress on the programme has been as high as 82 per cent. This has been on account of the fact that part of the state government subsidy which was for community latrines has been used for individual latrines, thereby recording a high progress for individual latrines. This was done since there was little demand for community latrines. This reflects the sensitivity of the local agency to the felt needs of the citizens and the flexibility in their programme implementation. Further, fund utilisation has also to be viewed in the time perspective. Out of all the cases, in Bhimavaram,

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funds were utilised in the shortest time. So far as loan recovery is concerned, Vijayawada has recovered Rs.1.39 lakhs and Bhimavaram Rs.0.89 lakhs while the other towns have yet to initiate recovery proceedings. The reasons for poor recovery are several viz. (a) low level of affordability of the people, (b) lack of willingness to pay to a government agency and (c) laxity on the part of bill collectors too at the instalments.

2.4 PROGRAMME PROMOTION :

The success of a programme to a great extent depends on how well it is promoted. In all the cases study towns, the promotion has been very poor. If the programme was properly promoted, people would have made applications for seeking loans to construct PF latrines and the programme would have been completed and targets achieved in a period of one or two years. However, this has not been so in the towns except for the case of Bhimavaram. Programme promotion by using the media or audio-visual methods would make the people aware and urge them to avail of the loans. On account of the absence of promotion, the rate at which people seek loan has been very low and the targets are yet to be achieved even after almost four years.



CHAPTER III
TECHNICAL ASPECTS OF POUR FLUSH LATRINES
IN SELECTED TOWNS

3.1 **QUALITY OF CONSTRUCTION AND CONFORMITY TO STANDARD
DESIGN WITH RESPECT TO DESIGN ADOPTED AND MATERIALS
USED**

3.1.1 **Super Structure :**

As per the standard design of the UNDP IND Project IND/81/014,

the outer dimensions of the Pour Flush latrine superstructure need to be (1130 mm x 980 mm) or 3'9" x 3'3". However, the situation in the selected case study towns portray a different picture. Table 17.0 clearly shows the physical dimensions of the super structure of the Pour flush latrines in the selected towns. In Vijayawada, only 46.50 per cent of the sample latrines are close to the standard design specifications. User reactions as indicated in Table 24.0 also corroborate the same since 70.25 per cent of the sample households have complained that the cubicle was too small. Although the local implementing agency requires that the latrines be constructed as per standard design requirements, local conditions in individual houses as well as lack of proper knowledge of the latrines by both the users as well as the local contractors has resulted in the emergence of pour flush latrines having dimensions which do not always conform to the standards. While a variance on the positive side is a welcome one, variance on the negative side has several undesirable effects. Although people may like to economise on cost of the latrine by reducing the dimensions, darkness within the cubicle as well as discomfort have led to discontent amongst the users. The next indicator of the superstructure is the materials with which it is constructed. Vijayawada and Bhimavaram present contrasting picture. In Vijayawada, 52.25 per cent of the sample latrines were found to have been constructed with brick walls without plastering, as shown in Table 19.0. The same table

further shows that in Bhimavaram, as much as 70.60 percent of the sample latrines have plastering with white wash. Although the reasons for the success of the programme in Bhimavaram have already been mentioned earlier, it may be worthwhile to recapitulate here that the dynamism of the local implementing officials as well as the initiative of the local leaders has gone a long way in motivating the people, howsoever uneducated or poor they may be, to construct, use and maintain the latrines in a desirable manner. These points are portrayed in photographs VJ-1, VJ-2, VJ-3, VJ-4, VJ-9 & VJ-10.

The materials used for roofing are equally important. Table 18.0 shows the materials used by the sample beneficiaries in the selected towns. The predominant materials used have been found to be RCC slab, stone slabs and tin or asbestos sheets. Stone slabs have found extensive use in Vijayawada while RCC has been predominantly used in Bhimavaram and Srikakulam. In Anakapalle, the major roofing material has been either tin sheets or asbestos sheets. The importance of a proper roofing material is that it prevents rain water from entering the pan and thereby leading to over-loading or choking. Photographs VJ-11 & 12 show latrines with asbestos roofing while SR-33 & 34 show use of tin sheets.

As can be seen from the Table 24.0 all the selected towns have shown a high incidence of rain water entry. However, this has been more on account of lack of proper roof projections over the door rather than lack of a roof itself. These points are portrayed in Photographs VJ-4 and VJ-7.

3.1.2 Pan, Rests and Floor :

↳ (The UNDP IND Project IND/81/014 specifies the design for the pan of the pour flush latrines. In the selected towns, the local implementing agencies have been able to supply the standard design FRP pans for the beneficiaries.) The aspect is further described in item 3.2.2.

Footrests are an important component of the Pour Flush latrine as they provide proper positioning while using the pan.

The dimensions of the foot rests have been observed to be as per standard design in majority of cases since majority have used standard porcelain foot rests. Cement foot rests of about 5"x12" have been provided in the remaining sample cases. Table 20.0 shows the various conditions of materials used for pan and footrests. The three combinations found in the samples were (i) FRP & Porecelin (ii) FRP & Cement and (iii) Porecelin & Porecelin. Porecelin and Cement combination has not been found

since a person who can afford a porcelain pan would not normally like to have cement footrests.

The slope of the latrine floor has been observed to be proper in terms of its ability to drain off the water and keep the floor dry. Poor slope of the latrine floor would leave the latrine wet and there is every possibility of slippage. Photographs VJ-7, VJ-8, BH-32, AN-44 and AN-50 illustrate these points.

3.1.3 Trap & Connecting Drains/Pipes :

Standard Cement water seal traps have been provided by the local implementing agencies. In order to connect the pan with the pits, connecting drains or pipes are required. In the selected towns, 3" diameter pipes have been provided. The diameter of the pipes is sufficient to transfer the excreta from the pan to the pits while maintaining the self-cleansing velocity. As per the UNDP design, brick drains are to be provided for connect-
int the pan to the pits. However, studies in several towns of Bihar and Rajasthan have shown that brick drains often suffer from collapse. The usage of 3" dia. cement pipes is therefore a desirable variation adopted in the towns.

3.1.4 Y-Junction

As per the UNDP IND PROJECT IND/81/014, a brick bat is to

be provided for blocking the flow into one pit while the other is being used, this is possible only for brick drains as specified by the same UNDP designs. Since 3" diameter pipes are being used here, a junction chamber are usually (12"x18") and are found to be satisfactory for accomodating one 3" dia inlet pipe and two 3" dia outlet pipes.

3.1.5 Pit Size, Walls and Cover :

4 (As per the UNDP Project IND/81/014, the pit size varies from 3' dia to 4' dia and from 3'6" depth to 5'0" depth. In the selected towns, the design of the pit has been varied slightly to suit local conditions. While the depth has been found to vary from 3'6" to 5'0", the diameter has been found to be constant in all cases at 3'00". This has been on account of the the usage of standardised cement rings in the place of a honeycomb brick wall. The cover for the pits has been found to be of the same design in all the cases.] The cement rings are precast rings having 1-1/2" thickness and 10" width. The rings are placed one above the other with a small gap of 1" to 2" in between by placing a few brick bats. The gaps in between suffice for the leaching action. In Bhimavaram, burnt earthern rings used for conventional open wells are used for the pits. Precast RCC pit covers are used for covdring, the top of the pit. The materials and design have been observed

too be satisfactory. Photographs VJ-5 and VJ-6 clearly illustrate this point.

3.2 DISTANCE BETWEEN PITS :

3 (The distance between the two pits is a very important indicator of the successful performance of the pour flush latrine.) As per the UNDP IND Project IND/81/014, a minimum distance of 1000 mm or 3'00" has to be maintained between the pits in order to facilitate proper leaching action, if the distance between the two pits falls short of the minimum distance, there is every possibility of the dry pit acting as a barrier to the leaching pit. In fact, in due course, the sewage may also find its way into the dry pit. Table 21.0 shows the distance between the pits in the selected towns, [47.25 percent of the samples in Vijayawada, 22.50 per cent in Srikakulam and 53.33 per cent in Anakapalle have shown only 2'00" distance between the pits. In Bhimavaram, 74.12 per cent of the cases had maintained the 3'00" distance between the pits.] With normal usage it may take about 5 to 6 years for the problems in such cases to surface. This is further discussed in item 3.4.

3.3 ^{Annamachari} DISTANCE BETWEEN WATER SOURCE AND PITS

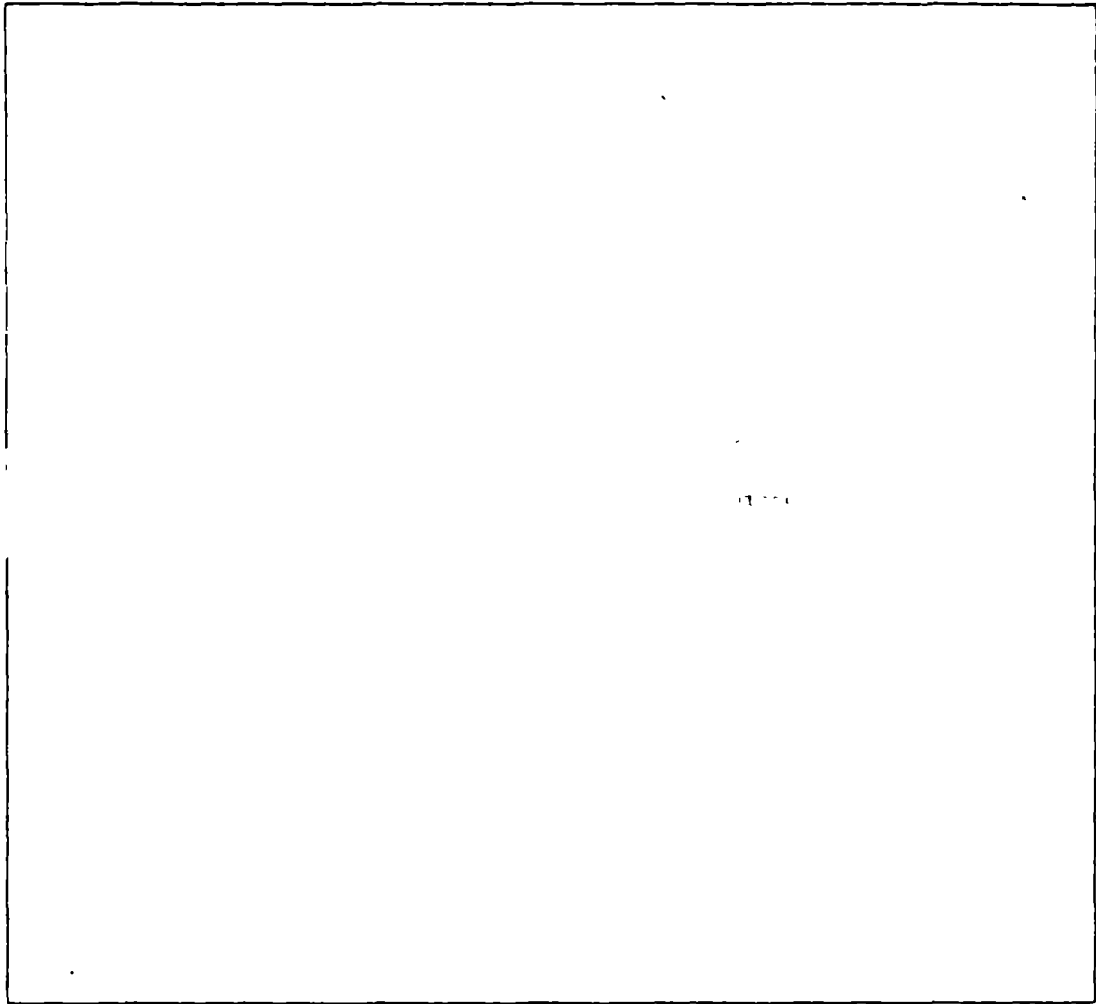
(k) The location of the pits assumes paramount importance since

an improper location could lead to hazardous consequences in terms of the hygiene and health of the users. Table 22.0 shows the location of the pits of the pour flush latrines in the selected towns. A majority of them are located either within the plot or adjoining the hut. This has now to be viewed in conjunction with the source of water which has been shown in Table 23.0. Individual sources of water supply such as municipal tap, open well or hand pump account for 45.25 percent in Vijayawada, 55.31 percent in Bhimavaram, 25.00 percent in Srikakulam and 63.33 percent in Anakapalle. The sources of open wells and hand pumps are likely to create a problem since there is every possibility of ground water and sewage interference. Ground water pollution could lead to serious health problems. (In the samples surveyed, a minimum distance of 6 to 8 metres has been observed. Although the situation appears to be satisfactory, it is not that the situation was the same always or will remain like that in time to come. In Bhimavaram, one case was observed where the open well and the pits were only 1 metre apart. In Anakapalle also, two cases were observed, one where an open well was only 2 metres away from the pits and another where a hand pump was $2\frac{1}{2}$ metres away from the pits. This point has been further discussed in item 3.4. Examples of the close proximity of latrines and drinking water source are shown in photographs BH-29, BH-30, AN-49 and AN-50.

3.4 GROUND WATER TABLE :

The height of the ground water table is very important when deciding on the implementation of the pour flush latrine programme. The ground water table in Bhimavaram (also in Amalapuram) has been observed to be at a depth of only 6'00" below ground level, which in rainy seasons could raise to 4'00". Srikakulam also has a similar ground water table situation. In Anakapalle, the depth is about 8'00" below ground level. In Vijayawada, in the plain areas, the level has been observed to be at about 10'00" to 13'00" while in the rocky/hill areas, it is much more below. As already mentioned in items 3.3 and 3.4 above, the drinking water - sewage interface is very crucial. With the intrusion of water into the sewage, the leaching action ceases and back drawal commences. The entry of ground water into the pits could even result in overflow of sewage from the pan, especially during cyclones. It can thus be concluded that the situation in the selected towns is rather precarious as far as this aspect is concerned.

Conclusion
Side



CHAPTER IV
SOCIO-ECONOMIC ASPECTS OF BENEFICIARIES

4.1 BENEFICIARY CHARACTERISTICS AND AFFORDABILITY

The success of any programme depends to a large extent on the understanding of the beneficiary characteristics. A programme can be successful only if it is sympathetic to the beneficiary

characteristics. In evaluation of existing programmes *too*, a perception of socio-economic characteristics of the beneficiaries is quite essential. In Table 10.0, the household size of the sample beneficiaries is shown. The mean household size has been found to be six. The number of persons in the household has a direct bearing on the income expenditure relationship as well as the nature and extent of wage and maintenance. The monthly family income is shown in Table 11.0. Nearly 15 to 40 per cent of the sample households have a monthly income upto Rs.700.00. One can see that on account of very low incomes, maintenance suffers. In fact, in some cases as shown in Photographs AN-45, 47 & 48, the people have not built the superstructures at all. The occupation of the beneficiaries has been found to be varied, as shown in Table 12.0. The major occupations have been found to be agriculture, business, private service, government service and petty labour. What is most significant to note is that nearly 35 to 60 per cent of the sample beneficiaries are illiterate. The problem of effective programme implemented would thus be very acute while dealing with a predominantly illiterate target population. Further, it would also necessitate appropriate programme promotion by creating awareness campaigns, etc. It could be summarised that the socio-economic characteristics of the beneficiary population in the selected towns is rather critical.

4.2 KNOWLEDGE AND AWARENESS OF CONSTRUCTION, USE AND MAINTENANCE OF PF LATRINES :

Although it is commonly believed that the pour-flush latrine technology is a simple one, experience of evaluating various low-cost sanitation schemes in Bihar, Rajasthan and Madhya Pradesh have revealed that beneficiary knowledge and awareness of construction, use and maintenance of the pour flush latrines has been limited. The items discussed earlier viz. materials used for construction, location of pits, distance between pits, etc. are clear points to the fact that [in the selected towns of Andhra Pradesh ~~too~~, people's knowledge and awareness has been limited] Table 24.0 indicates that [in Vijayawada, Srikakulam and Anakapalle, 70 per cent of the beneficiaries reported a lack of knowledge regarding the pour flush latrine technology.]

As elaborated earlier in item 2.4 of Chapter II, the programme promotion in the selected towns has been totally neglected. Much could be done to increase the awareness of the people by imparting basic education, awareness campaigns, etc. as discussed more elaborately in Chapter VII on Training Programmes.

It is interesting to note that [even the local implementing agencies are not fully aware of the varied dimensions of low-cost sanitation.]

Preparation of local agency officials to implement the programme is equally important. This has been further discussed in Chapter VIII on Preparedness of Local Agency for Implementation. Non-

Source ?

How aware ?
Survey

?

5

5.1

5.2

governmental organisations (NGO's) and other voluntary social service groups have a great role to play in acting as intermediaries between the 'desk engineers' and 'field users'. This aspect is discussed in Chapter IV. Before these crucial issues are discussed, it is appropriate to look at some common problems which the users perceive and face day to day.

4.3 PROBLEMS FACED BY BENEFICIARIES :

4.3.1 Foul Smell :

6
This is a common problem in most sanitation projects. (Nearly 20 to 30 per cent of the users have reported foul smell in the selected towns.) Reasons for these were given as inability to afford deoderants (see Photographs AN-43 & 44). Compared to Bihar and Rajasthan, foul smell in Andhra Pradesh has been observed to be relatively less. This could be attributed to the reasonably good availability of water. (Only 20 per cent of the sample households in Vijayawada reported water scarcity while the sample households in other towns did not report water scarcity.) People's innovativeness in terms of installing a vent pipe can be seen in Photographs AN-41 and 42.

4.3.2 Breakage :

6.2 (Breakage of Pan, foot rests, floor and pit covers was a commonly

prevalent) phenomenon in several cases in Bihar and Rajasthan. However in the case study towns, no such cases were reported. This could largely be on account of the fact that standard FRP pans and traps were provided by the local agency. Breakage could even lead to disastrous effects in terms of the loss of confidence of the people in the pour-flush latrine technology.

4.3.3 Collapse of Drains and Pits :

Collapse of drains is a common phenomenon with brick drains. However, in the selected towns, no brick drains have been used as already mentioned earlier. Further honey combed brick walls which are also susceptible to collapse, especially in high ground water table areas, have not been used in the selected towns. Only cement or burnt clay circular rings have been used.

4.3.4 Overflow of Sewage :

6 > Overflow of sewage normally occurs when either the pit is full and the flow has not been diverted to the second pit or when rain water enters the pan/pits in large quantities. It was only in Anakapalle that a small percentage of the sample reported overflow of sewage on account of the filling up of pits.) This can also be seen from the year of construction as shown in Table 9.0. Srikakulam however has not shown any cases of filling up of pits as yet.

4.3.5 Privacy :

64
Lack of privacy in a latrine is a very strong social inhibitor for usage of the latrine by the people. In Bihar and Rajasthan the absence of superstructure in most of the cases resulted in non-usage of the latrines. In all the selected towns in Andhra Pradesh, conditions of privacy were found to be satisfactory. Photograph AN-46 shows a latrine without superstructure.

4.3.6 Cubicle Size and Darkness in Cubicle :

65
Nearly 70 to 100 percent of the beneficiaries in the selected towns reported that the cubicle size was too small and nearly 50 to 80 percent of them reported of darkness within the cubicle. For people who have been using the wide open country side for a long time, it is reasonable for them to react strongly to using a small latrine cubicle with a tiny ventilator. This can be seen from Photographs BH-27 & 28.

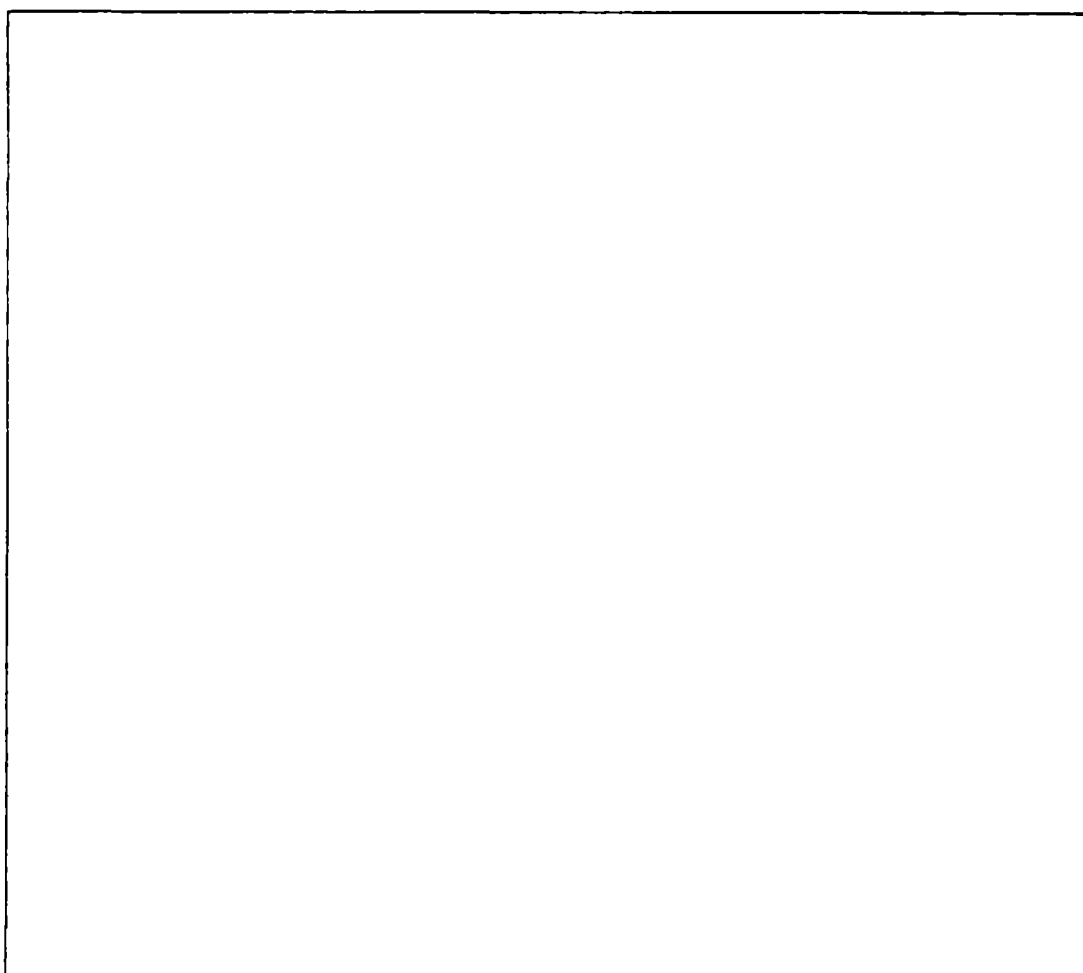
4.3.7 Rainwater entry :

66
It has been observed that rain water entry into the pan and pits in the sample cases in the selected towns has been very high. ^{Summary} Table 24.0 shows that as much as 65 to 80 percent of the sample cases reported rain water entry into the pan and

6.7 pits. Only Vijayawada reported 21.25 per cent of rain water entry into pits) since the ground conditions there are much better than in the other towns as already mentioned under the item 3.4 in Chapter III. (It has been observed that the absence of adequate projections of the roof over the latrine door has contributed to a great extent in the entry of rain water spray which finds its way into the pan. Further, inadequate plinth height above adjoining ground level also contributes to entry of rain water.) Although the effects of this are not yet visible, in about 4 or 5 years time when the pits contain substantial sewage, the consequences are definitely going to create a problem in future. While Photographs VJ-15 & 16 illustrate a latrine with adequate plinth height, photographs BH-25 & 26 show that when the latrine is at ground level rain water entry is imminent.

4.3.8 Damaged Superstructure :

6.8 (Nearly 25 to 60 percent of the PF latrine super structures in the sample cases in the selected towns have been observed to have damaged superstructure. Damage has been observed in terms of cracks in walls, breaking of doors, roofing sheets, etc. These have largely been on account of the effect of the cyclone in Andhra Pradesh. This therefore makes a very strong case for proper superstructure in PF latrines built in cyclone prone areas.)



CHAPTER V

7 VARIOUS ASPECTS OF COMMUNITY LATRINES

The concept of community latrines is to provide common latrine facilities by the local agency instead of providing loans for construction of individual latrine by the beneficiaries so as to achieve more speedy instantaneous improvement in the conditions of sanitation. Amongst the selected towns in Andhra Pradesh, only the town of Bhimavaram has a component of community latrines in the low cost sanitation programme. The Bhimavaram Municipality has proposed the following community latrines :

- a) 16 seat community latrines,
- b) 12 seat community latrines and
- c) 8 seat community latrines.

In all 38 community latrine blocks were proposed to be constructed in the town. However, only 5 blocks of 16 seat community latrines and 9 blocks of 12 seat community latrines have been constructed. In all only 14 community latrine blocks were constructed as against the proposed 38 community blocks. The cost of the 16 seat community latrine block has been Rs.65,000/- and that of 12 seat community latrine has been Rs.55,000/-. Construction of these community latrines has been stopped since it has been found that the local people do not favour these toilets. They would much rather prefer to avail of loans for constructing and using individual latrines. The Bhimavaram Municipality has decided to stop the community latrine scheme all together due to the low level of acceptance and usage by the people.

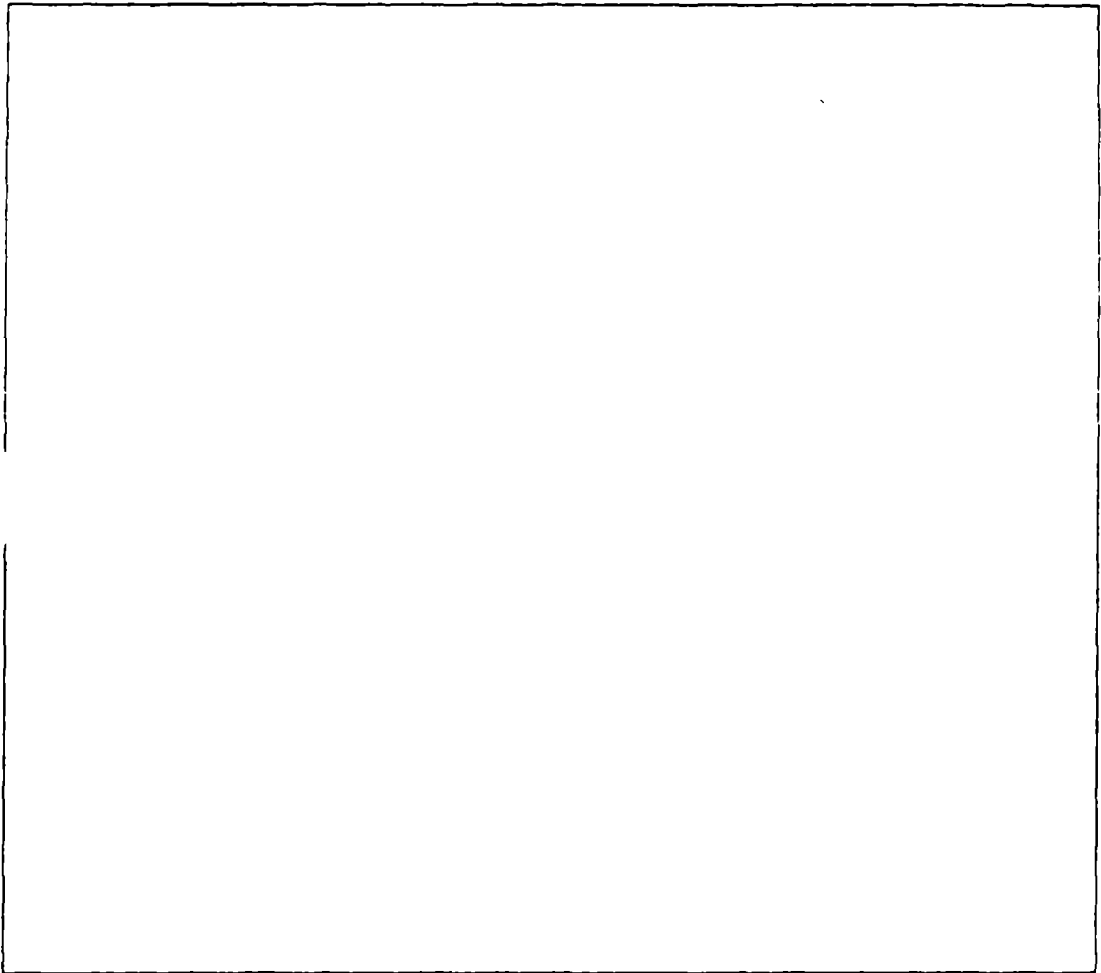
These community toilets have separate cubicles for men and women. The superstructure of the toilets is pucca with brick walls and reinforced cement concrete roofing. Ordinary cement flooring has been provided. Cement grills for ventilation have been provided in each of the cubicles. No glazed tiles have been provided unlike in community toilets built recently in some resettlement colonies of Delhi. Open tanks have been provided

in each of the community latrine blocks for storing water. Rectangular honeycomb pits of equivalent capacity to individual latrine pits have been constructed (see Drawing 4.0). People's non-acceptance has been not on account of lack of water availability or poor quality of construction. It has been primarily on account of lack of proper maintenance.) These community latrines have not been constructed for utilisation on a pay and use basis. Thus there being no agency to maintain the latrines, foul smell and deterioration of the superstructure have led to a repulsion amongst the people towards community latrines. People would rather use an open countryside than use the community toilets. This scheme could be made a success provided the toilets are maintained on a pay and use basis. Use of good quality mosaic flooring and glazed tiles on the walls provide a very pleasing and aesthetic environment and would go a long way in increasing people's acceptability and usage of the toilets.

The quality of environment in the community latrines is illustrated in Photographs BH-31 and 32.

$$\begin{array}{r}
 12 \quad 155000 \quad 4583.00 \\
 \quad 48 \\
 \quad 70 \\
 \quad 60 \\
 \quad 100 \\
 \quad 96 \\
 \quad 40 \\
 \quad 26
 \end{array}$$

$$\begin{array}{r}
 16 \quad 650000 \quad 4062.50 \\
 \quad 84 \\
 \quad 100 \\
 \quad 96 \\
 \quad 40 \\
 \quad 32 \\
 \quad 80
 \end{array}$$



CHAPTER VI
LIBERATION OF SCAVENGERS

The origin of the implementation of various pour flush latrine programmes could be traced to the recognition of the problem of scavengers in our cities and towns. Scavenging has been the occupation predominantly of certain groups/castes of people. This was largely on account of two major factors viz. (a) predominant use of dry latrines on account of lack of access to

flush sewerage systems and (b) the social structure of society. This latter had led to the lower castes to be employed in the inhuman occupation of carrying night soil in baskets over their heads for disposal in nearby dumping grounds, drains, canals, etc. In recognition of the urgent need to eradicate this inhuman practice of scavengery and uplift of downtrodden socio-economic strata of our society, the Scheme of Liberation of Scavengers' was initiated by the Ministry of Home Affairs under the umbrella of the Prevention of Civil Rights (PCR) Act of 1955. In continuation with this, the scheme of Liberation of Scavengers was initiated in the Sixth Plan. 5 towns in Bihar and one each in Kerala, Rajasthan and Orissa witnessed the implementation of this Scheme between 1981 to 1985 (VIth Plan) and 849 scavengers in all were liberated and rehabilitated. Subsequently in the VIIth Plan, the states of Assam, Tripura, Madhya Pradesh and Tamil Nadu were also included along with some more towns in Bihar and Kerala. Upto March 1986, an additional 2193 scavengers were liberated and rehabilitated. Totally, between 1981 to 1986, 18 towns were rendered scavengers free, liberating and rehabilitating 3042 scavengers in all. Subsequently, the Ministry of Home Affairs vide its circular DO No. BC 11014/1/86-SCBCD III dated 20/22 January, 1986 extended and detailed out the scheme further and laid down the two components of the Scheme as follows :

- (i) Conversion of dry latrines into water borne/sanitary ones to be implemented by the urban development/local self government departments of various States and
- (ii) Providing necessary training to the scavengers and their dependents. The follow up action for their occupational mobility was to be undertaken by the Welfare Department or the nodal department for the overall development of Schedule Castes.

Consequently to the above, between April 1986 and March 1988 (during the VIIth Plan) the states of Maharashtra, Uttar Pradesh, West Bengal and Andhra Pradesh along with some more towns in Bihar, Madhya Pradesh and Rajasthan were included. The towns in Andhra Pradesh were Warrangal and Eluru. Thus, an additional 1865 scavengers in 14 more towns were liberated and rehabilitated. The total number of towns made scavenger free are 32 and the total number of scavengers liberated and rehabilitated are 4907. The details of these are given in Table 1.0 and Table 2.0.

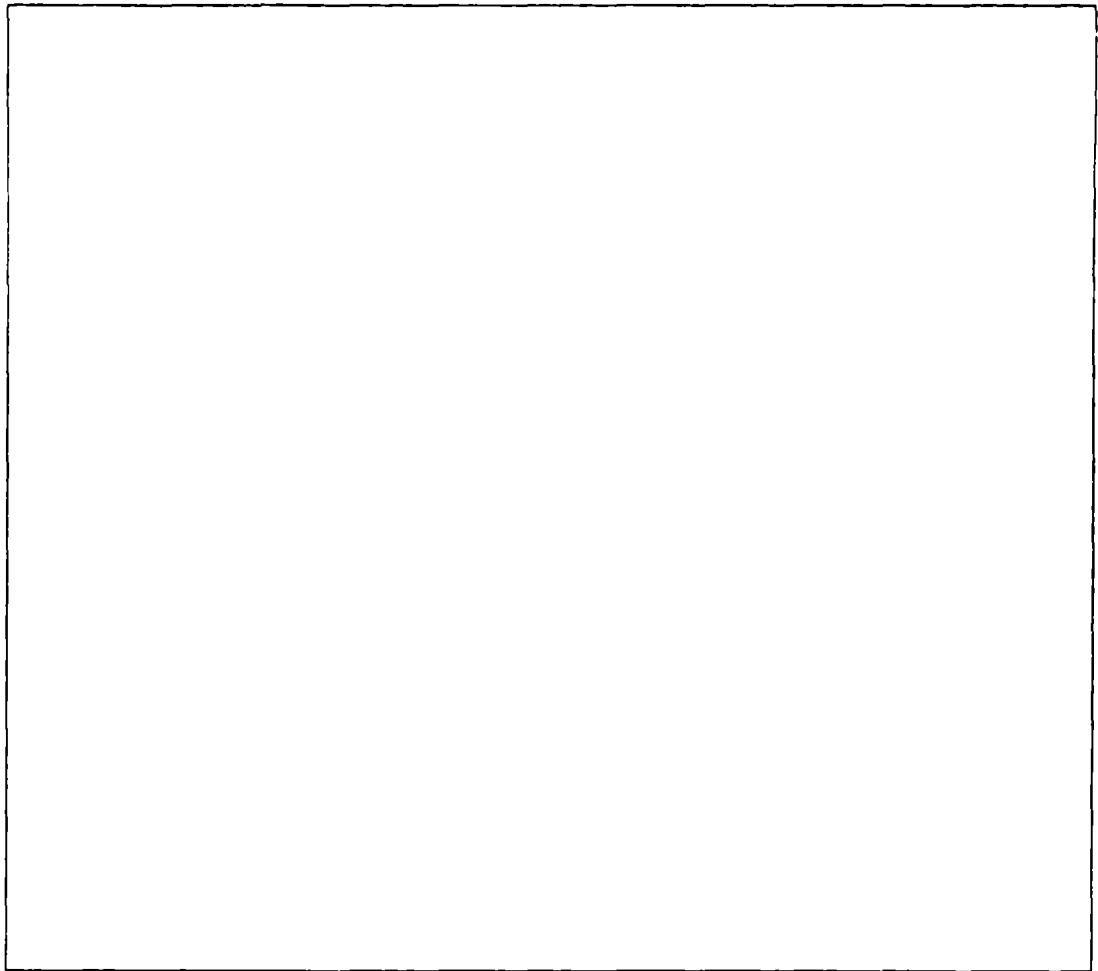
The Hon. Minister for Municipal Administration, Government of Andhra Pradesh in his speech delivered at the Conference of State Ministers incharge of Housing, Urban Development & Local Govt. held at New Delhi on October 9-19, 1990 said :

"The centrally sponsored scheme for liberation of scavengers under P.C.R. Act 1955, is being implemented in this State right from 1984-85. The earlier pattern of financing of the scheme was that 50% of the total cost of the scheme had to be borne by the Govt. of India as Grant-in-aid (subsidy) and the remaining 50% borne by the State Govt. as loan component (matching assistance). The Govt. of India have sanctioned 13 municipal towns and they are in various stages of implementation.

The State Government has submitted proposals in respect of 22 new towns in February '90. The Government of India have conveyed sanction for all the 22 schemes at a total cost of Rs.2,10,79,600/- only and have also released an amount of Rs.72.00 lakhs as Central subsidy, on an ad-hoc basis.

The Government of India have requested the State Government to work out the details of the balance amount of subsidy, and the HUDCO loan component as per the modified method of financing and to furnish the same to them for release of Central subsidy. These are being attended to."

It needs to be noted here that in Andhra Pradesh, while Warrangal and Eluru have been made scavenger free, liberating 96 and 123 scavengers respectively, the other towns of Andhra Pradesh, Rajamundry, Siddipet, Kurnool, Hyderabad, Yemmignaur and Jagtial



CHAPTER VII
TRAINING PROGRAMMES

Training programmes are an intrinsic part of low-cost sanitation programmes. The four basic questions related to training are:

- (i) How do training programme benefit?
- (ii) What should be the contents of a training programme?
- (iii) Whom to train?

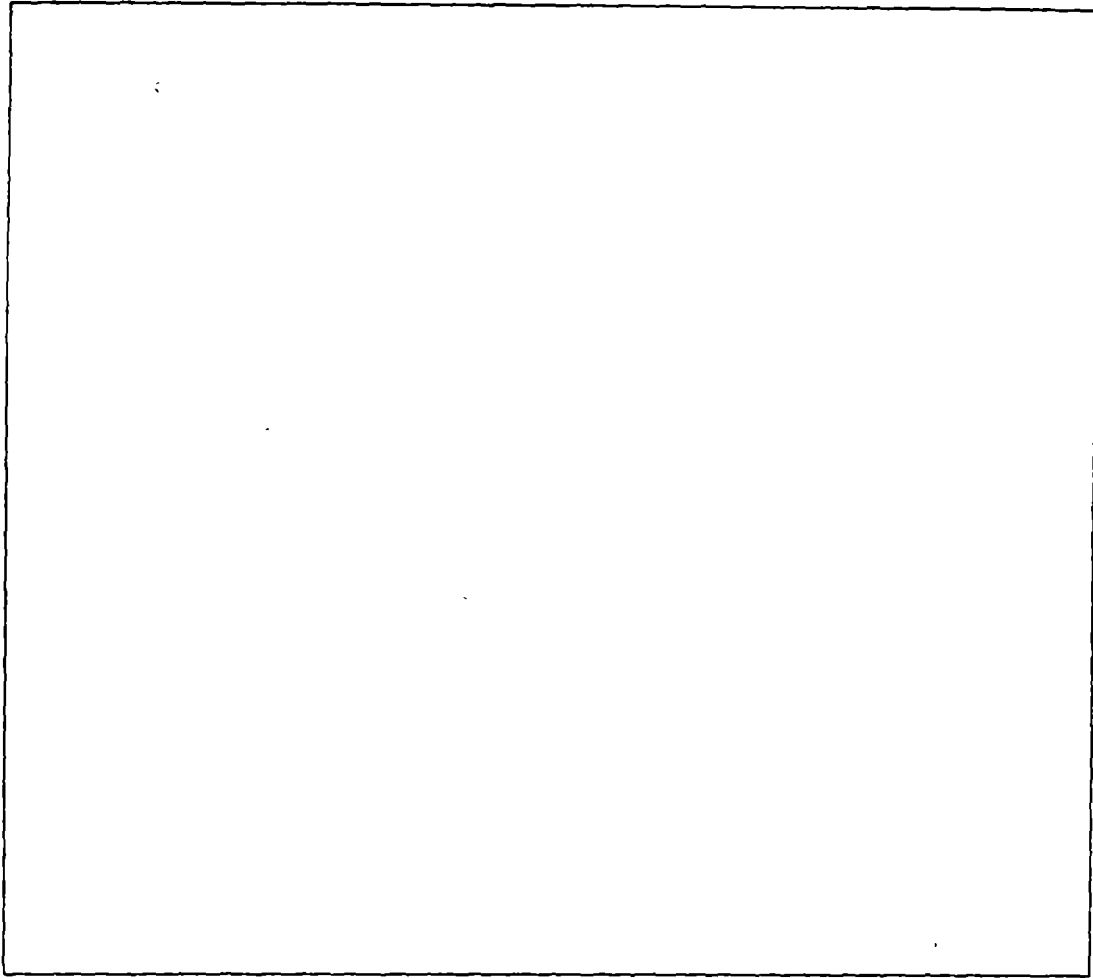
- (iv) Who should train whom?
 - (v) What training methods need to be employed?
- (I) How do training programmes benefit?

Training programmes have several benefits. These are:

- (a) ... all vertical as well as horizontal coordination at both inter-agency and intra-agency level could be achieved.
- (b) Clear role identification at various levels of the programme.
- (c) Greater awareness of programme components.
- (d) General improvement in efficiency at various levels.
- (e) Better user involvement and satisfaction.
- (f) Appropriate user involvement of liberated scavengers with greater chances of their upward socio-economic mobility.

Unfortunately, the significance of training needs has not been recognised in the selected towns where this study was conducted. The programme was implemented in a mechanical and 'matter of fact' manner with little awareness on both the local implementing agency as well as the user/beneficiary level, not to mention the liberated scavengers. Proper training as outlined in

Chapter-X on Strategy for the Future Programmes needs to be incorporated into the low-cost Sanitation Programmes. Items ii), iii), iv) and v) mentioned at the beginning of this chapter are also described in detail in Chapter-X.



CHAPTER VIII

PREPARADENESS OF LOCAL AGENCY FOR IMPLEMENTATION

The preparedness of the concerned local agency for implementation of the Low-cost Sanitation Programme is quite essential for its ultimate success. In Chapter-II of this report it has been clearly brought out in items (i) and (ii) of sections 2.1.1 that the lack of local situation & 'needs' assessment as well as 'delay' in starting the programme have been largely on account of the

*The arguments were
was different here*

the lack of preparedness of the local agency for implementation.

9.1

In order to undertake the programme, the local agency needs to be fully prepared in terms of

*that was
OK they said*

a) adequate, appropriate and competent personnel for implementing the programme,

b) proper assessment of local situation and beneficiary needs,

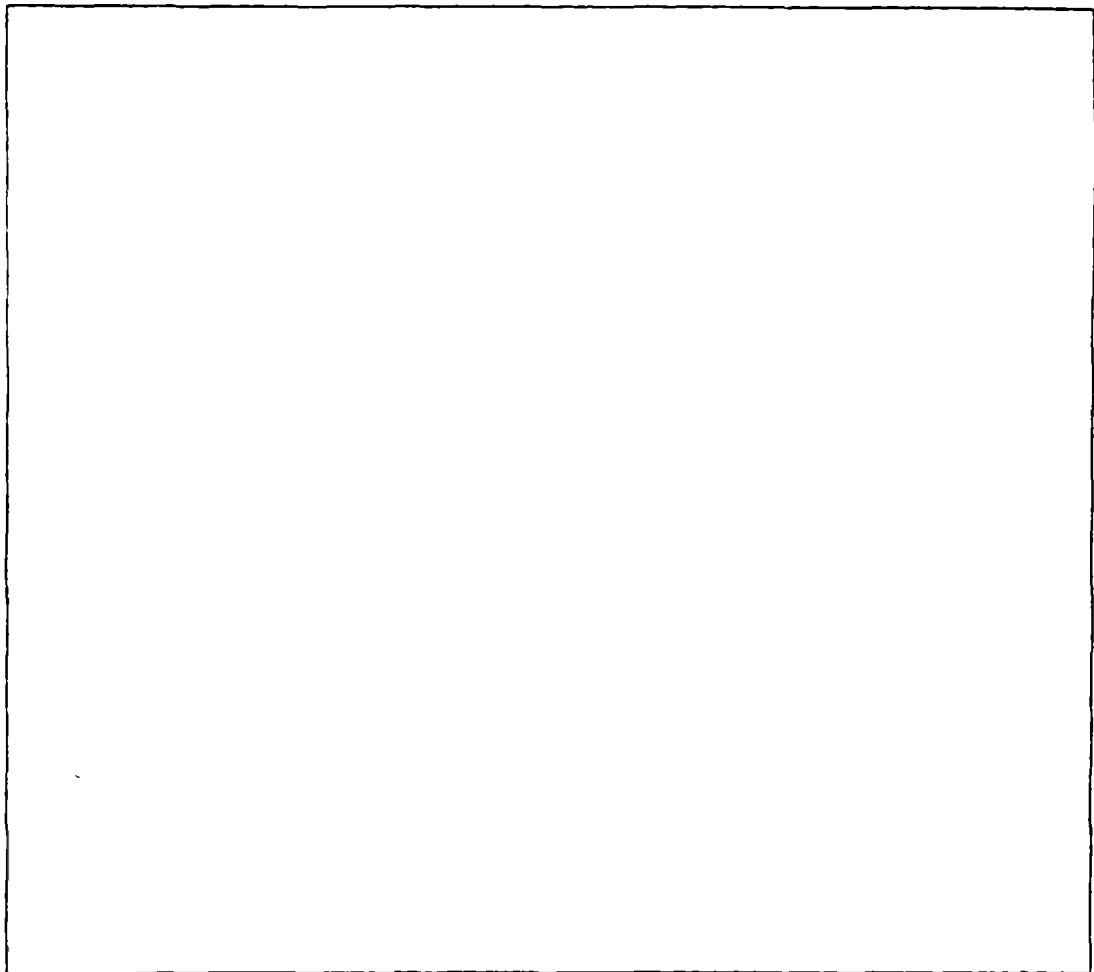
c) approval from the state government and

d) adequate finance to start the programme.

e) *Bank Guarantee*

Without proper preparedness, the 'take-off' of the programme, its appropriate and speedy implementation as well as post implementation cost recovery would falter. It may be worthwhile to reiterate here that except in the case of Vijayawada, the other towns had little preparedness in terms of a preliminary survey in order to assess the local situation and needs. Although in Vijayawada a survey had been done, it had more or less become redundant since the programme started only after nearly 5 years after the survey was conducted. This was largely on account of the lack of preparedness on the part of the state government to provide the matching grant. The delay could also be attributed to the lack of preparedness on the part of the Vijayawada Municipal Corporation in terms of availability of adequate staff. While this has been the case in Vijayawada,

the other towns had gone ahead with the implementation without proper preparedness. For example, in Anahapalle, the municipality still does not have an officer to look after the programme. The situation has been worse in the town of Amalapuram where there has been no commissioner to head the Municipality for the last one year (a sanitary inspector has been made incharge as acting commissioner). It can be concluded that in all the towns surveyed, the local implementing agencies have been far from 'prepared' to undertake the programme. The consequences of 'unpreparedness' are clearly visible in the primary survey results. Most of the problems amply discussed in Chapters II and III would not have arisen if there was a sound 'preparedness' on the part of the local agencies to implement the programme.



CHAPTER IX

ROLE OF NGO'S IN LOW-COST SANITATION PROGRAMMES

Voluntary or non-governmental organisations (NGO's) have a very crucial role to play in any developmental programme, low-cost sanitation programmes being no exception. It has been observed that in most of the government sponsored programmes, there is a wide gap between the people and government agencies. The implementing arms of the concerned agencies rarely reach upto

the needs of the target beneficiaries. This is primarily on account of deficiencies both at the agency level as well at the user level. The beneficiaries are invariably poor, illeterate and unaware of government programmes and can rarely articulate their felt needs to the implementing agencies. On the other hand, the implementing agencies have a programme implementation set-up which is rather outdated. Thus, for successful implementation, there arises an urgent need to bridge this yawning and crucial gap.

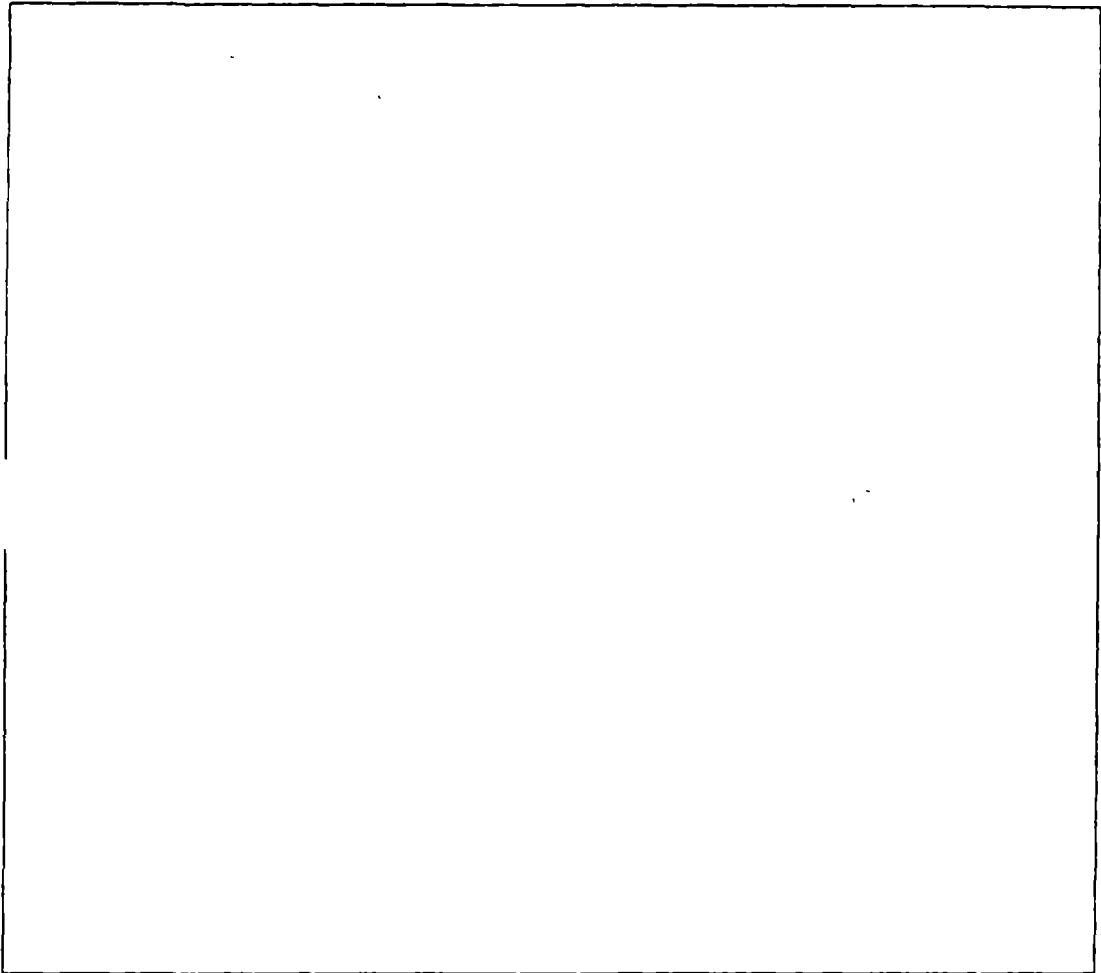
Non-governmental agencies which are primarily social service oriented have more often than not, been able to bridge this gap successfully. The role played by an NGO is usually that of an intermediary between the state and the people. The people are able to easily identify themselves with the social workers of committed NGO's. The NGO workers in town are able to more easily absorb the people's felt needs and act as their spokesmen to the government agencies. The NGO's can thus transmit the local conditions more accurately to the government agencies. In town, they could also be instrumental in translating the government agency programme to the people. An NGO is thus a very crucial 'link' in the 'development chain'.

The role of the NGO becomes even more important in programmes where the 'software' component is totally missing. For example,

programmes such as the UCD and UBS have achieved a great deal of success in various states of the country more on account of their wholistic and totalitarian approach incorporating both the 'software' as well as the 'hardware' components rather than the intermediation of NGO's. In programmes where 'software' components such as community involvement, literacy improvement, health and hygiene education, skill upgradation or better employment, etc. are missing, the NGO's could play a major role as a fillip. The HUDCO sanitation programmes at initial stages has a vacuum in this category where NGO involvement is almost a primary prerequisite.

10-1 The surveys in the selected towns of Andhra Pradesh have revealed that ^{implementation of NSA} ~~this aspect~~ has been totally neglected by the local agencies. In fact, the local agencies were in total ignorance of the role of NGO's in implementing low-cost sanitation programmes. A strong case for improving the programme and suitably incorporating NGO's is of prime importance.

Community participation is the cardinal principle underlying the whole programme. This implies organising local communities into neighbourhood communities nurtured by field level staff of local organisations. This calls for coordinated efforts from the neighbourhood committees/Basti committees and town level committees. Emphasis will also be placed on training of resident community volunteers, community organisers, area project officers, personnel of associated NGO, and government/municipal officer for implementing the programme.



CHAPTER X

CONCLUSIONS AND STRATEGY FOR THE FUTURE

Before embarking on a future strategy, it would be worthwhile to recapitulate the major findings and conclusions of this study. These would also clearly highlight the major setbacks so as to give proper direction to the future strategy.

- (i) Many setbacks have come to light as far as the operational aspects are concerned. Lack of proper programme initiation

had to be seen

has been reflected in the rudimentary if not total absence of local situation and needs assessment as well as abnormal delay in starting the programme.

(ii) exaggerated

In the absence of periodic revision of the costs, the funding has been far from sufficient and people had to incur additional expenditure on construction. Where the people could not afford to do so, the quality of construction in particular has suffered.

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(iii) While physical progress has been rather slow (except in the case of Bhimavaram), fund utilisation and loan recovery have suffered as a direct consequence.

(iv) Lack of programme promotion has also been a significant contributing factor for the tardy progress.

(v) Although variation from standard UNDP designs have been made by the people, they have in no way affected the functioning of the latrine. For example (a) use of cement concrete rings in place of honeycomb walls, (b) use of 3" dia pipes in place of brick drains and (c) incorporation of a junction chamber, are innovations for the better. However, non-adherence to certain other parameters viz. (a) minimum distance between the pits

and (b) minimum distance between water source and pits could lead to serious environmental consequences over passage of time. This would be more so in the towns having a high ground water table.

(vi) Problems such as foul smell, rainwater entry, etc. have arisen more on account of poor quality of construction and improper maintenance.

addition | (vii) Low levels of beneficiary awareness as well as low levels of their income have been major inhibiting factors seriously affecting the success of the programme.

In order to restore the above imbalances, a strategy for the future has been proposed.

National level statistics on sanitation coverage still portray a very dismal picture. In order to improve the situation, there remains much to be done. There is thus a lot of scope for improving the programme further as they are yet to be implemented in several parts of the country. The following four major components have to be kept in mind for the future strategy :

(i) Reorientation of Approaches

(ii) Integration of Efforts

- (iii) Appropriate Promotion
- (iv) Training
- (v) Monitoring Implementation and
- (vi) Ensuring success - the last word

Each of these is dealt with in the following sections :

10.1 Reorientation of Approaches :

The present approach towards low cost sanitation programmes in the selected towns could be termed as narrow and unidirectional. The local agencies involvement in the programme has been only too the extent of performing the necessary office work for sanctioning of loans. The local agencies can not be totally blamed for this since the basic structure of the HUDCO low-cost sanitation scheme in the selected towns is such; it does not encompass community education, literacy programmes, health and hygiene education, employment promotion, etc. Further, it remains silent on the issue of rehabilitation of scavengers. The funds provided under the HUDCO loan scheme in the selected towns have been utilised only for giving loans to the beneficiaries. The local agencies on the other hand can not take any initiative on their own to impart education etc. as it does not have any community organisers or social workers on its staff. The root cause for the present situation lies with the basic programme approach.

The approach needs to be totally reoriented; from mere narrow 'loan distributing - money lender attitude' to a wider comprehensive one encapsulating all the peripherals attached with sanitation. When all the inputs to improving sanitation; not just a loan, would go into a programme, the success rate would be definitely high. The wholistic approach to sanitation is not new. The UNICEF sponsored Urban Basic Services (UBS) Programme is one which has proved a success in several parts of the country. The HUDCO low-cost sanitation programme approach should also be reoriented on these lines. The HUDCO has already initiated steps to overcome these setbacks.

10.2 Integration of Efforts :

A reorientation in approach should be followed by an integration of efforts of the HUDCO as well as the Ministry of Welfare. To this extent, the Ministry of Urban Development, Government of India has taken a forward step by constituting an inter-ministerial coordination committee vide Memorandum No. Q.11021/60/86-PHE dated 18th July, 1989. The committee shall consist of senior level representatives from the Ministry of Welfare, Ministry of Urban Development, Central Public Health and Environmental Engineering Organisation and HUDCO. State level coordination committees would also be set up with representations of the Urban Development Local Self Govt. Departments, Social Welfare

Departments and the Department dealing with SC/ST as well as the scheduled caste Development Corporation. While a separate cell has been proposed to be set up in HUDCO for this purpose to implement and regularly monitor the programme, the state level committee would ensure suitable training programmes for rehabilitation of scavengers. Voluntary organisations have also been proposed to be utilised. The financing pattern uses loans and subsidies for conversion/construction of low-cost sanitation units upto plinth level. Additional loan for superstructure would be extended by HUDCO to the extent of 50 percent of the cost not exceeding Rs.1000/-. The remaining would have to be met by the beneficiary itself. The proposed financing pattern envisages 5%, 15% and 25% beneficiary contribution for EWS, LIG and MIG & HIG categories respectively. As has been observed from our study, beneficiaries are already contributing towards the construction to the extent they can afford. It is proposed that the beneficiary contribution component specially in case of Economically Weaker Sections be included in the loan amount so as to facilitate the scheme to reach the lowest rungs of the social strata and gain larger acceptance. It is hoped that this strategic move will help to integrate efforts and also reorient the approach leading to greater success of the low-cost sanitation programme.

10.3 Appropriate Promotion :

The problems of lack of proper promotion of the low-cost sanitation

scheme have been discussed in detail in Chapter-II. The structure of the present programme has been such that the people have to take the initiative by making the loan application to the local implementing agency. Unless the people are aware of the programme benefits, initiative from the people will be hard to come forth. This is amply evidenced in the low level of progress. The local agency has to take the initiative in a concerted manner by 'going to the people' and 'promoting' the scheme. Just as consumer products are promoted by the manufacturers, a low-cost sanitation programme also has to be promoted by the local agencies. User awareness campaigns would go a long way in promoting the programme.

10.4 Training :

This section outlines strategy actions for some of the crucial training issues.

- (i) What should be the contents of a training programme?
The contents of the training programme depend primarily on the group for which the programme is targeted.
 - a) The programme for trainers needs to focus on the development of skills to evolve appropriate training programmes to suit specific needs of target groups.

- b) The programme for senior level officers should focuss at the policy plane, the emphasis being on coordination, administration, financial management and personnel management.
- c) The programme for middle and lower level officers should focus on implementation asp . with special emphasis on technical/engineering aspects of construction.
- d) The programme for the users should focuss oon the technical/engineering aspects of construction and routine maintenance. Health and hygienic awareness should also be included.
- e) The programme for liberated scavengers should include skill upgradation, literacy, general awareness and income generating enterprises.

(ii) Whom to train?

The following would be the target groups for a training programme :

- a) Trainers
- b) Senior level officers

- c) Middle and Junior level officers
- d) Users
- e) Liberated Scavengers and
- f) School children.

(iii) Who should train whom ?

The financing agency i.e. HUDCO, should impart training to the local implementing personnel who in turn should impart training to the users/beneficiaries as well as the liberated scavengers.

(iv) What training methods need to be employed?

There are wide variety of methods that could be employed to train the target groups. These could vary from one or all of the following :

- a) Short term training classes at training institutes
- b) Field training by 'para-foot trainers'
- c) Informal discussions with local community participation
- d) Use of printed leaflets in local languages
- e) Audio visual techniques
- f) A lesson in school text-books explaining salient features.

10.5 Monitoring Implementation :

At every stage, monitoring is required. Local level monitoring

has to be done by the implementing agency officers. Monitoring should include each and every component of the programme. The following could be the main heads under which monitoring could be done :

- flow of finances
- progress of loan sanctioning
- user awareness
- physical progress
- level of benefits
- recovery of loan components
- problems if any.

Periodic assessment of these in every town where the programme is being implemented would help the policy makers to assess the level of success of programme. It will also increase their knowledge of local conditions and problems which could be rectified from time to time.

10.6 Ensuring Success - the last word

It is very important for the agencies concerned to ensure success at every stage. Starting a programme is relatively simple, but completing it successfully requires much more skill, perservance and tenacity to see the 'whole project through'. Conventional bureaucratic administrative style should accomodate within its

folds a culture of functioning where only results matter.

Development programmes constitutes several links in a long chain. Each and every one of them is complementary to the other. One cannot function without another. Each one of the links is as crucial to success as the other is. Ensuring success would mean ensuring that every link in the chain is strong. This is possible only in a culture where every individual involved in implementing the programme is committed with a missionary zeal to ensure success. In a private enterprise, hard work leading to success of the project is often rewarded in the end by the huge monetary profits. The rewards of developmental work are not monetary gains. Only when each and every individual involved in the developmental programme can take pride in the satisfaction derived out of uplifting the other downtrodden half of humanity, only in such a paradigm can development work succeed.

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| (1) | (2) | (3) |
|-----|---------------|----------------------------|
| | | 74. Jharsuguda |
| | | 75. Puri |
| | | 76. Khurda |
| | | 77. Talchar |
| 12. | Rajasthan | 78. Bhilwara |
| | | 79. Makrana |
| | | 80. Bharatpur |
| | | 81. Nagaur |
| | | 82. Pali |
| | | 83. Sirohi |
| | | 84. Hanumangarh |
| | | 85. Chittorgarh |
| | | 86. Sikkar |
| | | 87. Tonk |
| | | 88. Behror |
| 13. | Tamil Nadu | 89. Udumalpet |
| | | 90. Ambattur |
| | | 91. Nagarcoil |
| | | 92. Villupuram |
| | | 93. Tiruchandur |
| | | 94. Tirukkalukundram |
| | | 95. Veerapanchatram |
| 14. | Tripura | 96. Agartala (Proposal I) |
| | | 97. Agartala (Proposal II) |
| | | 98. Dharamnagar |
| | | 99. Udaipur |
| 15. | Uttar Pradesh | 100. Barbanki |
| | | 101. Badaur |
| | | 102. Sitapur |
| | | 103. Jabaun |
| | | 104. Mirganj |
| 16. | West Bengal | 105. Sonamukhi |
| | | 106. Murshidabad |
| | | 107. Shantipur |
| | | 108. Ghatal |
| | | 109. Bolpur |
| | | 110. Rampurhat |
| | | 111. Mekliganj |
| | | 112. Alipurduar |
| | | 113. Burdwan |

contd...

| (1) | (2) | (3) |
|-----|-----|---|
| | | 114. Asansole 115. Taki 116. Mathbhanga |

Source : Records of the Ministry of Welfare, Government of India,
New Delhi.

TABLE - 2

Table showing scavenging-free Towns upto 1988

| Name of the Town made scavenging Free | State | Number of Scavengers Liberated and Rehabilitated |
|---------------------------------------|----------------|--|
| VI Plan (1980-81 to 1984-85) | | |
| 1. Bihar Sharif | | 125 |
| 2. Purnea | | 82 |
| 3. Madhubani | Bihar | 161 |
| 4. Daltonganj | | 70 |
| 5. Chaibasa | | 42 |
| 6. Cochin | Kerala | 164 |
| 7. Bhilwara | Rajasthan | 155 |
| 8. Bhubaneswar | Orissa | 50 |
| VII Plan (April 1985-March, 1986) | | |
| 9. Nalbari | Assam | 38 |
| 10. Mangaldoi | | 58 |
| 11. Bhagalpur | Bihar | 1205 |
| 12. Gaya | | 307 |
| 13. Chapra | | 183 |
| 14. Agartala I | Tripura | 97 |
| 15. Palighat | Kerala | 42 |
| 16. Shajapur | Madhya Pradesh | 43 |
| 17. Durg | | 175 |
| 18. Udumpet | Tamil Nadu | 45 |
| Total number of towns = 18 | | |
| | | Total = 3042 |

contd...

| Name of the Town made scavenging Free | State | Number of Scavengers Liberated and Rehabilitated |
|--|----------------|--|
| VII Plan (April 1986 to March 1988) | | |
| 1. Warrangal | Andhra Pradesh | 96 |
| 2. Eluru | | 123 |
| 3. Muzafarpur | Bihar | 334 |
| 4. Hazaribagh | | 475 |
| 5. Satna | Madhya Pradesh | 182 |
| 6. Khandwa | | 22 |
| 7. Sehore | | 67 |
| 8. Jdgir | Maharashtra | 30 |
| 9. Sirohi | Rajasthan | 80 |
| 10. Chittorgarh | | 50 |
| 11. Barabanki | Uttar Pradesh | 85 |
| 12. Badaun | | 70 |
| 13. Sonamukhi | West Bengal | 93 |
| 14. Murshidabad | | 151 |
| Total Number of Towns = 14 | Total = | 1865 |

Source : Records of Ministry of Welfare, Government of India, New Delhi.

Total No. of Towns 1980-81 to 1988 = 18+14 = 32

Total No. of Scavengers Liberated & Rehabil. 1980-81 to 1988
= 3042 + 1865 = 4907

TABLE - 3

Table Showing Dates of Application & Sanction by State Government and HUDCO

| Town | Date of Appln. to SG | Date of sanction by SG | Date of Appln. to HUDCO | Date of sanction by HUDCO | Date of receipt of Ist Loan Instalment from HUDCO | Date Prog. commencement | Status* (July '90) |
|------------|----------------------|------------------------|-------------------------|---------------------------|---|-------------------------|--------------------|
| Vijayawada | 1982 | 1986 | 1986 | 1986 | 1986 | 1986 | In progress |
| Bhimavaram | 1987 | 1987 | 1987 | 1987 | not yet drawn | 1987 | Almost completed |
| Srikakulam | 1983 | 1984 | 1986 | 1986 | 1989 | 1984 | In progress |
| Anakapalle | 1982 | 1984 | 1986 | 1986 | 1986 | 1985 | In progress |

Note : 1. SG = State Government
 2. * See Table 5.0 for details of Physical Progress.

Source : Records of Municipal Corporation/Municipalities of Selected Towns.

TABLE - 4

Table Showing Targets for Low-Cost Sanitation Programme In Selected Towns

| | (U = users) | | | |
|-----------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| | Vijayawada (No. of units) | Bhimavaram (No. of units) | Srikakulam (No. of units) | Anakapalle (No. of units) |
| Conversion | | | Conversion | Conversion & New constr. |
| EWS & LIG | | | 5U 800 | |
| 5U - 1,018 | | | 10U 565 | |
| 10U - 2,040 | | | 15U 50 | 2092 |
| 15U - 341 | | | | |
| MIG & HIG | | | | |
| 5U - 634 | | | | |
| 10U - 1,278 | | | | |
| 15U - 219 | | | | |
| New constr. | | New constr. | New constr. | |
| EWS & LIG | | 5U - 2,272 | 5U - 287 | |
| 5U - 2,821 | | 10U - 1,182 | 10U - 200 | |
| 10U - 5,634 | | | 15U - 17 | |
| 15U - 944 | | | | |
| MIG & HIG | | | | |
| 5U - 1,410 | | | | |
| 10U - 2,826 | | | | |
| 15U - 478 | | | | |
| Total | 19,643 | 3,374 | 1,919 | 2092 |
| Community Latrines | Nil | 39 | Nil | Nil |
| Public baths | Nil | 8 | Nil | Nil |

Source : Records of Municipal Corporation/Municipalities of Selected Towns.

TABLE - 5

Table Showing Cost of PF Latrines in Selected Towns

| Vijayawada | | Bhimavaram | | Srikakulam | | Anakapalle | |
|----------------|----------|----------------|--|-----------------------|--|--------------------|--------------------------------|
| 1985-86 SSR | | 1989-90 SSR | | 1985-86 SSR | | 1985-86 SSR | |
| Conversion | | | | New construction | | Conversion | |
| 5U - Rs. | 725.00 | Rs. 1,000.00 | | 5U - Rs. 1,446.00 | | 5U - Rs. 700.00 | Rs.1000.00 flat loan amount |
| 10U - Rs. | 850.00 | Rs. 1,364.00 | | 10U - Rs. 1,520.00 | | 10U - Rs. 850.00 | |
| 15U - Rs. | 1,025.00 | Rs. 1,540.00 | | | | 15U - Rs. 1,000.00 | (Rs.915.00 + Pan) |
| New constr. | | | | Community latrines | | New constr. | |
| 5U - Rs. | 1,450.00 | Rs. 1,960.00 | | 16 seats = | | 5U - Rs. 900.00 | |
| 10U - Rs. | 1,570.00 | Rs. 2,200.00 | | Rs.65,000.00 | | 10U - Rs. 11000.00 | |
| 15U - Rs. | 1,800.00 | Rs. 2,350.00 | | 12 seats = | | 15U - Rs. 1,650.00 | |
| | | | | Rs.55,000.00 | | | |

Note : 1) In Srikakulam material is supplied in the following manner

| | | | |
|-----|---|-----------------------|-------------|
| 5U | - | 5 cement bags + 1 pan | (Rs.438.00) |
| 10U | - | 6 cement bags + 1 pan | (Rs.509.00) |
| 15U | - | 8 cement bags + 1 pan | (Rs.650.00) |

2) In Vijayawada, Rs.146.00 is deducted towards cost of pan and trap supplied.

3) SSR - Standard Schedule of Rates

Source : Records of Municipal Corporation/Municipalities of Selected Towns.

TABLE - 6

Table Showing Funds Sanctioned for the Selected Towns

| Town | State Govt. (Rs. in lakhs) | HUDCO (Rs. in lakhs) | Total (Rs. in lakhs) |
|------------|-------------------------------|-------------------------|-------------------------|
| Vijayawada | 168.86 | 167.07 | 335.93 |
| Bhimavaram | 45.82 | 45.16 | 90.98 |
| Srikakulam | 10.77 | 10.58 | 21.35 |
| Anakapalle | 10.37 | 10.09 | 20.46 |

Source : Records of Municipal Corporation/Municipalities of Selected Towns.

TABLE - 7

| No. of Units Sanctioned | | Progress (July '90) |
|-------------------------|-----------------------|------------------------|
| 1) | Vijayawada | |
| | Conversion | |
| | EWS & LIG | |
| | 5U - 1,018 | 63 |
| | 10U - 2,040 | 146 |
| | 15U - 341 | 102 |
| | MIG & HIG | |
| | 5U - 634 | 61 |
| | 10U - 1,278 | 123 |
| | 15U - 219 | 67 |
| | New constr. | |
| | EWS & LIG | |
| | 5U - 2,821 | 3,472 |
| | 10U - 5,634 | 4,145 |
| | 15U - 1,410 | 593 |
| | MIG & HIG | |
| | 5U - 1,410 | 2,139 |
| | 10U - 2,826 | 2,603 |
| | 15U - 478 | 273 |
| | | <hr/> |
| | 19,643 | 13,787 (70.19%) |
| 2) | Bhimavaram | |
| | 5U - 2,272 | 2,272 |
| | 10U - 1,182 | 561 |
| | | <hr/> |
| | 3,454 | 2,833 (82.0%) |
| | Community latrines 39 | 14 |
| | Public Baths 8 | - |

contd...

| Targets | | Progress (July '90) |
|---------|-------------|------------------------|
| 3) | Srikakulam | |
| | Conversion | |
| | 5U - 800 | 542 |
| | 10U - 565 | 370 |
| | 15U - 50 | 38 |
| | New Constr. | |
| | 5U - 287 | 149 |
| | 10U - 200 | 140 |
| | 15U - 17 | 10 |
| | 1,919 | 1,349 (70.29%) |
| 4) | Anakapalle | 2,092 |
| | | 1,028 (49.14%) |

Source : Records of Municipal Corporation/Municipalities of Selected Towns.

TABLE - 8

Table Showing Fund Utilisation in Selected Towns

| Town | Total Project Cost | Subsidy from SG | Amount Utilised | HUDCO Loan | Amount Utilised | Rs. Lakhs | |
|------------|--------------------|-----------------|-----------------|------------|-----------------|-----------------------|----------------------|
| | | | | | | Total Amount Utilised | Utilisation Rate (%) |
| Vijayawada | 335.93 | 168.86 | 168.86 | 167.07 | 80.14 | 249.00 | 74.12 |
| Bhimavaram | 90.93 | 45.82 | 45.85 | 45.16 | - | 45.85 | 50.00 |
| Srikakulam | 21.35 | 10.77 | 10.77 | 10.58 | 2.90 | 13.67 | 64.03 |
| Anakapalle | 20.46 | 10.37 | 10.37 | 10.09 | 0.34 | 10.71 | 52.35 |

Source : Records of Municipal Corporation/Municipalities of Selected Towns.

TABLE - 9

Table Showing Year of Construction of PF Latrines by Sample Beneficiaries in Selected Towns

| Sl.No. | Town | Year of construction | | | | | Total N= |
|--------|------------|----------------------|----------------|---------------|---------------|-------------|-----------------|
| | | '85 | '86 | '87 | '88 | '89 | |
| 1. | Vijayawada | - | 122 (30.50) | 17 (4.25) | 80 (20.00) | 3 (0.75) | 400 (100.00) |
| 2. | Bhimavaram | - | - | 25 (29.41) | 53 (62.35) | 7 (8.24) | 85 (100.00) |
| 3. | Srikakulam | 10 (25.00) | 5 (12.50) | 18 (45.00) | 7 (17.50) | - | 40 (100.00) |
| 4. | Anakapalle | 3 (10.00) | 6 (20.00) | 16 (53.33) | 5 (16.67) | - | 30 (100.00) |

Source : Primary Survey, August 1990

Figures in parenthesis are percentages

TABLE - 10

Table Showing Household Size of Sample Beneficiaries in Selected Towns

| Sl.No. | Town | Household Size | | | | | Total N= |
|--------|------------|----------------|----------------|---------------|---------------|---|-----------------|
| | | 5 | 6 | 7 | 8 | 9 | |
| 1. | Vijayawada | 121 (30.25) | 101 (25.25) | 84 (21.00) | 94 (23.50) | - | 400 (100.00) |
| 2. | Bhimavaram | 36 (42.36) | 20 (23.50) | 13 (15.29) | 16 (18.82) | - | 85 (100.00) |
| 3. | Srikakulam | 18 (45.00) | 10 (25.00) | 6 (15.00) | 6 (15.00) | - | 40 (100.00) |
| 4. | Anakapalle | 14 (46.67) | 7 (23.33) | 4 (13.33) | 5 (16.67) | - | 30 (100.00) |

Source : Primary Survey, August 1990

Figures in parenthesis denote percentages.

Vijayawada : Mean HH Size = 6.38

Bhimavaram : Mean HH Size = 6.10

Srikakulam : Mean HH Size = 6.00

Anakapalle : Mean HH Size = 6.00



TABLE - 11

Table showing Monthly Family Income of
Sample Beneficiaries in Selected Towns

| Sl.No. | Town | Monthly Family Income (Rs.) | | | | Total N= |
|--------|------------|-----------------------------|----------------|----------------|-----------------|----------------|
| | | Upto 700 | 701- 1500 | 1501- 2500 | 2501 & Above | |
| 1. | Vijayawada | 155 (26.25) | 112 (28.00) | 100 (25.00) | 83 (20.75) | (100.00) |
| 2. | Bhimavaram | 37 (48.53) | 13 (15.29) | 20 (23.53) | 15 (17.65) | 85 (100.00) |
| 3. | Srikakulam | 15 (37.50) | 12 (30.00) | 8 (20.00) | 5 (12.50) | 40 (100.00) |
| 4. | Anakapalle | 5 (16.67) | 15 (50.00) | 10 (33.33) | - | 30 (100.00) |

Source : Primary Survey, August 1990

Figures in parenthesis denote percentages.

TABLE - 12

Table Showing Occupation of Head of Household of Sample Beneficiaries
In Selected Towns

| Sl.No. | Town | Occupation of Head of Household | | | | | Total= N= |
|--------|------------|---------------------------------|------------------|--------------------|---------------|------------------|-----------------|
| | | Petty Labour | Govt. Service | Private Service | Busi- ness | Agri- culture | |
| 1. | Vijayawada | 112 (28.00) | 100 (25.00) | 83 (20.75) | 90 (22.50) | 75 (18.75) | 400 (100.00) |
| 2. | Bhimavaram | 26 (30.59) | 11 (12.94) | 10 (11.76) | 13 (15.29) | 25 (29.42) | 85 (100.00) |
| 3. | Srikakulam | 10 (25.00) | 4 (10.00) | 15 (37.50) | 6 (15.00) | 5 (12.50) | 40 (100.00) |
| 4. | Anakapalle | 8 (26.66) | 5 (16.67) | 10 (33.33) | 5 (16.67) | 2 (6.67) | 30 (100.00) |

Source : Primary Survey, August 1990

Figures in parenthesis denote percentages.

TABLE - 13

Table Showing Educational Status of Head of Household of
Sample Beneficiaries

| Sl.No. | Town | | | | Total N= |
|--------|-------------|----------------|----------------|---------------|-----------------|
| | | Illiterate | School | College | |
| 1. | Vijaya Vada | 141 (35.25) | 202 (50.50) | 57 (14.25) | 400 (100.00) |
| 2. | Bhimavaram | 41 (48.24) | 36 (42.35) | 8 (9.41) | 85 (100.00) |
| 3. | Srikakulam | 24 (60.00) | 10 (25.00) | 6 (15.00) | 40 (100.00) |
| 4. | Anakapalle | 11 (36.67) | 12 (40.00) | 7 (23.33) | 30 (100.00) |

Source : Primary Survey, August 1990

Figures in parenthesis denote percentages.

TABLE - 14

Table Showing Additional Expenditure Incurred by
Sample Beneficiaries on Construction of PF Latrines
in Selected Towns

| Sl.No. | Town | Additional Expenditure (Rs.) | | | | | Total N= |
|--------|------------|------------------------------|----------------|---------------|----------------|---------------|-----------------|
| | | +200 | +150 | +100 | +75 | +50 | |
| 1. | Vijayawada | 23 (5.75) | 163 (40.75) | 96 (24.00) | 102 (25.50) | 16 (4.00) | 400 (100.00) |
| 2. | Bhimavaram | 5 (5.89) | 28 (32.94) | 22 (25.88) | 19 (22.35) | 11 (12.94) | - (100.00) |
| 3. | Srikakulam | 7 (17.50) | 8 (20.00) | 16 (40.00) | 6 (15.00) | 3 (7.50) | - (100.00) |
| 4. | Anakapalle | 1 (3.33) | 1 (3.33) | 15 (50.00) | 8 (26.67) | 5 (16.67) | - (100.00) |

Source : Primary Survey, August 1990

Figures in parenthesis denote percentages.

* Additional expenditure relates to the amount of money the beneficiary has spent from his own resources, in addition to the HUDCO loan & Government subsidy.

TABLE - 15

Table Showing Time Taken for Construction of PF Latrine

| Sl.No. | Town | Time taken for Construction of PF latrine (No. of days) | | | Total N= |
|--------|------------|--|----------------|----------------|-----------------|
| | | 20 | 25 | 30 | |
| 1. | Vijayawada | 132 (33.00) | 159 (39.75) | 109 (27.25) | 400 (100.00) |
| 2. | Bhimavaram | 34 (40.00) | 27 (31.76) | 24 (28.24) | 85 (100.00) |
| 3. | Srikakulam | 10 (25.00) | 17 (42.50) | 13 (32.50) | 40 (100.00) |
| 4. | Anakapalle | 13 (43.33) | 11 (36.67) | 6 (20.00) | 30 (100.00) |

Source : Primary Survey, August 1990

Figures in parenthesis denote percentages.

TABLE - 16

Table Showing Structural Condition of the Houses of Sample of Beneficiaries in Selected Towns

| Sl.No. | Town | Structural Condition of Houses | | | Total N= |
|--------|------------|--------------------------------|----------------|----------------|-----------------|
| | | Kuccha | Semi- Pucca | Pucca | |
| 1. | Vijayawada | 166 (41.50) | 123 (30.75) | 111 (27.25) | 400 (100.00) |
| 2. | Bhimavaram | 35 (41.18) | 36 (42.35) | 14 (16.47) | 85 (100.00) |
| 3. | Srikakulam | 12 (30.00) | 15 (37.50) | 13 (32.50) | 40 (100.00) |
| 4. | Anakapalle | 14 (46.66) | 8 (26.67) | 8 (26.67) | 30 (100.00) |

Source : Primary Survey, August 1990

Figures in parenthesis denote percentages.

TABLE - 19

Table Showing Conditions of PF Latrine Super Structure in Sample Beneficiary House in Selected Towns

| Sl.No. | Town | no SS | Condition of PF Latrine Superstructure | | | Total N= |
|--------|------------|--------------|--|--|--|-----------------|
| | | | Brick Walls with Plaster- ing & White Wash | Brick walls with partial plaster- ing | Brick Walls without plaster- ing | |
| 1. | Vijayawada | - | 91 (22.75) | 100 (25.00) | 209 (52.25) | 400 (100.00) |
| 2. | Bhimavaram | - | 60 (70.60) | 25 (29.40) | - | 85 (100.00) |
| 3. | Srikakulam | - | 14 (35.00) | 20 (50.00) | 6 (15.00) | 40 (100.00) |
| 4. | Anakapalle | 6 (20.00) | 8 (26.67) | 10 (33.33) | 6 (20.00) | 30 (100.00) |

Source : Primary Survey, August 1990

Figures in parenthesis denote percentages.

SS = Super Structure.

TABLE - 18

Table Showing Materials Used for Roofing in the Super Structure of PF Latrines Constructed by Sample Beneficiaries in Selected Towns

| Sl.No. | Town | No SS | Materials Used for Roofing | | | Total N= |
|--------|------------|--------------|----------------------------|----------------|------------------|-----------------|
| | | | RCC | Stone | Tin/ Asbestos | |
| 1. | Vijayawada | - | 177 (44.25) | 200 (50.00) | 23 (5.75) | 400 (100.00) |
| 2. | Bhimavaram | - | 67 (78.82) | 10 (11.76) | 8 (9.42) | 85 (100.00) |
| 3. | Srikakulam | - | 18 (45.00) | 12 (30.00) | 10 (25.00) | 40 (100.00) |
| 4. | Anakapalle | 6 (20.00) | 10 (33.33) | 2 (6.67) | 12 (40.00) | 30 (100.00) |

Source : Primary Survey, August 1990

Figures in parenthesis denote percentages.

SS = Super Structure

TABLE - 19

Table Showing Conditions of PF Latrine Super Structure in Sample Beneficiary House in Selected Towns

| Sl.No. | Town | no SS | Condition of PF Latrine Superstructure | | | Total N= |
|--------|------------|--------------|--|--|--|-----------------|
| | | | Brick Walls with Plaster- ing & White Wash | Brick walls with partial plaster- ing | Brick Walls with out plaster- ing | |
| 1. | Vijayawada | - | 91 (22.75) | 100 (25.00) | 209 (52.25) | 400 (100.00) |
| 2. | Bhimavaram | - | 60 (70.60) | 25 (29.40) | - | 85 (100.00) |
| 3. | Srikakulam | - | 14 (35.00) | 20 (50.00) | 6 (15.00) | 40 (100.00) |
| 4. | Anakapalle | 6 (20.00) | 8 (26.67) | 10 (33.33) | 6 (20.00) | 30 (100.00) |

Source : Primary Survey, August 1990

Figures in parenthesis denote percentages.

SS = Super Structure.

TABLE - 20

Table Showing Materials Used for Pan and Footrests in the PF Latrines Constructed by Sample Beneficiaries in Selected Towns

| Sl.No. | Town | Materials Used for Pan and Footrests | | | | Total N= |
|--------|------------|--------------------------------------|----------------|-------------------------|---------------------|-----------------|
| | | FRP & Pore-celins | FRP & Cement | Pore-celin & Pore-celin | Pore-celin & Cement | |
| 1. | Vijayawada | 208 (52.00) | 150 (37.50) | 42 (10.50) | - | 400 (100.00) |
| 2. | Bhimavaram | 60 (70.59) | 15 (17.65) | 10 (11.76) | - | 85 (100.00) |
| 3. | Srikakulam | 10 (25.00) | 22 (55.00) | 8 (22.00) | - | 40 (100.00) |
| 4. | Anakapalle | 11 (36.67) | 15 (50.00) | 4 (13.33) | - | 30 (100.00) |

Source : Primary Survey, August 1990

Figures in parenthesis denote percentages.

FRP = Fibre Reinforced Plastic

TABLE - 21

Table Showing Distance Between Pits of PF Latrines Constructed by Sample Beneficiaries in Selected Towns

| Sl.No. | Town | Distance Between Pits | | | Total N= |
|--------|------------|-----------------------|----------------|---------------|----------------|
| | | 2'00" | 2'6" | 3'00" | |
| 1 | Vijayawad | 120 (47.25) | 130 (32.50) | 81 (20.25) | 40 (100.00) |
| 2 | Bhimavaram | 10 (11.77) | 12 (14.11) | 63 (74.12) | 85 (100.00) |
| 3. | Srikakulam | 9 (22.50) | 20 (50.00) | 11 (27.50) | 40 (100.00) |
| 4. | Anakapalle | 16 (53.33) | 5 (16.67) | 9 (30.00) | 30 (100.00) |

Source : Primary Survey, August 1990

Figures in parenthesis denote percentages.

TABLE - 22

Table Showing Location of Pits of PF Latrines Constructed by Sample Beneficiaries in Selected Towns

| Sl.No. | Town | Location of Pits | | | Total N= |
|--------|------------|--|--|------------------|-----------------|
| | | Within the built portion of house | Within the plot adjoining hut | On the Street | |
| 1. | Vijayawada | 194 (48.50) | 206 (51.50) | - | 400 (100.00) |
| 2. | Bhimavaram | 27 (31.76) | 58 (68.24) | - | 85 (100.00) |
| 3. | Srikakulam | 13 (32.50) | 27 (67.50) | - | 40 (100.00) |
| 4. | Anakapalle | 8 (26.76) | 22 (73.33) | - | 30 (100.00) |

Source : Primary Survey, August 1990

Figures in parenthesis denote percentages.

FIGURE - 23

Table Showing Source of Water for Sample Beneficiaries
in Selected Towns

| Sl.No. | Town | Source of Water | | | | | | Total N= |
|--------|------------|-----------------|----|----|----|----|----|-----------------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | |
| 1. | Vijayawada | 79 (19.75) | | 52 | 61 | 75 | 83 | 400 (100.00) |
| 2. | Bhimavaram | 5 (5.90) | 40 | 2 | 4 | 33 | 1 | 85 (100.00) |
| 3. | Srikakulam | 2 (5.00) | 6 | 2 | 20 | 4 | 6 | 40 (100.00) |
| 4. | Anakapalle | 3 (10.00) | 10 | 6 | 6 | 3 | 2 | 30 (100.00) |

Source : Primary Survey, August 1990

Figures in parenthesis denote percentages.

- 1 = Individual Municipal Tap
- 2 = Individual Open Well
- 3 = Individual Hand Pump
- 4 = Community Tap
- 5 = Community Well
- 6 = Community Hand Pump

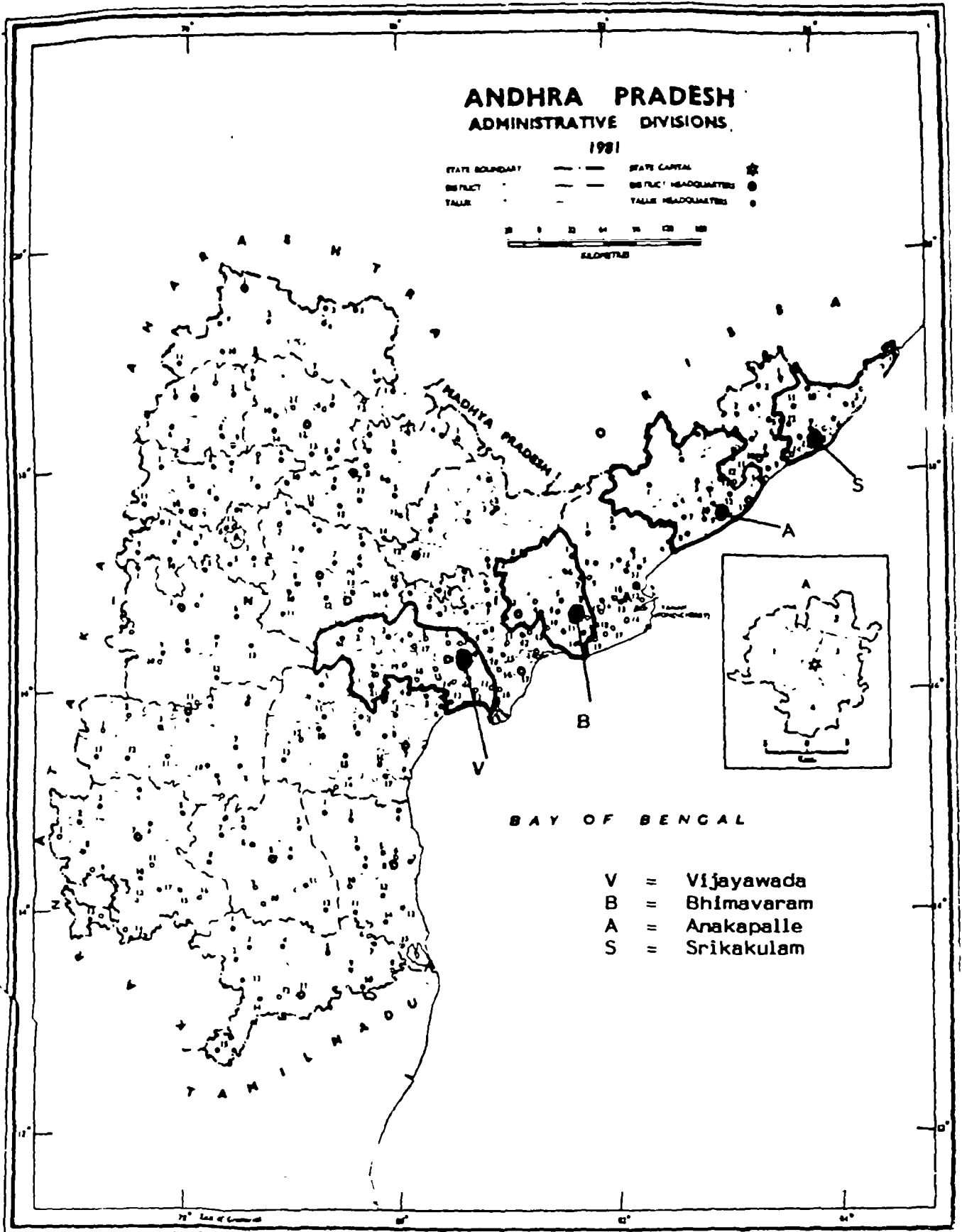
TABLE - 24

Table Showing Problems Faced by Sample Beneficiaries
in Selected Towns

| Sl.No. | Problems | Vijaya- wada | Bhima- varam | Srika- kulam | Anaka- palle |
|--------|---|-------------------|------------------|------------------|------------------|
| 1. | Foul Smell | 110(27.50) | 16(18.80) | 8(20.00) | 6(20.00) |
| 2. | Water Scarcity | 80(20) | - | - | - |
| 3. | Breakage of Pan | - | - | - | - |
| 4. | Breakage of footrest | - | - | - | - |
| 5. | Chipping of Floor | - | - | - | - |
| 6. | Collapse of Drains | - | - | - | - |
| 7. | Collapse of Pits | - | - | - | - |
| 8. | Breakage of Pit Covers | - | - | - | - |
| 9. | Overflow of Sewage from Pan | - | - | - | 2(6.7) |
| 10. | Overflow of Sewage from Pits | - | - | - | 6(20.00) |
| 11. | Lack of Privacy | - | - | - | - |
| 12. | Darkness in Cubicle | 250(62.50) | 40(47.08) | 36(90.00) | 25(83.33) |
| 13. | Cubicle too small | 281(70.25) | 66(77.64) | 32(80.00) | 30(100.00) |
| 14. | Rainwater entry into Pan | 265(66.25) | 63(74.12) | 31(77.50) | 24(80.00) |
| 15. | Rain water entry into pits | 85(21.25) | 70(82.35) | 30(75.00) | 22(73.33) |
| 16. | Damaged SS | 96(24.00) | 60(70.59) | 22(55.00) | 19(63.33) |
| 17. | Lack of know- ledge working of PF Latrine | 280(70.00) | 35(41.18) | 30(75.00) | 23(76.67) |
| | | N=400 (100.00) | N=85 (100.00) | N=40 (100.00) | N=30 (100.00) |

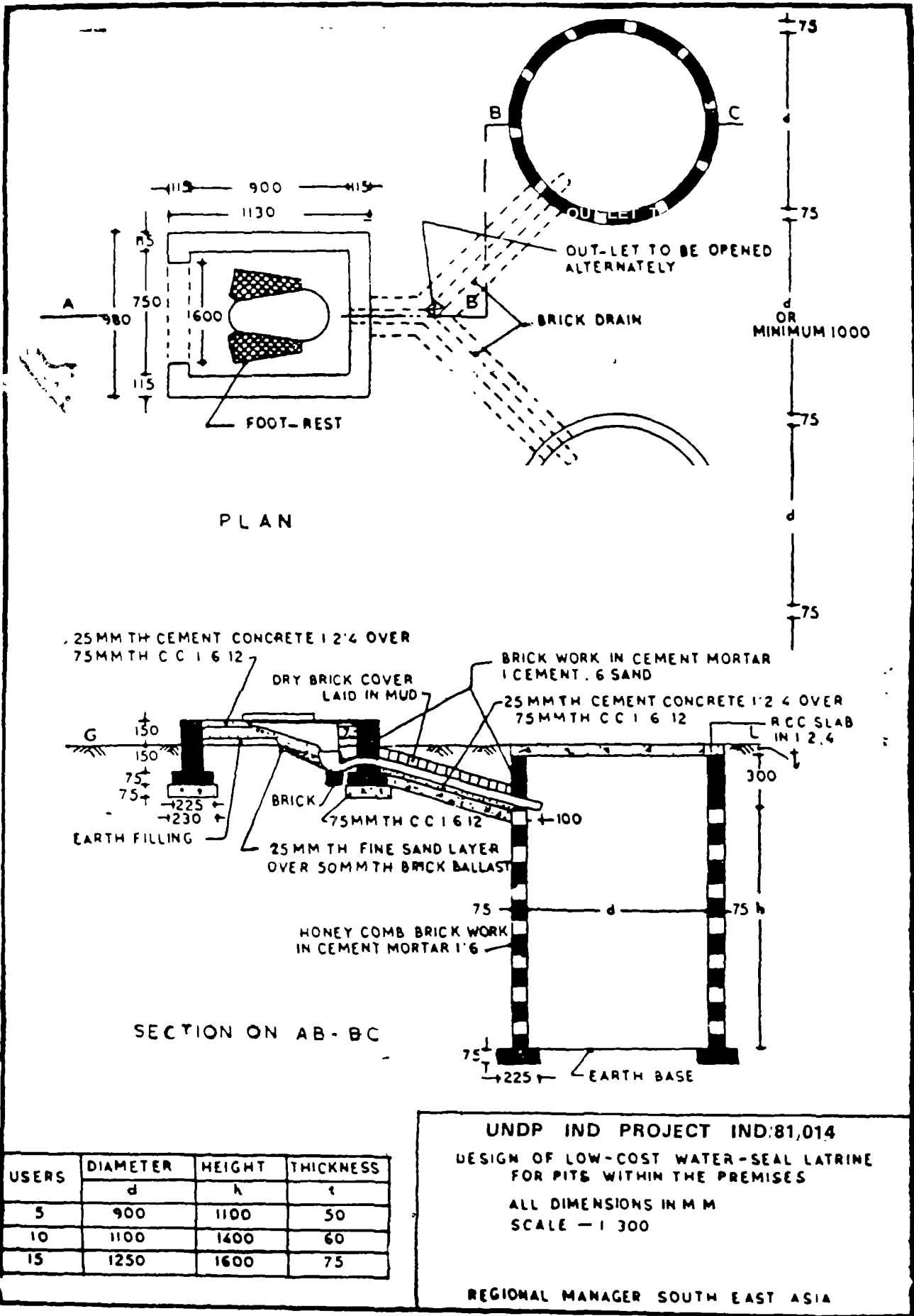
Source : Primary Survey, August 1990

Figures in parenthesis denote percentages.



- V = Vijayawada
- B = Bhimavaram
- A = Anakapalle
- S = Srikakulam

Based upon Survey of India map with the permission of the Surveyor General of India.
The horizontal values of India extend from the sea to a distance of twelve nautical miles
measured from the appropriate base line.



ANNEXURE - 1.0

IMPLEMENTING AGENCY SURVEY SCHEDULE

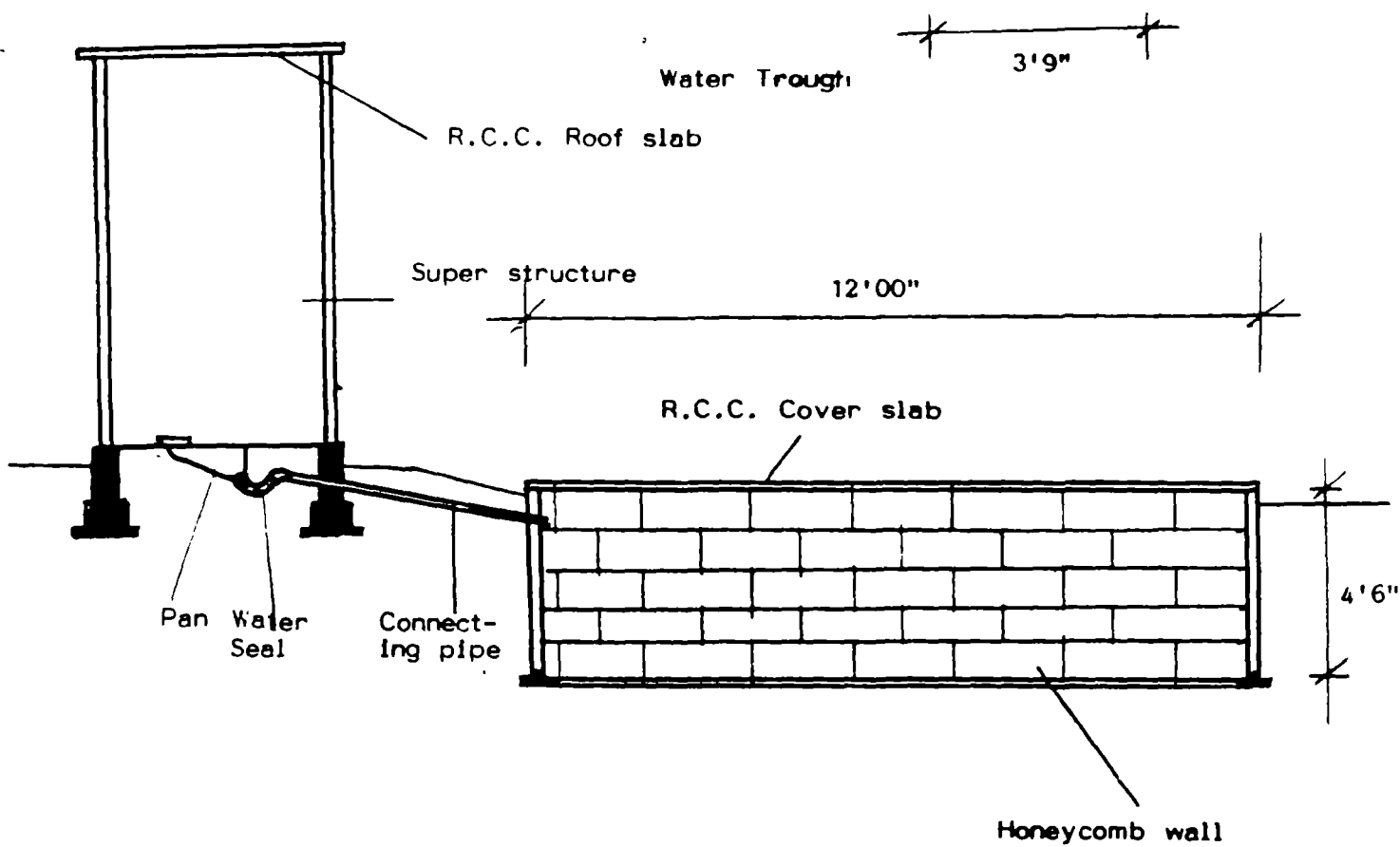
Name of town :

Month of Survey :

01. Date of loan application to HUDCO -
02. Date of loan application to state government -
03. Targets specified -
04. Amount of sanction from state government -
05. Date of sanction from HUDCO -
06. Amount of state government loan sanctioned -
07. Amount of HUDCO loan sanctioned -
08. Total project cost -
09. Date of commencement of project implementation -
10. Progress to date -
11. Expenditure on HUDCO loan -
12. Expenditure on state government loan -
13. Procedure adopted for implementation -
14. Amount recovered from beneficiaries -
15. Design of PF latrines adopted -
16. Materials used for construction -
17. Localities where the project has been implemented -
18. Cost of PF latrines -
19. Source of water -

3'9"

3'3"



DRAWING - 4.0

TYPICAL PLAN AND SECTION OF COMMUNITY LATRINES IN SELECTED TOWNS

ANNEXURE - 1.0

IMPLEMENTING AGENCY SURVEY SCHEDULE

Name of town :

Month of Survey :

01. Date of loan application to HUDCO -
02. Date of loan application to state government -
03. Targets specified -
04. Amount of sanction from state government -
05. Date of sanction from HUDCO -
06. Amount of state government loan sanctioned -
07. Amount of HUDCO loan sanctioned -
08. Total project cost -
09. Date of commencement of project implementation -
10. Progress to date -
11. Expenditure on HUDCO loan -
12. Expenditure on state government loan -
13. Procedure adopted for implementation -
14. Amount recovered from beneficiaries -
15. Design of PF latrines adopted -
16. Materials used for construction -
17. Localities where the project has been implemented -
18. Cost of PF latrines -
19. Source of water -

20. Publicity and training for adopting the programme -
21. Methods of excreta disposal prior to adopting this programme -
22. Depth of ground water table -
23. Rehabilitation of scavengers -
24. Number of slums and slum population -
25. Total population of the town -
26. Major problems faced in programme administration, management and implementation -

ANNEXURE - 2.0

USER SURVEY SCHEDULE

Name of the town :

Month of Survey :

01. Number of family members (users)
02. Type of house (Kucra/semi-pucca/pucca) -
03. Family income -
04. Level of education of head of household -
05. Nature of employment of head of household -
06. Number of employed persons in the family -
07. Date of construction of PF latrine -
08. Amount spent on construction of PF latrine -
09. Details of PF latrine -
 - a) Design adopted
 - super structure (roofing, walls, plastering, flooring, etc.)
 - pan
 - foot rests
 - floor
 - trap
 - connecting drains/pipes
 - Y-junction
 - pit walls
 - pit covers
 - b) Materials Used
 - super structure (roofing, walls, plastering, flooring, etc.)
 - pan
 - foot rests
 - floor
 - trap

- connecting drains/pipes
 - Y-junction
 - pit walls
 - pit covers
10. Shape of pits -
 11. Source of water (open well/hand pump/municipal tap) -
 12. Distance between water source and pits -
 13. Distance between pits -
 14. Location of pits -
 15. Problems faced by the users
 - a) foul smell
 - b) water scarcity
 - c) breakage of pan
 - d) breakage of footrests
 - e) chipping of flooring
 - f) collapse of drains
 - g) collapse of pits
 - h) breakage of pit covers
 - i) overflow of sewerage from pan
 - k) lack of privacy
 - l) darkness in cubicle
 - m) cubicle too small
 - n) rain water entry into pan
 - o) rain water entry into pits
 - p) damaged superstructure
 - q) any other
 16. Awareness regarding working of PF latrines -

To
 The Regional Chief,
 Housing & Urban Development Corporation Ltd.,
 9th Floor, Cauvery Bhavan,
 K.C. Road,
BANGALORE 560-009.

Subj:- Application for release of loan instalment
 for Scheme No.5133.

1. Name of the applicant .. Bhimavaram Municipality.
2. Name of the Scheme. .. Basic Sanitation Scheme.
3. Amount of loan sanctioned
 (Rs. in lakhs) .. Rs.45.16 lakhs.
- 4.(a) Loan amount requested
 to be released. .. Category Instalment No. Amount.
- | Category | Instalment No. | Amount. |
|------------------|----------------|----------------|
| Basic Sanitation | 1 | Rs.13.95 lakhs |
- (b) Loan amount already drawn. Nil.
5. Nature of Security .. Government Guarantee/B
6. (a) If secured by:
- (i) Govt. Guarantee, date of Govt. Guarantee & amount of Govt. Guarantee. Yes.
- (ii) Mortgage the date of Govt. Mortgaged(excluding value of properties recovered).. ..
- (b) Value of properties Mortgaged(excluding value of properties recovered) ..
- (c) Properties insured with ..
- (d) Amount of insurance cover ..
- (e) If the amount at(d) is less than the amount at (b) the reason for difference ..
7. Expenditure incurred so far (i.e. upto the date of application or about)
- | | Value of work done at estimated rates (Categorywise) | Actual expenditure(Category-wise) |
|--------------------------------|--|-----------------------------------|
| (a) On Land Acquisition | Nil | Nil. |
| (b) On Development | Nil | Nil |
| (c) On building construction | Rs. 44.32 lakhs | 44.60 lakhs |
| (d) On collection of materials | 1.25 | 1.25 lakhs |
| | --- | --- |
| | 45.57 | 45.85 lakhs |
| | --- | --- |

p.t.o.

-2-

| | | |
|---|----|--------------------|
| 8. Receipt realised so far (i.e.) upto the date of application or near about. | | |
| (a) From registration fees | .. | Rs.0.18lakhs. |
| (b) From advance deposit | .. | .. |
| (c) From out right sale | .. | .. |
| (d) From instalments | .. | .. |
| (e) From rentals | .. | .. |
| (f) From other sources | .. | Rs.45.82 lakhs |
| Total | | 4.00 lakhs. |

9. Loan amount refunded so far.

| | | |
|--|----|--------------------------------------|
| 10. Mode of release to be made by cheque/DD/(name of the Bank and station payable at may be indicated. | .. | Demand Draft State Bank of India. |
|--|----|--------------------------------------|

~~XXXXXXXXXX~~

**ADDITIONAL INFORMATION TO BE SUPPLIED IN THE CASE OF
RELEASE OF THE FIRST LOAN INSTALMENT**

- ..
- | | | |
|--|----|--|
| 11. Whether documentation charges paid If so the date of payment, | .. | Yes. Rs.5,000/- D.U.No.6/27-507872 dt.26-12-85 |
| 12. Whether accounts for immediate previous three years have been submitted, If so, reference of letter, | .. | Yes. |
| 13. Whether demand fully assessed | .. | Yes. |
| 14. Whether land is in possession | .. | Yes. |
| 15. Whether layout plans, designs drawing and specifications approved by HUDCO. | .. | Yes. |
| 16. Whether Govt. approval to the borrowing obtained. | .. | Yes. |
| 17. Whether tenders have been finalised and works awarded for, If Yes. State | .. | Yes. |
| (a) Development works | .. | .. |
| (b) Construction work | .. | Rs.5.80 lakhs. |

Sd/- D. Satyanarayana,
Commissioner,
Bhimavaram Municipality

/true copy/

D. Satyanarayana
Commissioner,
Bhimavaram Municipality.

B

**PROGRESS REPORT FOR BASIC SANITATION SCHEME FOR THE
SCHEME HUDCO FINANCE: BASIC SANITATION (No. 512) JALGAON DISTRICT
MUNICIPALITY SCHEME AT BHIMAYARAS**

DATE OF COMMENCEMENT OF THE SCHEME SCHEDULED 1.1.87 ACTUAL 1.6.85

| (Rs in lakhs) LOAN DRAWAL | | (Rs in lakhs) TOTAL EXPENDITURE | | (Rs in lakh) RECEIPTS | | REPAYMENTS | |
|------------------------------|--------|------------------------------------|--------|--------------------------|----------|------------|--------|
| SCHEDULED | ACTUAL | SCHEDULED | ACTUAL | SCHEDULED | ACTUAL | SCHEDULED | ACTUAL |
| | | | | | | Nil | Nil |
| 1.1.87 | --- | Rs 91.64 | 45.85 | Rs 45.82 | Rs 45.82 | | |
| Rs 13.95 | --- | | | (Govt. Grant) | | | |
| 1.10.87 | --- | | | Rs 45.16 | --- | | |
| Rs 17.08 | --- | | | (Hudco loan) | | | |
| 1.1.88 | --- | | | --- | --- | | |
| Rs 14.13 | --- | | | 50.92 | 45.92 | | |
| Rs 45.16 | --- | | | | | | |

II. Physical Progress : upto the quarter ending July 1990

| A. INDIVIDUAL LATRINES | Total as per Scheme | | Total in Progress | | Completed | |
|---------------------------|--------------------------------|----------------|----------------------|----------------|----------------|----------------|
| | Conver sion | New constr. | Conver sion | New constr. | Conver sion | New constr. |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| (EWS/AG MIG/HIG) | 5/6 std. Dagn. 2272 | --- | 122 | --- | 2150 | --- |
| within | 10 Std. Dagn. 1102 | --- | 228 | --- | 333 | --- |
| Premia- (W.ob) | 15 Std. Dagn. 25 Std. Dagn. | | | | | |
| EWS/ LIG | 5/6 Std. Dagn. | | | | | |
| Under | 10 Std. Dagn. | | | | | |
| Footpath | 15 Std. Dagn. 25 Std. Dagn. | | | | | |
| with 5/6 | Std. Dagn. | | | | | |
| in pre- mises | 10 Std. Dagn. | | | | | |
| (W.P.) | 15 Std. Dagn. | | | | | |
| MIG/ HIG | 25 Std. Dagn. | | | | | |
| Under | 5/6 Std. Dagn. | | | | | |
| Foot path | 10 Std. Dagn. | | | | | |
| (U.P) | 15 Std. Dagn. 25 Std. Dagn. | | | | | |

Contd.....

 5/6 Stnd. Degn.

Under
 Road 10 Stnd. Degn.
 (U.R.) 15 Stnd. Degn.

 25 Stnd. Degn.

Note : Leaching pits with sand cover Around may please be indicated separately

| Community Latrines | Bus Stand/Rly station | Markets/ Lanes | Slums | 4 | 10 | 25 | -- | -- | -- | -- | -- |
|--------------------|-----------------------|----------------|-------|---|----|----|----|----|----|----|----|
| | | | | | | | | | | | |
| | | | | | | | | | | | 14 |

U. LATRINES

| Public Baths | Bus Stand/Rly Station | Market / lanes | 6 | 2 | -- | -- | -- | -- | -- |
|--------------|-----------------------|----------------|---|---|----|----|----|----|----|
| | | | | | | | | | |

Value of materials in hand (Rs. in lakhs) -----

Description of work

III. HAVE YOU MADE ANY CHANGES

| a) No. of units from sanct. scheme | EWS / LIG | MIG/HIG | OTHERS | If yes, please give itemwise details of the change made. Report whether approval for the change was obtained from HUDCO. |
|------------------------------------|-----------|---------|--------|--|
| b) Design. | -- | -- | -- | |
| c) Specifications | -- | -- | -- | |
| d) Cost of Unit | -- | -- | -- | |
| e) Sale price | -- | -- | -- | |
| f) Disposal terms | -- | -- | -- | |

IV STATUS OF SCHEME :

(Reasons for shortfall : score out whichever is not applicable)

Behind Schedule

- 1) Shortage of building materials - Cement/Steel/Timber/Pipes/other
 - 2) Extreme weather conditions.
 - 3) Non availability of site.
 - 4) Late finalisation of tenders
 - 5) Contractors difficulties
 - 6) Other (Specify)
- (Due to frequent Natural Calamities such as Cyclones or Heavy Rains)

SIGNATURE

Sd/-D. Satyanarayana,
 COMMISSIONER.

True Copy
 [Signature]
 [Signature]

ANNEXURE - 5.0

DRAFT MODEL BYE-LAWS FOR REGULATING THE CONSTRUCTION, OPERATION, MAINTENANCE AND CONTROL OF LATRINES

In exercise of the powers vested under Section _____ of _____ (State) Municipalities Act _____ (year), the Municipal Board of _____ (Town) hereby make the following bye-law for regulating the construction, maintenance and control of water-flush latrines within its areas.

BYE-LAWS

1. Short Title, Extent and Commencement
 - (i) The Bye-Laws may be called the _____ (town) Municipal Board Latrine bye-laws.
 - (ii) They shall extend to the whole of Municipality of _____
 - (iii) They shall come into force after three months from the date of their publication in the Official Gazette.
2. Definitions
 - (i) "Municipal Board" includes Municipal Corporation, Municipal Council, Town Area Committee, Notified Area Committee and Nagar Panchayat.
 - (ii) "Executive Officer" includes Commissioner, Chief Officer and Secretary.
 - (iii) "Latrines" or "Privy" means a place set apart for defecation together with the structure comprising such place, the receptacle therein for human excreta and the fittings and apparatus, if any, connected therewith, and includes a dry latrine and a water-flush water-seal latrine.
 - (iv) "Dry Latrine" means a latrine in which human excreta are discharged into any type of receptacle e.g. bucket etc. or otherwise and required to be removed by human agency.

- (v) "Waterseal latrine" means a latrine with a minimum water-seal of 20mm in which excreta is pushed in or flushed by water and not required to be removed by human agency. The types, designs and specifications of various kinds of water-seal flush latrines shall be as given in the schedule of these bye-laws or as may be prescribed by the State Government from time to time.

3. Preparation of Register Regarding Latrines

The Executive Offices shall prepare and maintain a register of House-holds containing information about the existing position of latrine facilities, their types and number of users etc. where such facilities exist, in such form as may be prescribed. For collecting necessary information in his regard, the Executive Officer may, by requisition require the owner or occupier to furnish the same within the period specified therein who shall be bound to furnish such information.

4. Construction of New Latrines

After coming into force of these bye-laws :

- (i) Any latrine that may be constructed by any person shall be of water-seal type, conforming to the types, designs and specifications prescribed in the bye-laws;
- (ii) every person, who builds or rebuilds a residential building, shall provide at least one water-seal latrine on it;
- (iii) every house-hold shall have at least one water-seal latrine and in case the number of users within a house-hold exceeds 10, it shall have at least two latrines; and
- (iv) no building plan of any type of construction or alterations or additions to a building shall be sanctioned and no building shall be deemed to have been completed and fit for human occupation unless provision is made for a water-seal latrine and the dry latrine, if any, is dismantled; but if the number of users in the house-hold exceeds 10, at least two water-seal latrines shall be provided.

5. Location of the Units

- (i) No leaching pit for disposal of excreta shall be

located within a radius of 8 m from the existing hand pump or well unless special precautions to the satisfaction of the Executive Officer are taken. However, in soils with grain sizes less than 1mm and where maximum ground water level throughout the year is more than 2m below the pits, the leaching pits can be located at 3m distance from drinking water sources;

- (ii) leaching pits shall be located within the premises of the building where the latrine is proposed to be constructed new or converted; where it is not possible, the pits can be located under the foot-path, road or street. The final authority to determine this feasibility shall be of the Municipal Board and its decision shall be final and binding. Permission to build the leaching pits under the road, street or foot-path shall be given only by the Executive Officer or by the person authorised by him when he is fully satisfied that it is not feasible to construct these pits within the premises of the building; and
- (iii) in case the leach pits are located under the road, street, or foot path, the invert level of the pipe connecting the latrine pan with the pit shall be least 1.1m below ground level or below the bottom of the water main existing within a distance of 3m from the pits whichever is more.

6. Phased Latrine Programme

The Municipal Board shall make out a reasonable time bound phase 1 programme requiring the owners or occupiers of house-holds to convert the existing dry/bucket latrines to water-seal units and to provide water-seal latrines in all the

7. Notice for Construction/Conversion of Latrine

The Executive Officer shall issue a notice in writing to the owner or occupier to provide a water-seal latrine or latrines in the premises with no latrine, or an additional unit or units in house-holds with inadequate number of latrines and or to convert the existing dry latrine into a water-seal one as per prescribed specifications within 3 months from the date of service of notice. The period 3 of months may be extended by the Executive Officer at the request of the owner or the occupier if sufficient reasons justifying the grant of such request are shown, provided that the total period shall not exceed six months in aggregate from the date of service of such notice.

Board as per the scheme of financial assistance to the householders notified by the Municipal Board. The financial assistance will be in the shape of loan or a mix of loan and grant. The criteria for determination of grant element and the terms and conditions for giving the financial assistance and loan recovery with interest shall be as notified by the Municipal Board or the State Government from time to time.

- (iii) the licensed contractor shall construct the sanctioned latrine as per the prescribed design, drawing and specifications to the satisfaction of the Municipal Board and the owner or the occupier of the house.
- (iv) after the contractor submits the completion certificate of building the latrine; and the Municipal Board and the owner or the occupier of the building being satisfied with the construction, payment will be released to the contractor by the Municipal Board. The owner or the occupier of the building will be given detailed instructions and guidance apart from a pamphlet giving instructions and guidelines regarding its use, operation and maintenance.
- (v) the latrine constructed shall be provided with a superstructure with proper ventilation. If there is a scheme for giving financial assistance for constructing a superstructure, the person who constructs the latrine will be given financial assistance on execution of an agreement on terms and conditions as specified by the Municipal Board, provided funds are available with the Municipal Board.
- (vi) a person who builds or rebuilds a house shall not be given any financial assistance by the Municipal Board for constructing a latrine; and
- (vii) the person who has obtained a loan for constructing a latrine or superstructure shall repay a loan with interest in instalments determined by the Municipal Board under the financial assistance scheme, regularly. In case of default, the following measures will be taken for recovery :
 - a) Rate of interest from the date the last loan instalment paid to the date of repayment or outstanding due loan amount shall be enhanced by at least 5% above the current bank loan interest.

- b) Recovery of loan dues with penal interest in case of default will be effected by means of distraining of the goods of the defaulter as is laid down for the recovery of tax in Section _____ of the Municipal Act _____ or through the District Magistrate as arrears of land revenue.
- c) The water pipe connection, if the defaulter has in the house, may be disconnected.
- d) Recovery will be effected from the tenant who will recover it from the rent paid to the owner of the house hold.
- e) In case the owner of the building, in whose respect the default has accrued, is not living in the building, the water connection of the building where he is residing, if it lies within the municipal limits of the town, will be disconnected.

10. Dismantling of Dry Latrine

After the construction of water-seal latrine, the dry latrine if existing in the house-hold (where the water-seal latrine has been constructed) shall be dismantled.

11. Execution of Work by Municipal Board on Payment

If owner or the occupier against whom a notice under bye-law No.7 above has been issued, fails to comply with the notice within the specified time, then, without prejudice to any other action that may be taken against him under any other provision of the law, the Executive Officer shall get the latrine constructed or converted, as the case may be, in terms of notice, departmentally or through any licensed contractor and recover the expenses incurred in this behalf from the defaulter under Section _____ of the (State) Municipal Act _____ (year).

12. Maintenance of Latrine

The water-seal latrine shall be properly maintained and kept in sanitary condition by the owner or the occupier. The contents of the septic tanks, soak pits, leach pits, etc. shall be periodically emptied by the owner or occupier at its own cost either through private agency or the Municipal Board. The Municipal Board shall maintain a special squad for this purpose and provide its services for emptying the contents and/

- b) Recovery of loan dues with penal interest in case of default will be effected by means of distraining of the goods of the defaulter as is laid down for the recovery of tax in Section _____ of the Municipal Act _____ or through the District Magistrate as arrears of land revenue.
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or removal thereof. The leach pits will be cleaned only after 2 years of their remaining out of service after they were full. If the Municipal Board cleans the leach pits free of cost at the request of the owner or the occupier of the building, the humus shall be the property of the Municipal Board and the owner or the occupier of the house shall not have any claim on it.

13. Penalty of Breach

Any person committing breach of any of these bye-laws shall be liable to a fine not exceeding Rs.1000.

The following pages depict the situation of the low-cost PF latrines in the 4 selected towns of Andhra Pradesh. The photographs have been grouped in the following manner :

| | | |
|----------------------------|---|------------|
| Photographs VJ-1 to VJ-18 | - | Vijayawada |
| Photographs BH-19 to BH-32 | - | Bhimavaram |
| Photographs SR-33 to SR-40 | - | Srikakulam |
| Photographs AN-41 to AN-52 | - | Anakapalle |



VJ-1

VJ-1, VJ-2 : A typical PF latrine and bathroom in the slum areas of Vijayawada.



VJ-2



VJ-1

VJ-1, VJ-2 : A typical PF latrine and bathroom in the slum areas of Vijayawada.



VJ-2



VJ-3

VJ-3, VJ-4 :

While unplastered walls are likely to reduce the life of the superstructure, inadequate projection of the roof over the door leads to entry of rainwater into the latrine.



VJ-4

VJ-5, VJ-6 :

Manufacture of Moulded
cement rings for use
in the construction of
pits for the 2-pit PF
landfills.



VJ-5



VJ-6

VJ-7



VJ-7, VJ-8 :

- Use porecelin pan and trests.
- Red-oxide has been used in the cement flooring.
- Note the slight roof projection as well as the difference in the level of the latrine floor and the surrounding floor.

VJ-8

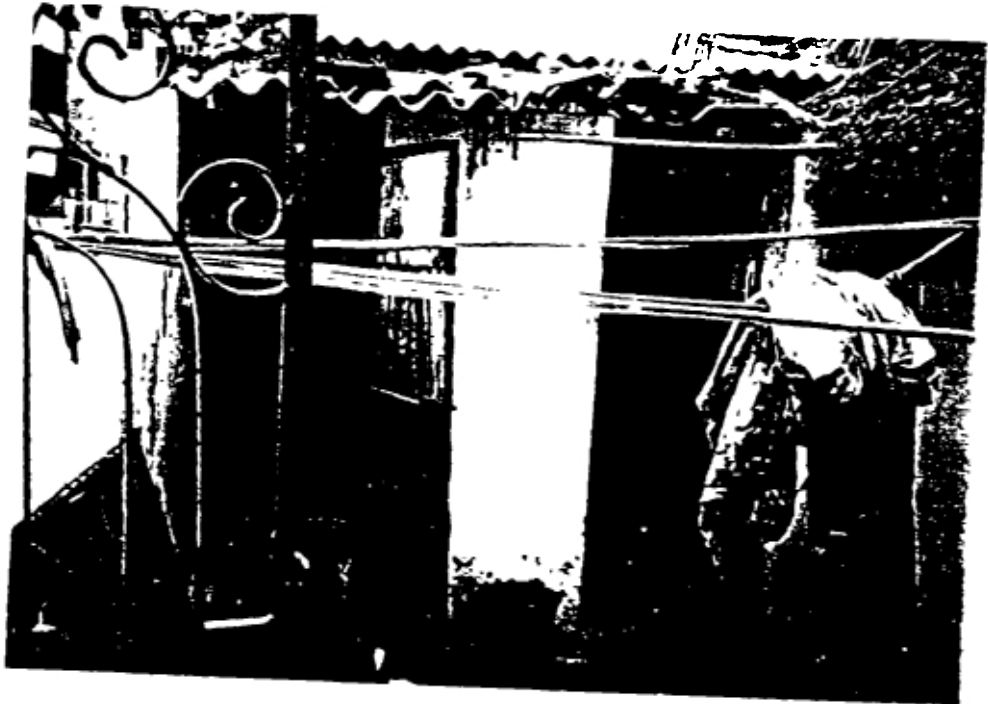


VJ-11, VJ-12 :

Use of Asbestos Sheets
as an alternative to
RCC roof for the super
structure of the PF
latrines.



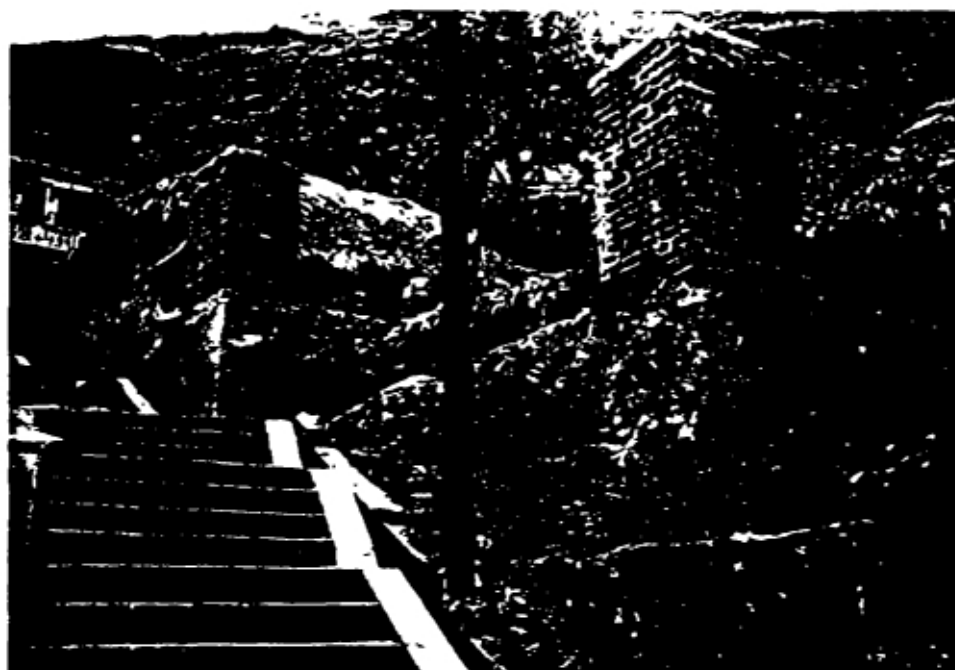
VJ-12



VJ-13



VJ-13, VJ-14 : Proliferation of slums along hill slopes in Vijayawada causes acute sanitation problems on account of the difficult water supply situation.



VJ-14

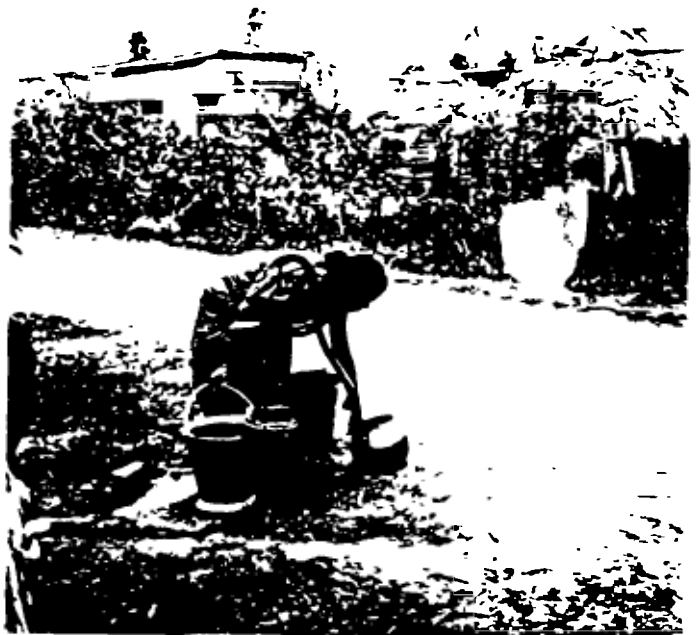


VJ-15, VJ-16 : A well constructed and properly maintained PF latrine.



VJ-16

VJ-17

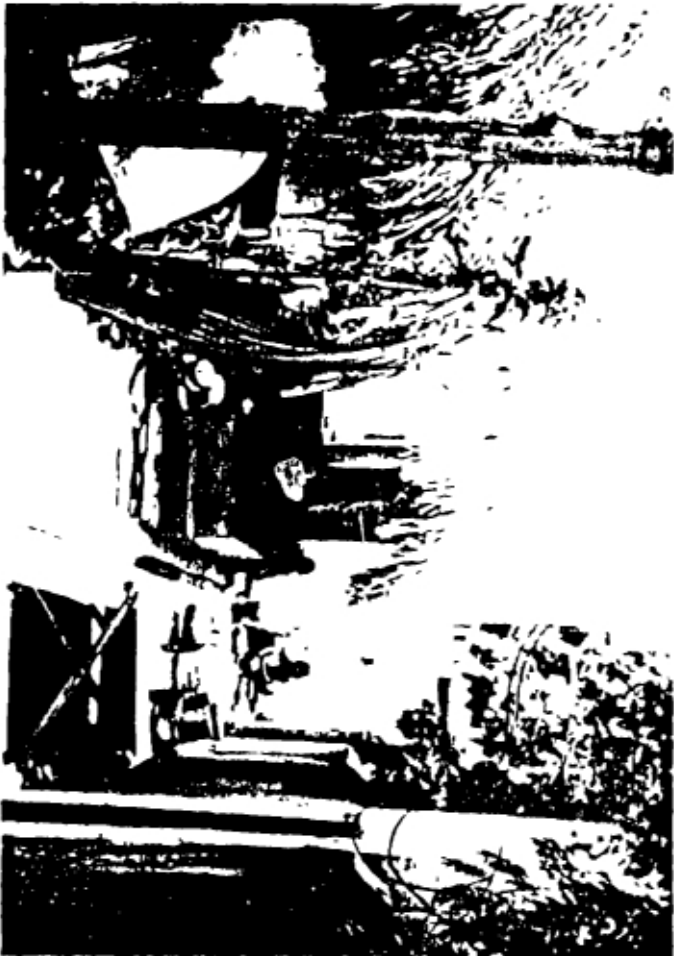


VJ-17, VJ-18 :

PF latrine construction alone would not always provide a sanitary environment. Solid waste management and clean water facilities are also essential.

VJ-18





BH-19

BH-19, BH-20 : Typical thatch huts in the low-income areas of Bhimavaram.



BH-20

BH-21

BH-21, BH-22 :

Pucca RCC and Brick
superstructures with
plastering ensure a
longer life of the
latrine.



BH-22

BH-23, BH-24 :

'Pucca' latrines amidst
'Kuccha' hutments.
Cost of the PF latrine
could be reduced if
the RCC roof could
be replaced by a tha-
tch roof.



BH-24

BH-25



BH-25, BH-26 : When the PF latrine floor is at the same level as the ground level, the possibility of rainwater entry into the pan is very high.



BH-26

BH-26



BH-29, BH-30 : The close proximity of an open well and the PF latrine pits could lead to contamination of the ground water table.



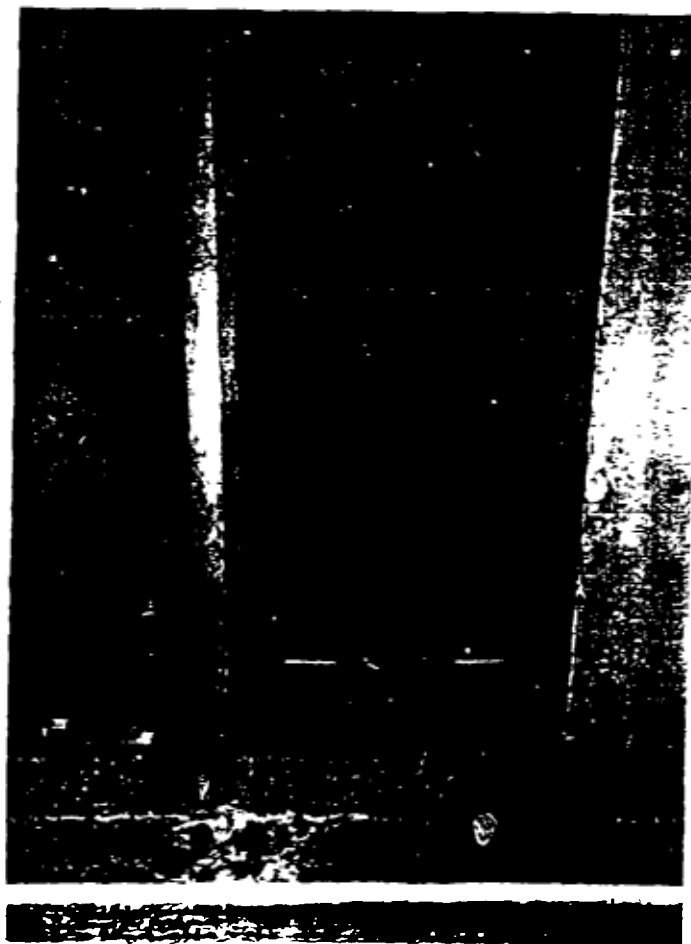
BH-30

BH-31, BH-32

A twelve seat commun
latrine in Bhimavara
(See Drg. 4.0)



BH-32



SR-33

SR-33, SR-34 :

Use of tin sheets as a roofing material for the superstructure of the PF latrines.



SR-34

SR-35



SR-35, SR-36 :

series of wo-pit latrines at close distance in Srikakulam. The pit covers being at ground level, rain water entry into pits could lead to several undesirable effects.



SR-36

SR-37



SR-37, SR-38

Pits close to cocanut trees are undesirable since the roots of the trees could penetrate the walls and lead to collapse of pits in the long run.



SR-38

SR-39



SR-39.

Extensive use of community water taps in Sriakulam.



SR-40

AN-41



AN-41, 2 :

Typical examples of people's innovation in Anapalle where vent pipes have been provided for the pits of the pour flush latrines.

AN-42



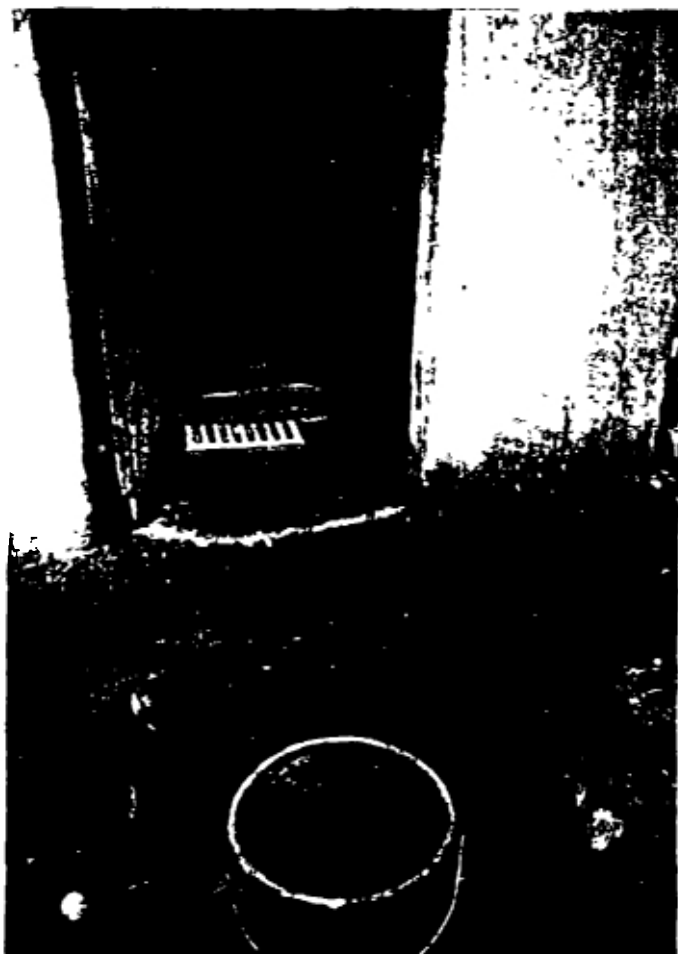
AN-43

AN-43, AN-44 :

Unhygienic surroundings
defeat the purpose of
a sanitary latrine.



AN-44



AN-45

A two-pit latrine
which is not in
use.



AN-46 : A two-pit latrine without a superstructure.



AN-49

AN-49, AN-50 :

Close proximity
of open wells and
handpumps to the
pit latrines.



AN-50

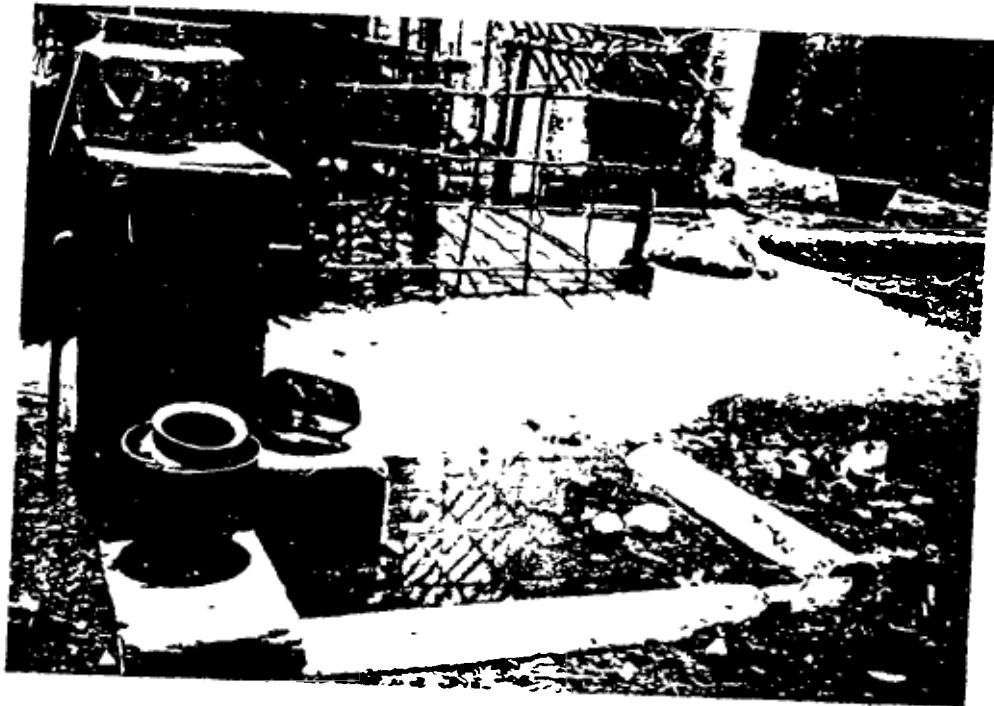


AN-51



AN-51, AN-52 :

v logging at
tl community taps
leads to mosquito
breeding.



AN-52



}

