



# PROPER STORAGE OF WATER

## WASH VESSELS THOROUGHLY



## FILTER WATER WITH A CLEAN CLOTH



## KEEP VESSELS COVERED



## TAKE WATER OUT ONLY BY TILTING OR USE A LADLE



## PREFACE

TARA Direct Action Handpump is yet-another contribution in the National Programme of providing safe potable water specially in the coastal areas. TARA Handpump is having all the VLOM (Village Level Operation and Maintenance) features suitable to draw water from low to medium lifts (upto 15 mts.)

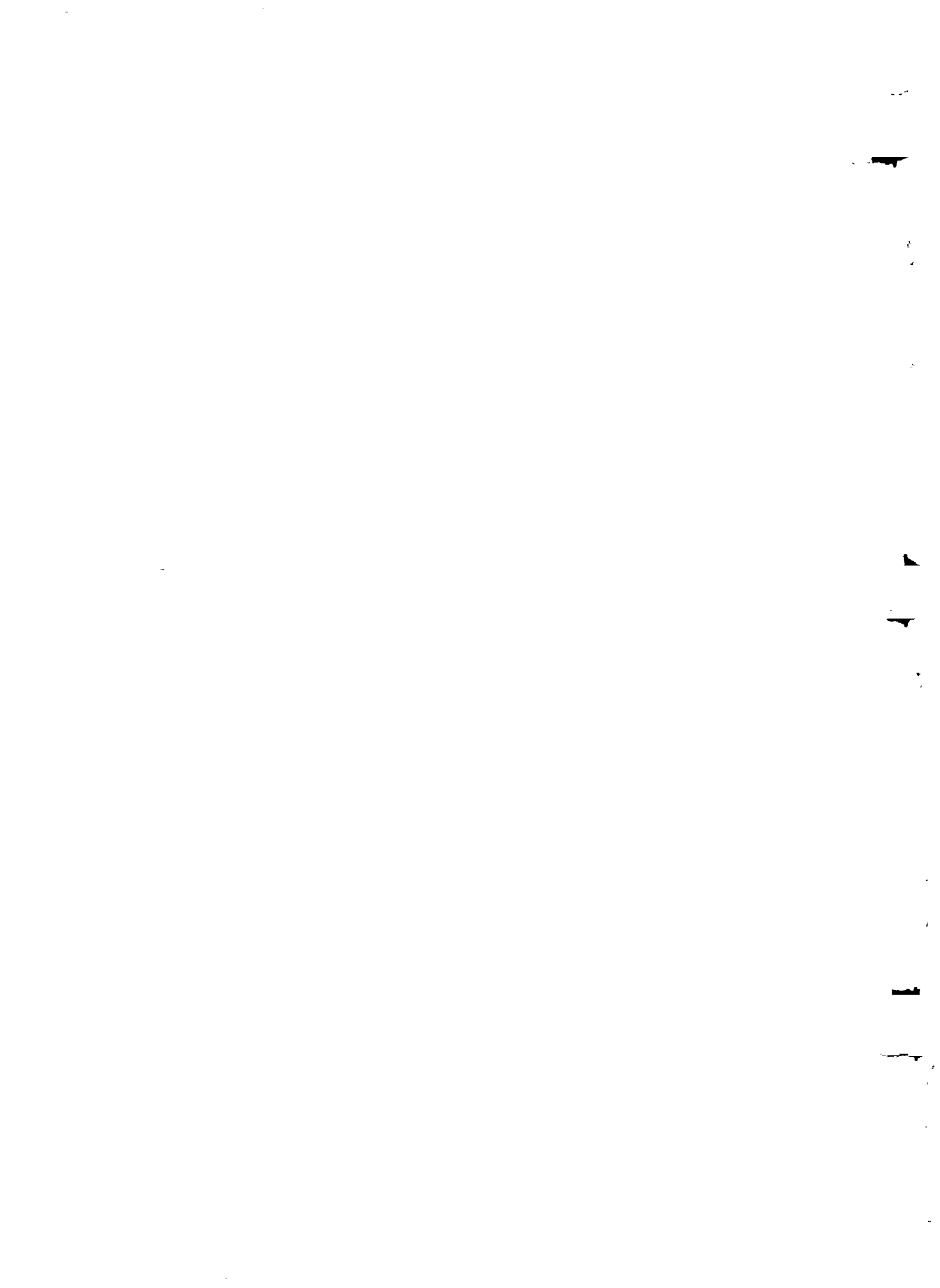
To introduce the concept of the Village Level Operation and Maintenance, a Plan of Action was developed, which has been simplified and given in this manual. The organisational structure and functioning of Village Level Operation and Maintenance system are figuratively depicted. This manual is specially designed for planners and facilitators for their ready reference. The illustrations can be transferred into transparencies which can be used as visual aids during the training programme of the project.

Planners and facilitators must follow a well-designed procedure suggested in this manual which involves people, planners and facilitators in a joint search for proper mix of hardware and software, to meet the needs of the community. This manual has been designed to successfully accomplish this goal. The guidelines suggested are subject to changes based on the field situation.

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# **VILLAGE LEVEL OPERATION AND MAINTENANCE OF DIRECT ACTION (TARA) HANDPUMP**

## ***INTRODUCTION***

**The Government of Tamil Nadu has given high priority to improvement of rural drinking water supply to enhance the health condition of rural population by providing handpumps in the alluvial/sandy areas.**

**There is an increasing interest in the use of direct action handpumps in relatively low lift areas of 12 to 15 metres particularly in the coastal areas of the state. In this handpump, the conventional operating lever has been exchanged for a T-bar handle at the top of the pump rod.**

**A good direct action pump design distributes the operating effort between the upward and downward parts of the pumping cycle. TARA pump is one such direct action pump. Manufacturing direct action TARA pump is simple. The maintenance is also simple. Women with minimum training can dismantle and reassemble the entire pump system with simple tools.**

**The TARA direct action handpump along with a 80 mm (3") tubewell costs about Rs.3500/- (average 12m depth) and is designed for a maximum lift of 15 metres and caters to a user group of 75-100 persons. The pump delivers from 1.0 - 1.5 litres per pumping cycle depending on the length of the stroke.**



***Main Objectives of the Project :***

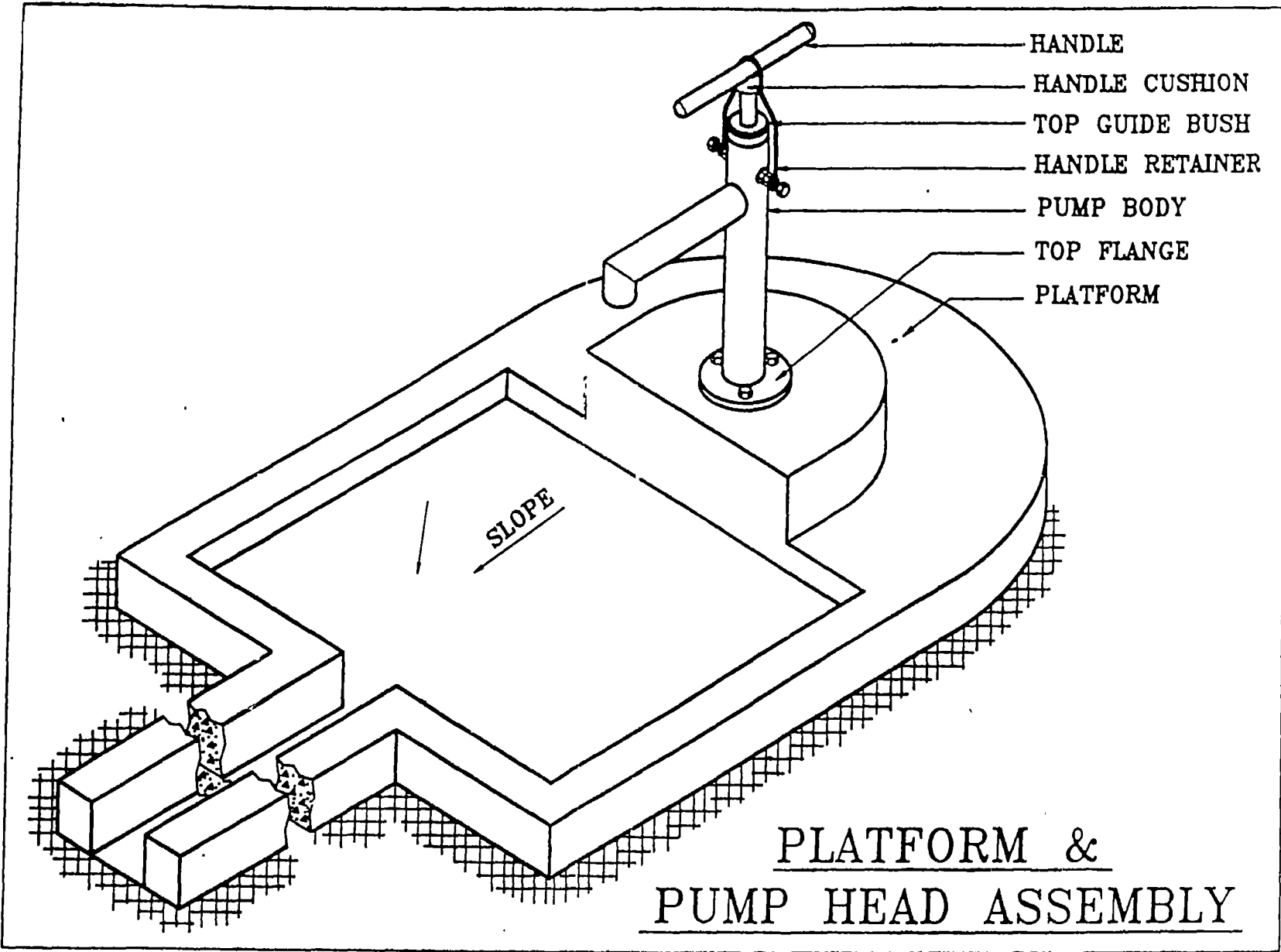
- **To convert the existing centralised system to Village based maintenance system through community participation**
- **Establish viable mechanisms at village level (WATSAN Committee) for planning execution and maintenance of TARA handpump.**

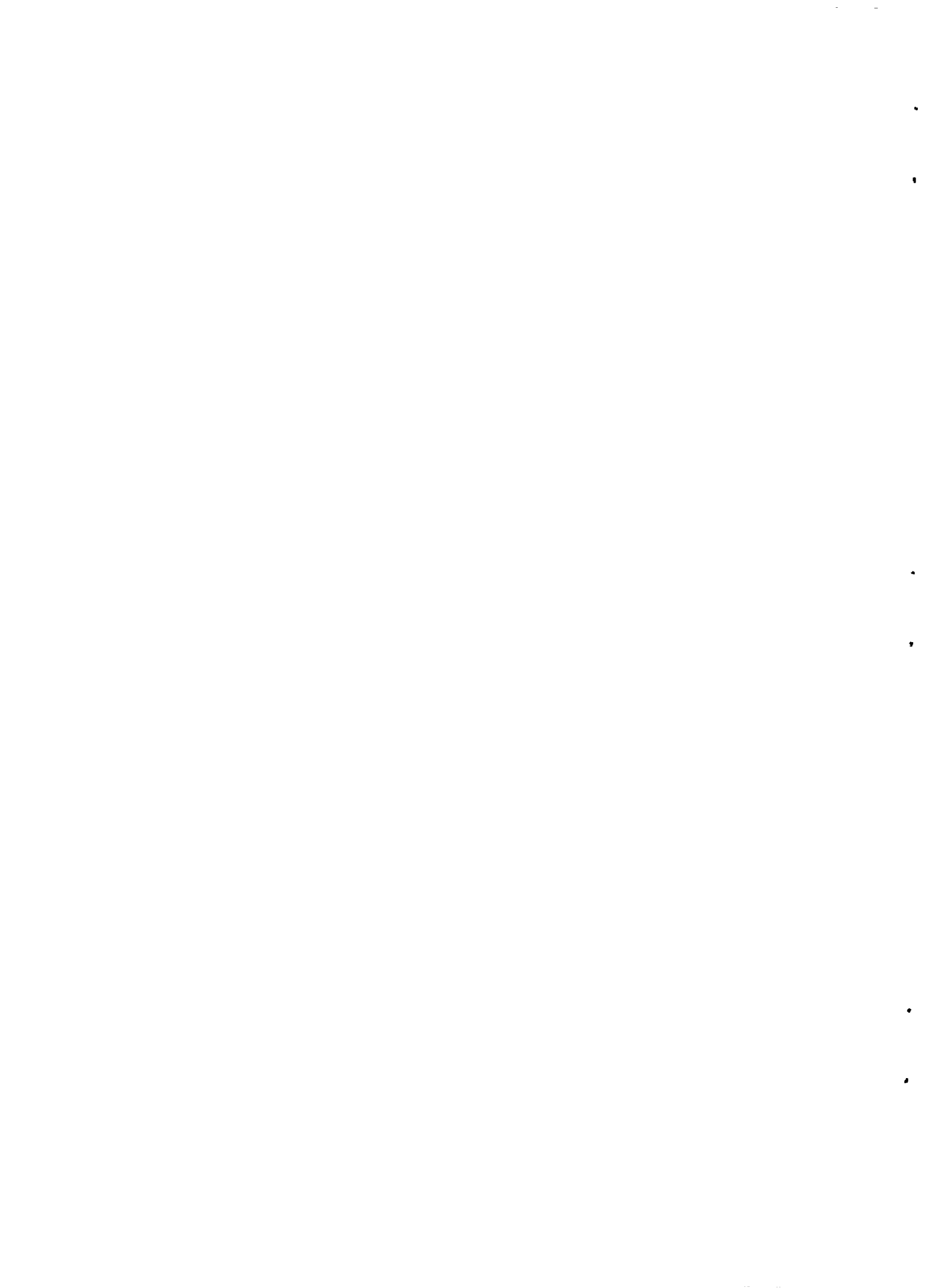
***Who will implement ?***

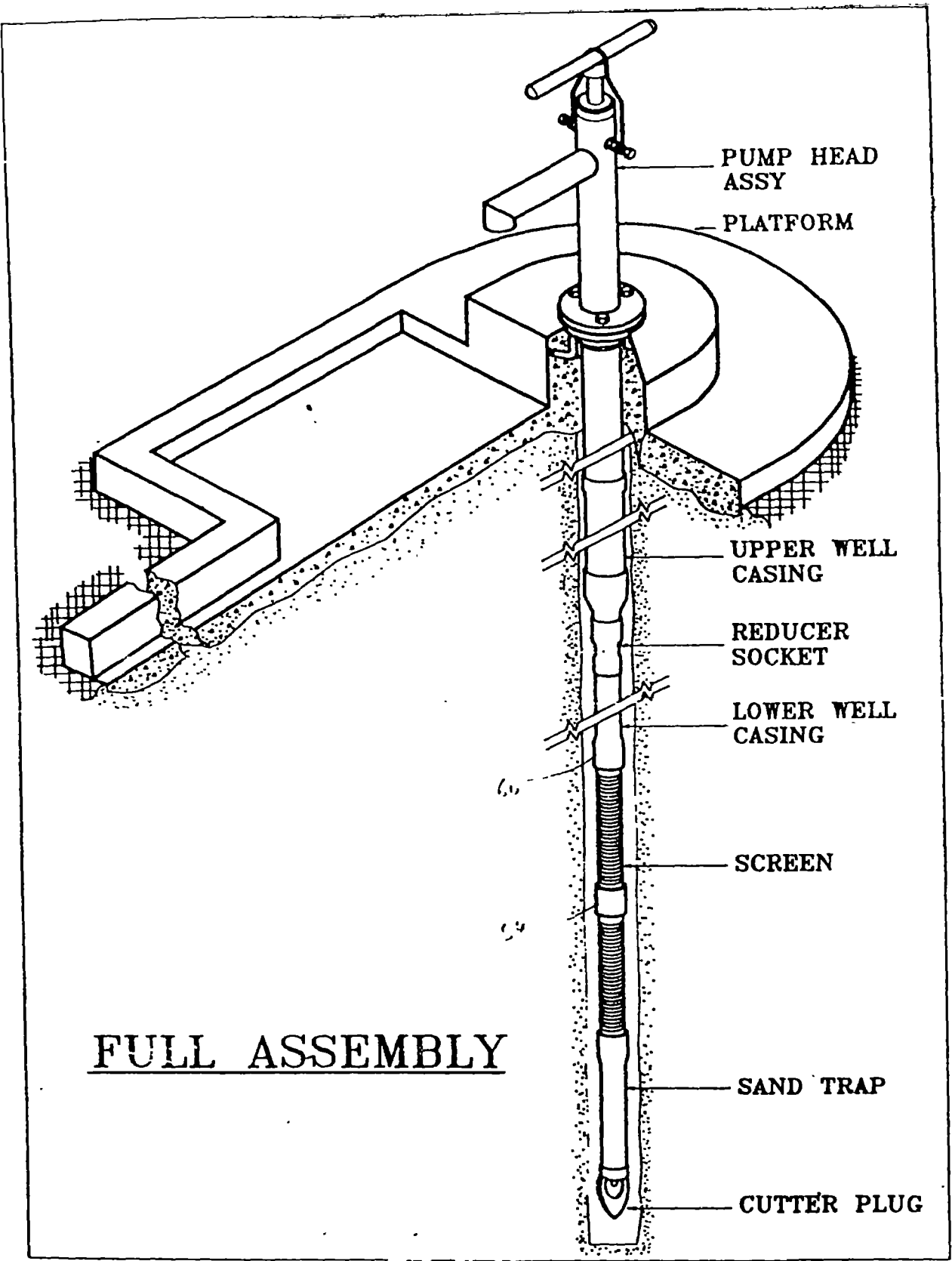
- |   |  |
|---|--|
| <b>i) Tamil Nadu Water &amp; Drainage Board (TWAD)<br/>Directorate of Rural Development (DRD)</b> | <b>Implementing<br/>agencies</b>               |
| <b>ii) Non Government Organisation (NGOs)</b>   | <b>Software &amp;<br/>mobilisation support</b> |
| <b>iii) United Nation's International Children's<br/>Fund (UNICEF)</b>                            | <b>Technical &amp; material<br/>support.</b>   |











PUMP HEAD ASSY

PLATFORM

UPPER WELL CASING

REDUCER SOCKET

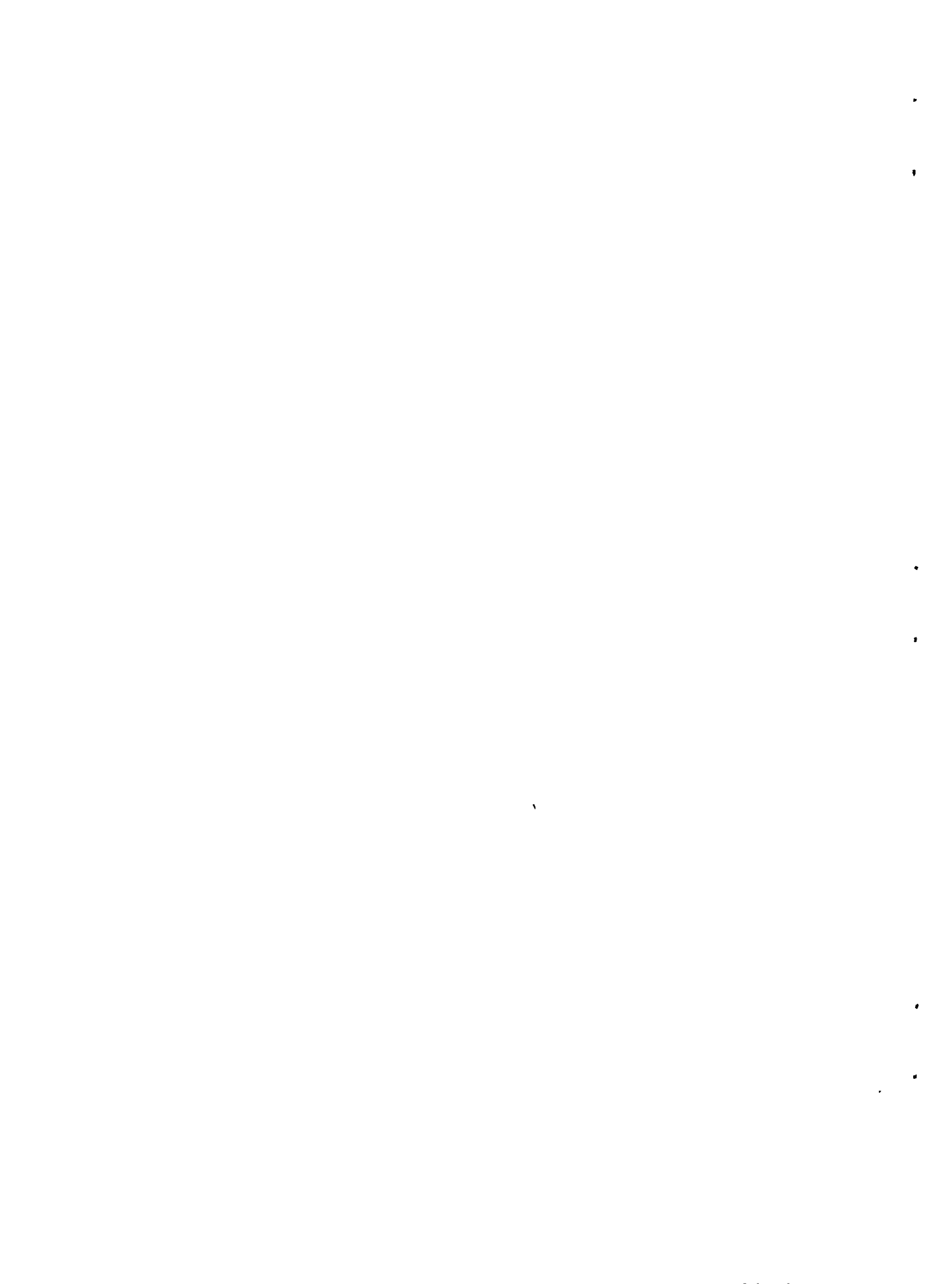
LOWER WELL CASING

SCREEN

SAND TRAP

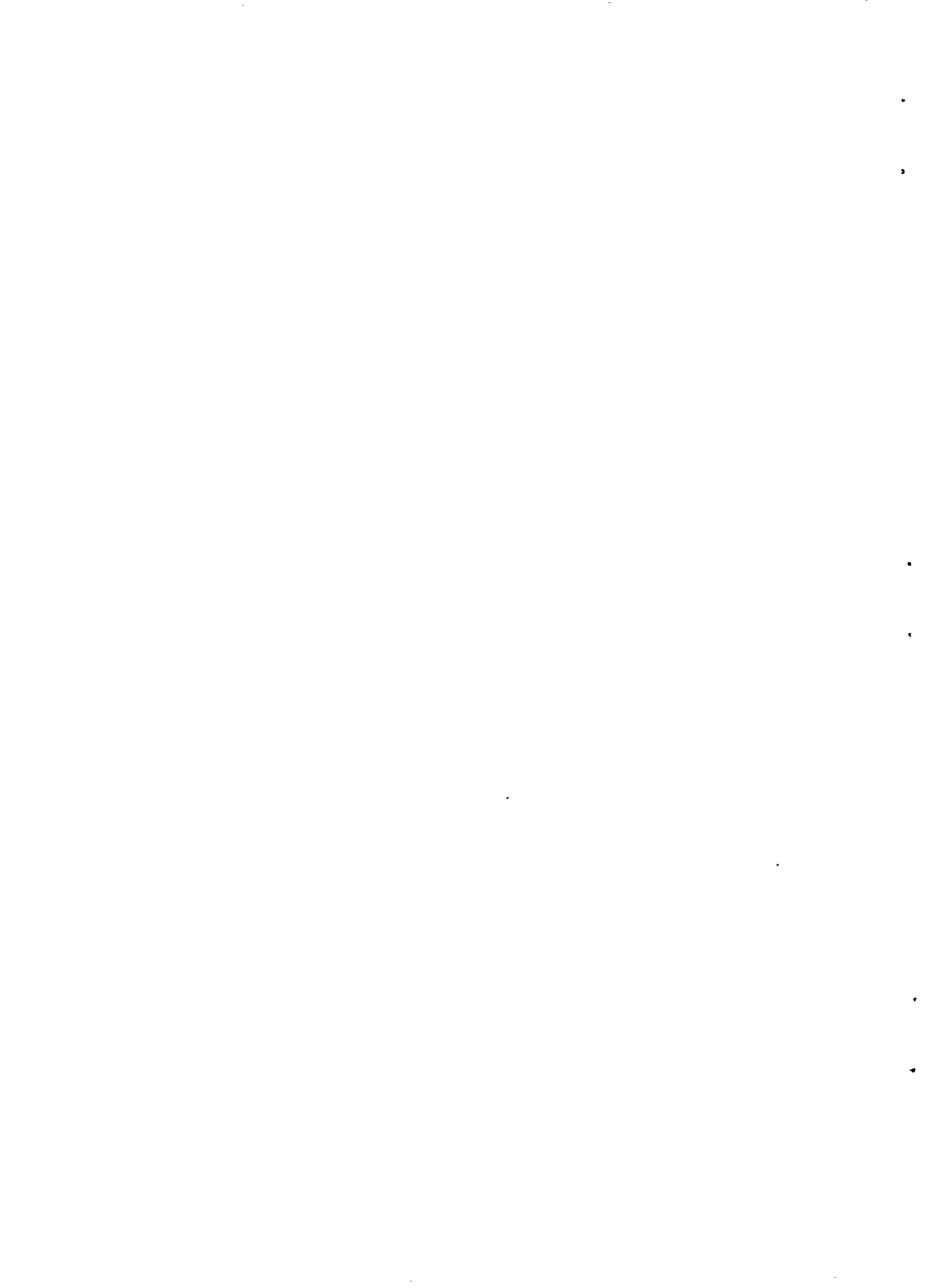
CUTTER PLUG

FULL ASSEMBLY



## **SALIENT FEATURES OF DIRECT ACTION HANDPUMPS**

- 1. Suitable for lifting water from a depth of upto 12 metres from the ground level.**
- 2. This pump will work throughout the year, even during acute drought period, when other suction pumps fail.**
- 3. No priming is necessary. Hence water is free from contamination.**
- 4. All components used below the ground level are made out of plastic or stainless steel to enable them to be totally corrosion free and long lasting.**
- 5. Installation & maintenance of the pump is very easy and cheap due to its simple design.**
- 6. Since there are only few moving parts, wear and tear due to abrasion is also minimum resulting in less frequent maintenance.**
- 7. The village women can attend to any type of repairs within a short period using one spanner.**



# COMMUNITY ORGANISATION PROCESS FOR TARA DIRECT ACTION HANDPUMP

## PRE PROJECT PLANNING

- 1) Plan of Action
- 2) Responsibility Chart
- 3) Work schedule
- 4) Supply of equipments and materials
- 5) Development of communication action plan/materials
- 6) Minimum operating standards/procedures

## STAGE 1

### WORKSHOP

Orientation of government officials & NGOs

## STAGE 2

### VILLAGE CONTACT DRIVE

Meeting with leaders, village members.  
Discuss information about the Project objectives,  
the roles and responsibilities of the Community

Formation of WATSAN committee with  
more women representatives. Selection of  
Village mechanic cum motivator

Site  
selection for  
New Source

Land Agreement for  
New Source  
Improvement of  
drainage, other  
sanitation facilities

Registration of WATSAN  
Committee as self help group

WATSAN Committee signs its  
commitment





**STAGE 3**

**TRAINING PROGRAMME  
For WATSAN Committee Members,  
Village Mechanics cum Motivators**

**On site Training (ongoing)  
for Village Mechanics cum  
Motivators**

**STAGE 4**

**Trainees and project staff construct well or boreholes &  
platforms and install pumps**

**STAGE 5**

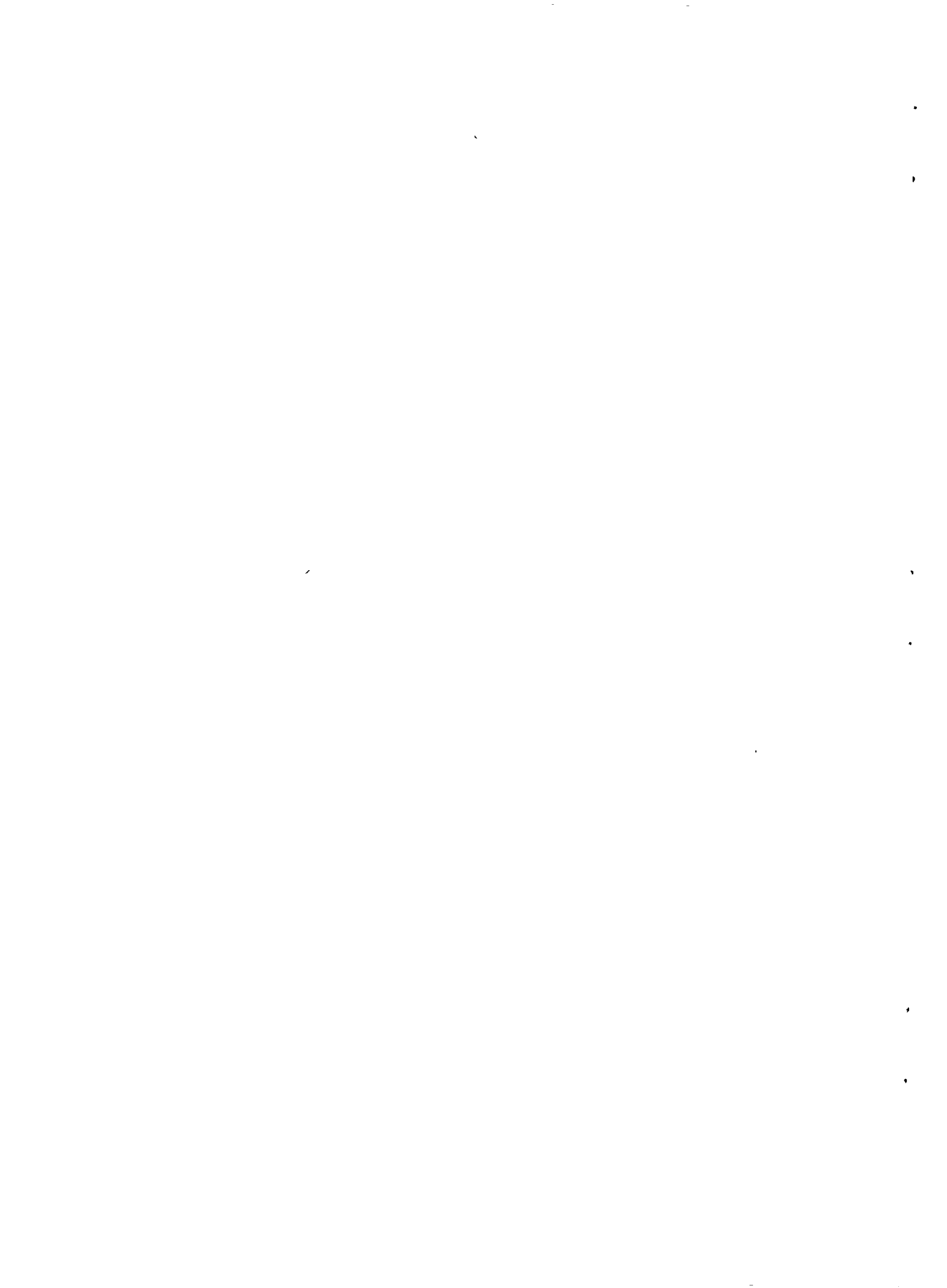
**Handpump is handed over to the WATSAN Committee at  
a public ceremony with certificate**

**STAGE 6**

**WATSAN Committee operates and maintains the water system**

**STAGE 7**

**Training team monitors and  
evaluates the project activities**



## ACTIVITIES UNDER PLAN OF ACTION FOR SOFTWARE ASPECTS - TARA DIRECT ACTION HANDPUMP

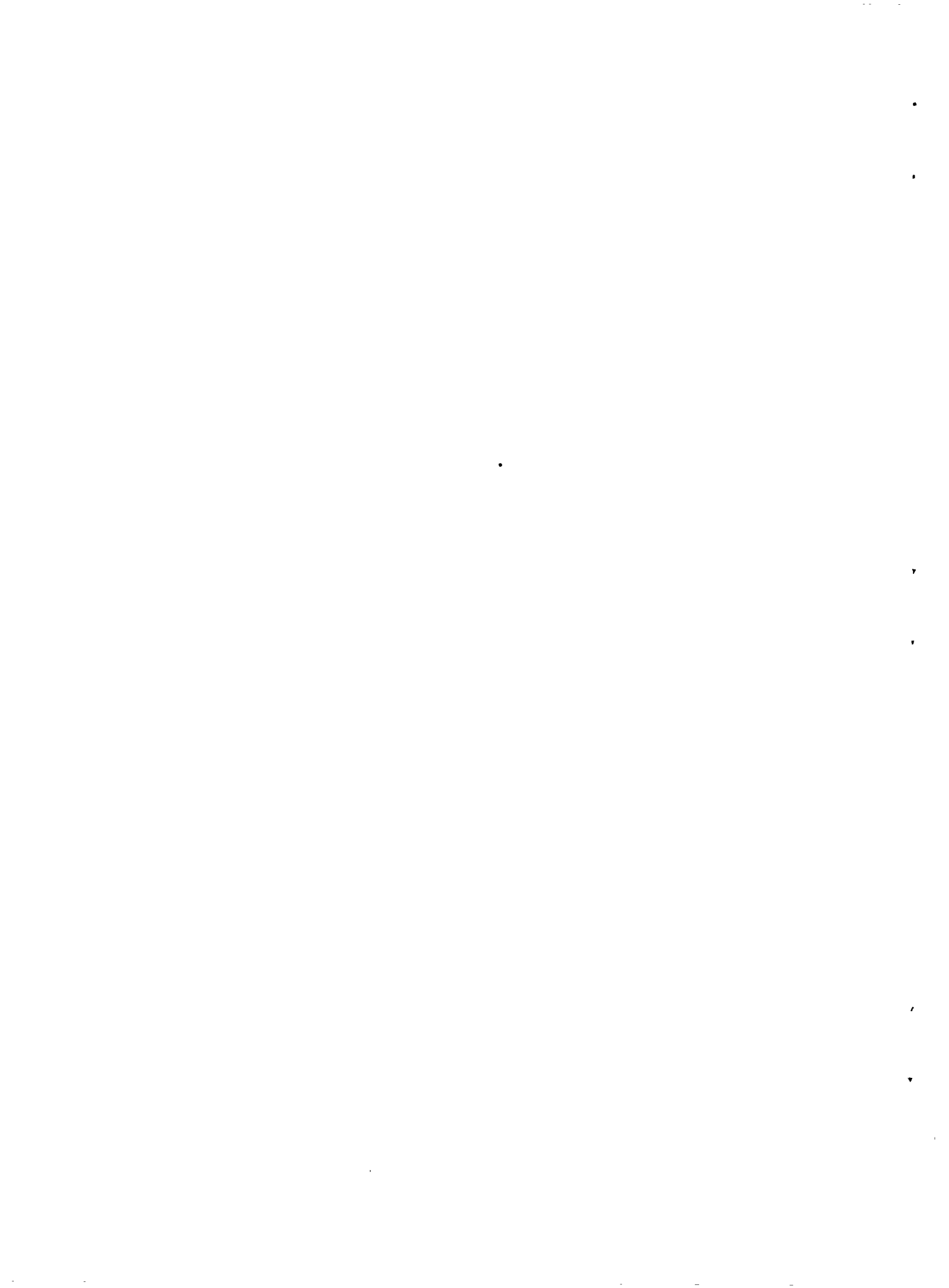
|   | <b>Main Activity</b>                  | <b>Sub Activity</b>                                  | <b>Responsible Persons</b>                                 | <b>Target Group</b>   | <b>Outcome</b>   | <b>Monitoring</b>          |
|---|---------------------------------------|--|--|---|--|----------------------------|
| 1 | <b>Planning</b>                       | Development of a plan of action work scheduling      | Coordinator, Delhi, Consultant & EE, AEE, TWAD & PPM & NGO | -   | A Comprehensive Plan of Action for implementation of each activity   | -                          |
|   | <b>Training</b>                       | Production of Communication and materials            | AEEs (TWAD & PPM) & NGOs AEs. Consultant                   | -   | Communication material kit for the workshop and village contact drive                                      | Consultant                 |
| 2 | <b>District/ block level Workshop</b> | Orientation of functionaries involved in the project | EE & AEEs, AEs TWAD & PPM and NGOs, Consultant             | DDO, BDO, all block level officials & staff, NGO connected with the project | Action plan for village contact drive, methodology & time frame<br><br>Action plan for training programmes | BDO / AEE (PPM) Consultant |
|   |                                       | Village contact drive demonstration                  | Resource persons   | "   | Practical field level demonstration  | BDO / AEE (PPM) Consultant |
|   |                                       | Village contact drive coverage                       | NGO, AEs of TWAD Board & JE (PPM) & Staff of block office  | User community, village leaders & members                                   | Exposure to the field situation  | BDO / AEE (PPM) Consultant |



|          | <b>Main Activity</b>         | <b>Sub Activity</b>  | <b>Responsible Persons</b>                   | <b>Target Group</b>                       | <b>Outcome</b>  | <b>Monitoring</b>    |
|----------|------------------------------|--|--|---|---|----------------------|
| <b>3</b> | <b>Village contact drive</b> | Activities for awareness creator   | NGO, AEs-TWAD, JE (PPM), block office staff  | User community, village leaders & members | Awareness regarding the projects importance and safe water                                  | AEE, PPM, Consultant |
|          |                              | Filling up village mapping format and participatory needs assessment             | NGO, AEs-TWAD, JE (PPM) & block office staff | User community, village leaders & members | Base line data about each village and selection of tentative site for handpump installation | AEE, PPM, Consultant |
|          |                              | Selection of WATSAN committee members identification of motivator such mechanics | "  | "   | Formation of WATSAN Committee selection of village mechanic cum motivator final list        | "                    |



| <b>Main Activity</b> | <b>Sub Activity</b>  | <b>Responsible Persons</b>  | <b>Target Group</b>                                       | <b>Outcome</b>  | <b>Monitoring</b>                    |
|----------------------|--|---|---|---|--------------------------------------|
| <b>TRAINING</b>      | <b>Preparation of training materials for all the training programmes</b> | <b>Consultant AEEs, NGO</b>                                       | <b>Functionaries for Training Programmes</b>              | <b>Development of Training kits for training different functionaries under the project</b>              |                                      |
|                      | <b>Trainers' training programme</b>                                      | <b>AEE, Medical Officer, Resource Person from WVI, Gandhigram</b> | <b>DDO, BDO, AEs, TWAD &amp; PPM Block fitters, NGOs</b>  | <b>Development of a training team of trainees for conducting training programmes</b>                    | <b>EE TWAD Consultant</b>            |
|                      | <b>Training of WATSAN Committee members</b>                              | <b>DDO, BDO, AEs, JE, TWAD, PPM, NGOs, Medical Officer</b>        | <b>Members of WATSAN Committees</b>                       | <b>Establishment of the Trained WATSAN Committee as a self help group</b>                               | <b>AEE, PPM, Consultant</b>          |
|                      | <b>Training of motivators cum mechanics</b>                              | <b>AEE, AEs, PPM, NGO, Master fitter</b>                          | <b>Selected user reps from each block (2 per village)</b> | <b>Trained motivator cum mechanics to undertaking maintenance and repair of TARA hps in the village</b> | <b>EE, TWAD, PPM, AEE Consultant</b> |

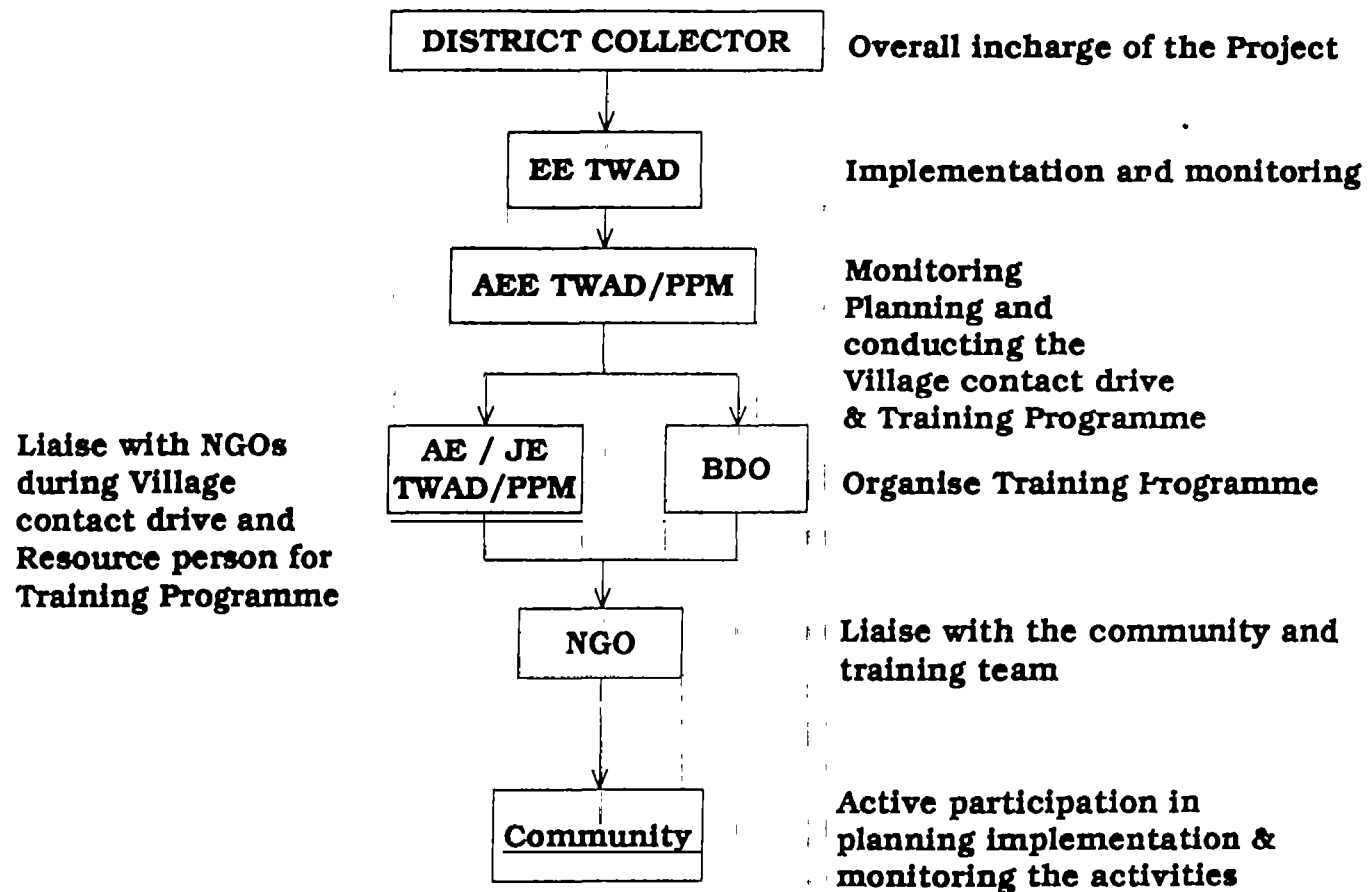


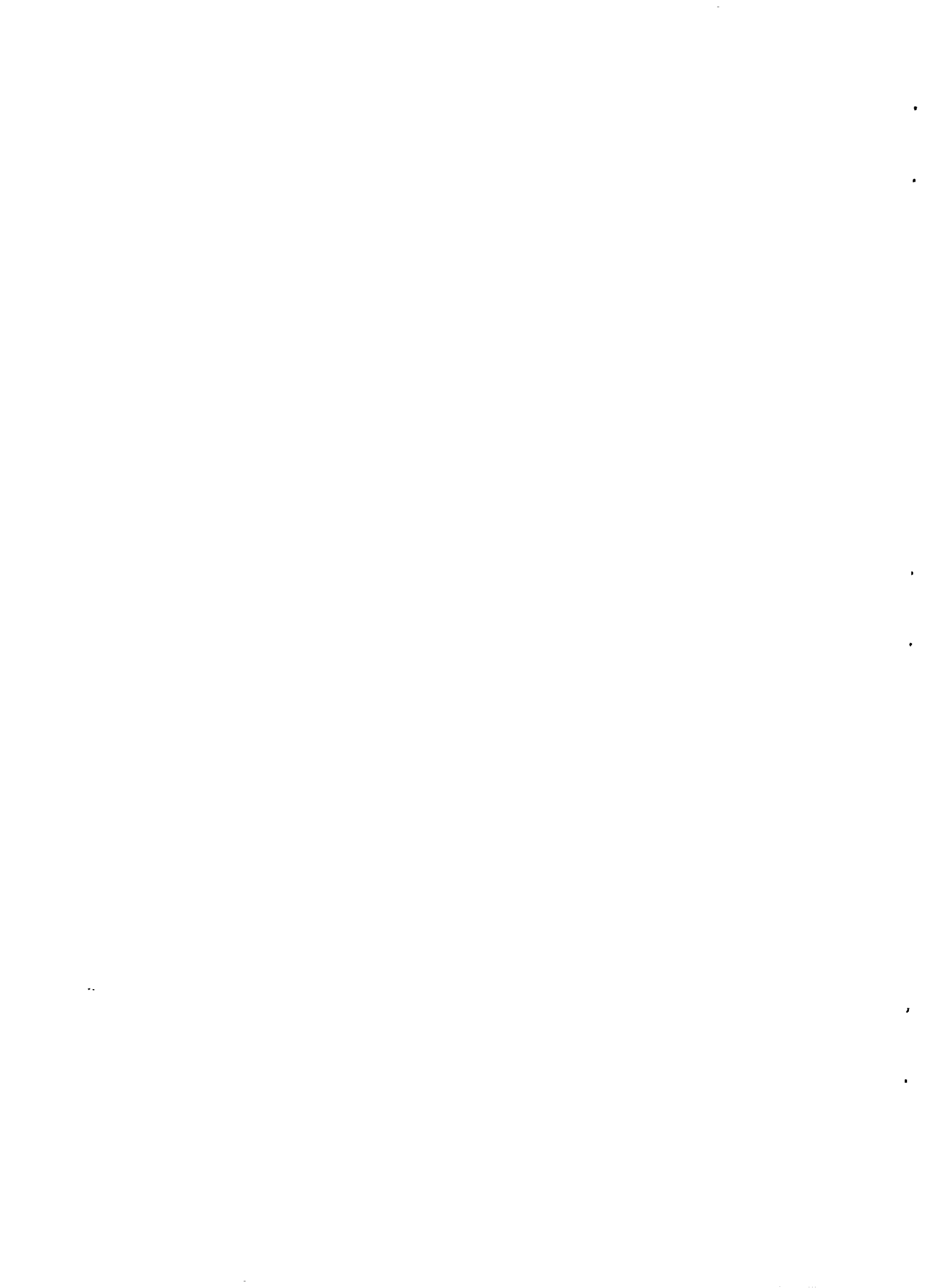


| <b>Main Activity</b>      | <b>Sub Activity</b>   | <b>Responsible Persons</b>     | <b>Target Group</b>  | <b>Outcome</b>                                       | <b>Monitoring</b>               |
|---------------------------|---|--------------------------------|--|--|---------------------------------|
| <b>MONI-TORING</b>        | Monitoring village contact drive                                      | EE, AEE, TWAD & PPM Consultant | NGO, WATSAN Committee  | Maintain information for course correction           | EE, TWAD, PPM, AEE & Consultant |
|                           | Monitoring of Training programmes                                     | EE, AEE, TWAD, PPM & NGO       | WATSAN Committee training and Training of motivators cum <sup>members</sup> <sub>mechanics</sub> | Information for course correction impact of training | "                               |
|                           | Monitoring activities of WATSAN Committee and motivator cum mechanics | "                              | WATSAN Committee members and motivator cum mechanics   | Impact assessment for course correction              | "                               |
| <b>REVIEW OF PROGRESS</b> | -   | EE, AEE, TWAD, PPM, Consultant | WATSAN Committee motivator cum mechanics and user community                                      | Information for course correction                    | EE, TWAD & PPM, AE Consultant   |
| <b>IMPACT STUDY</b>       | -   | External Agency                | "  | Overall impact of project                            | "                               |

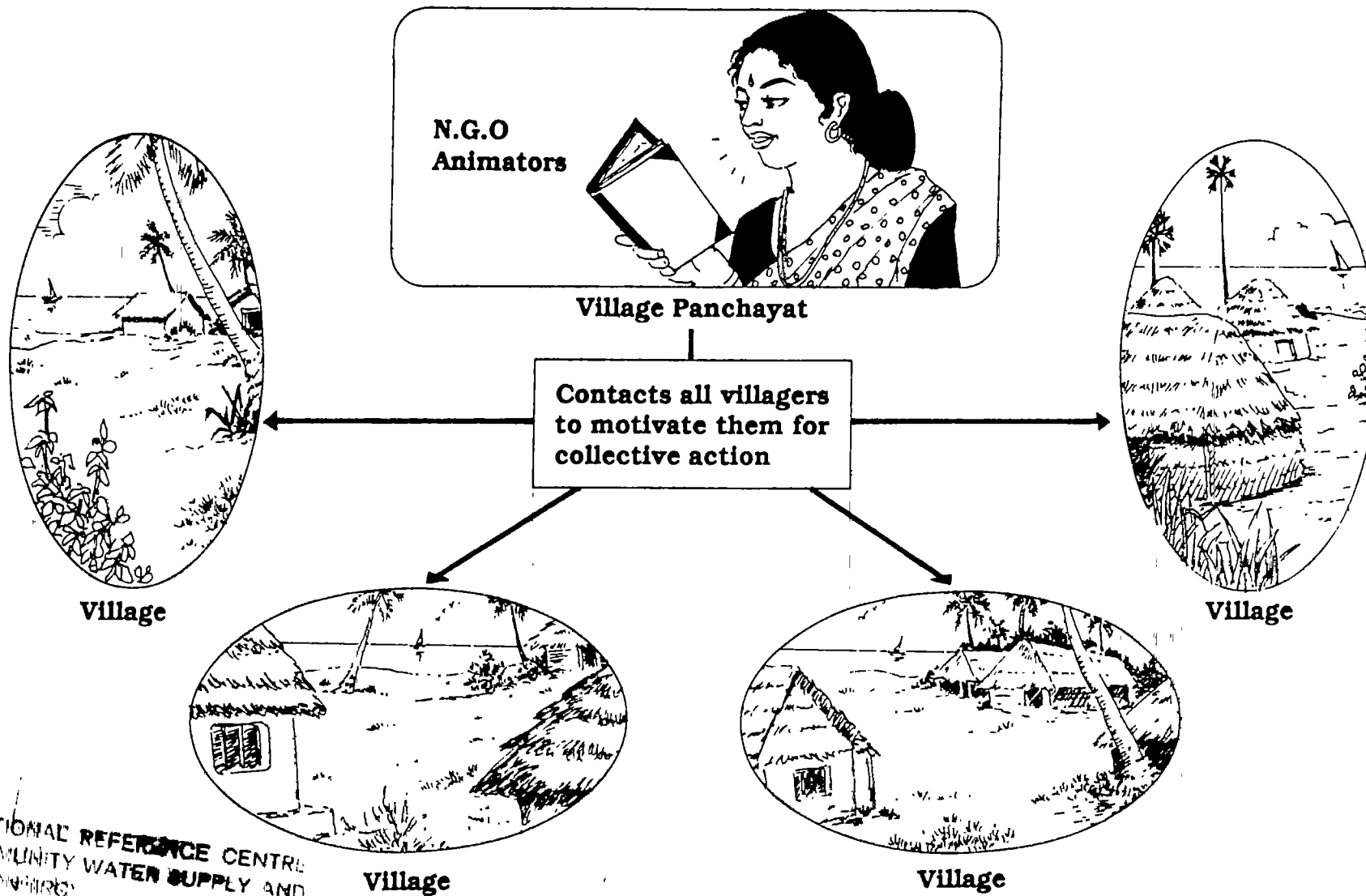


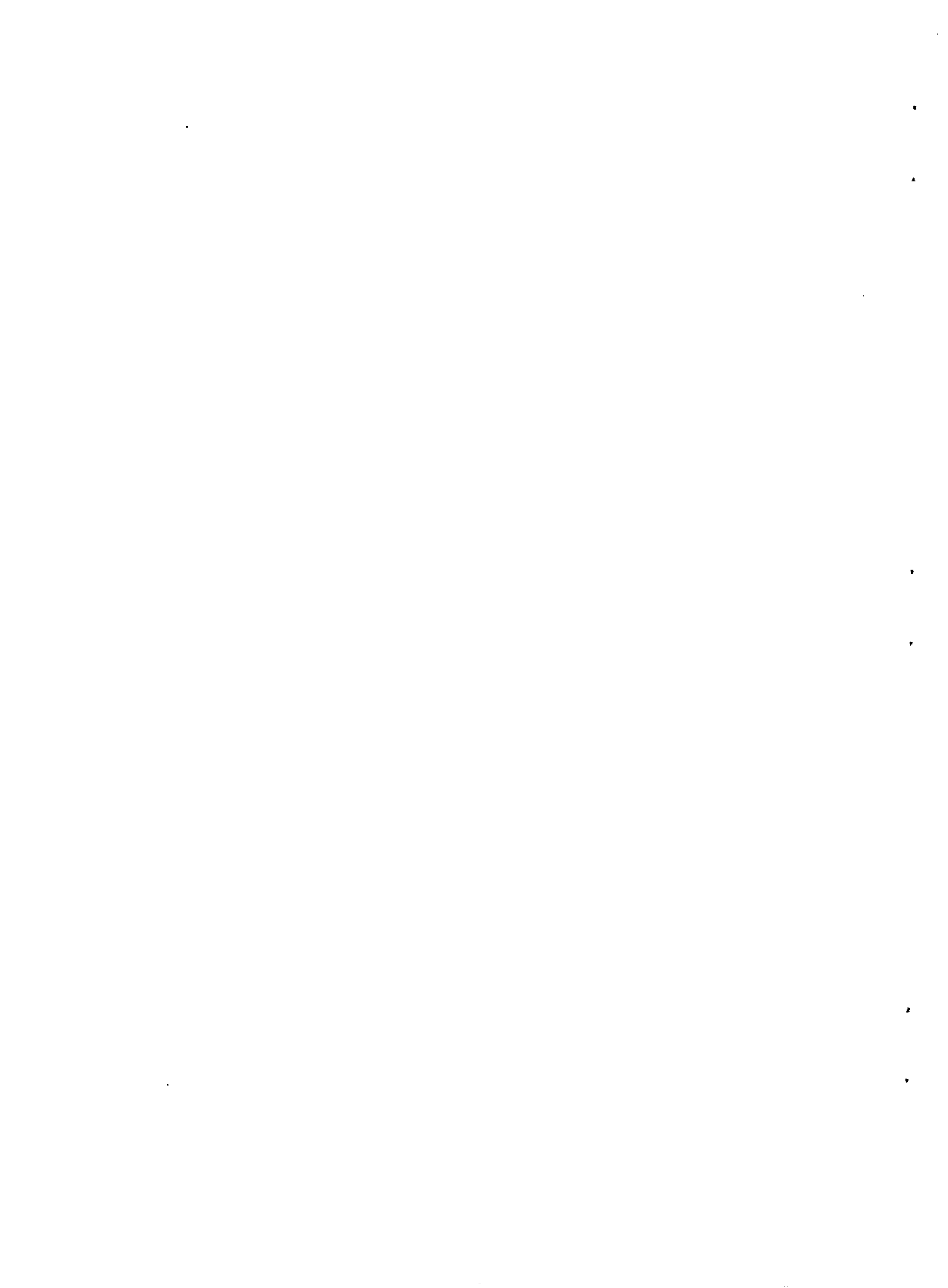
# PROJECT TEAM TARA DIRECT ACTION HANDPUMP VILLAGE LEVEL OPERATION AND MAINTENANCE PROJECT



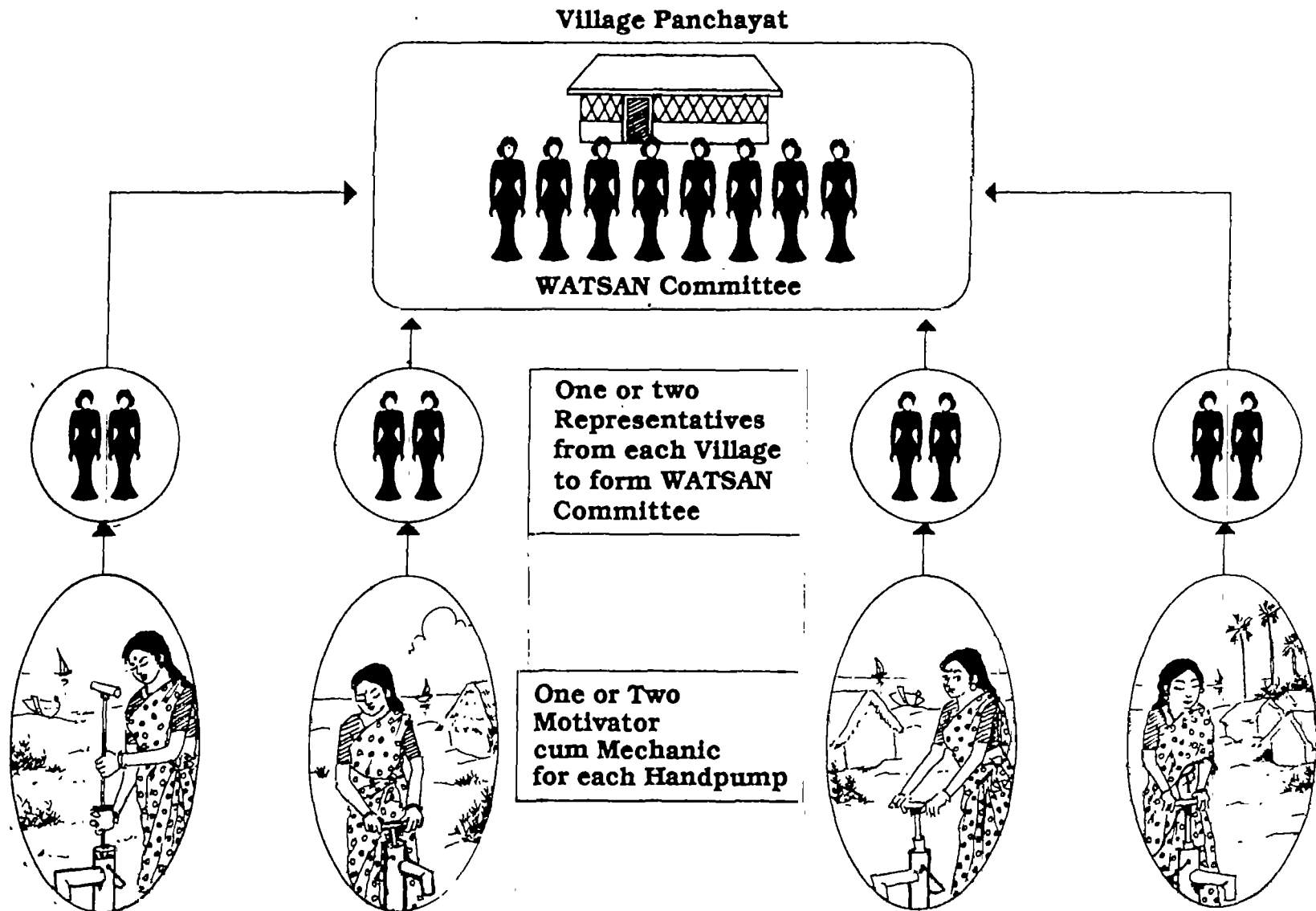


# PROCEDURES TO BE ADOPTED IN FORMING WASTSAN COMMITTEE





# THE OUTCOME OF VILLAGE CONTACT DRIVE



The list of WATSAN Committee members, Village Mechanic cum Motivator will be sent by the N.G.Os to the Block Office and AEE & PPM Cell.

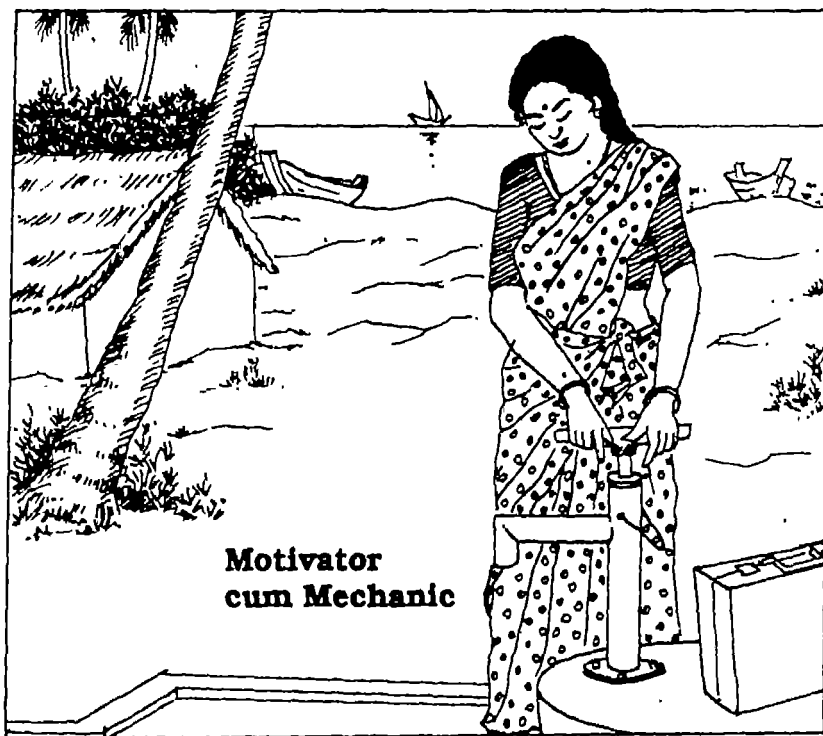




## VLOM TEAM FOR TARA HANDPUMP PROJECT

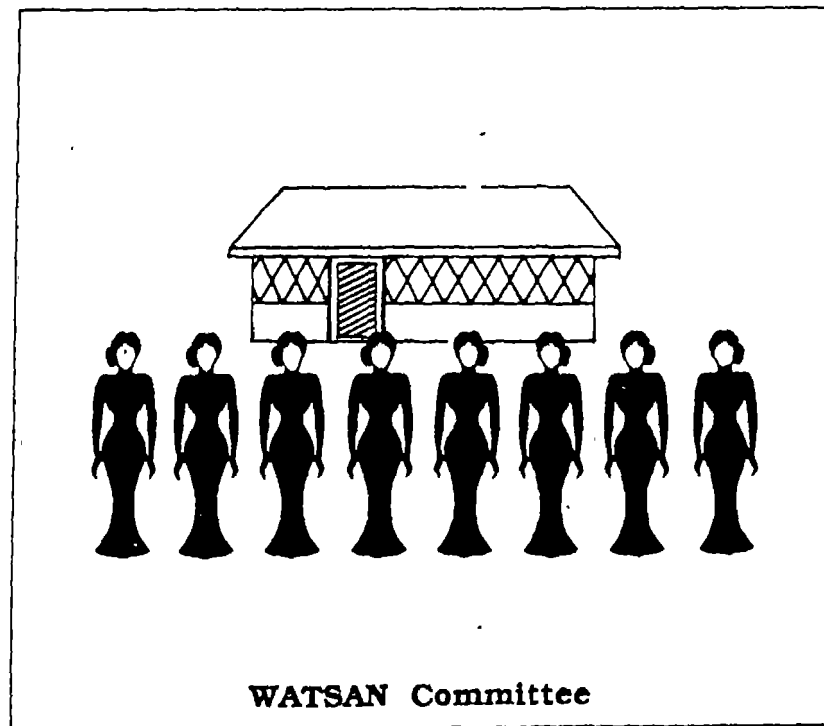
### Village Level

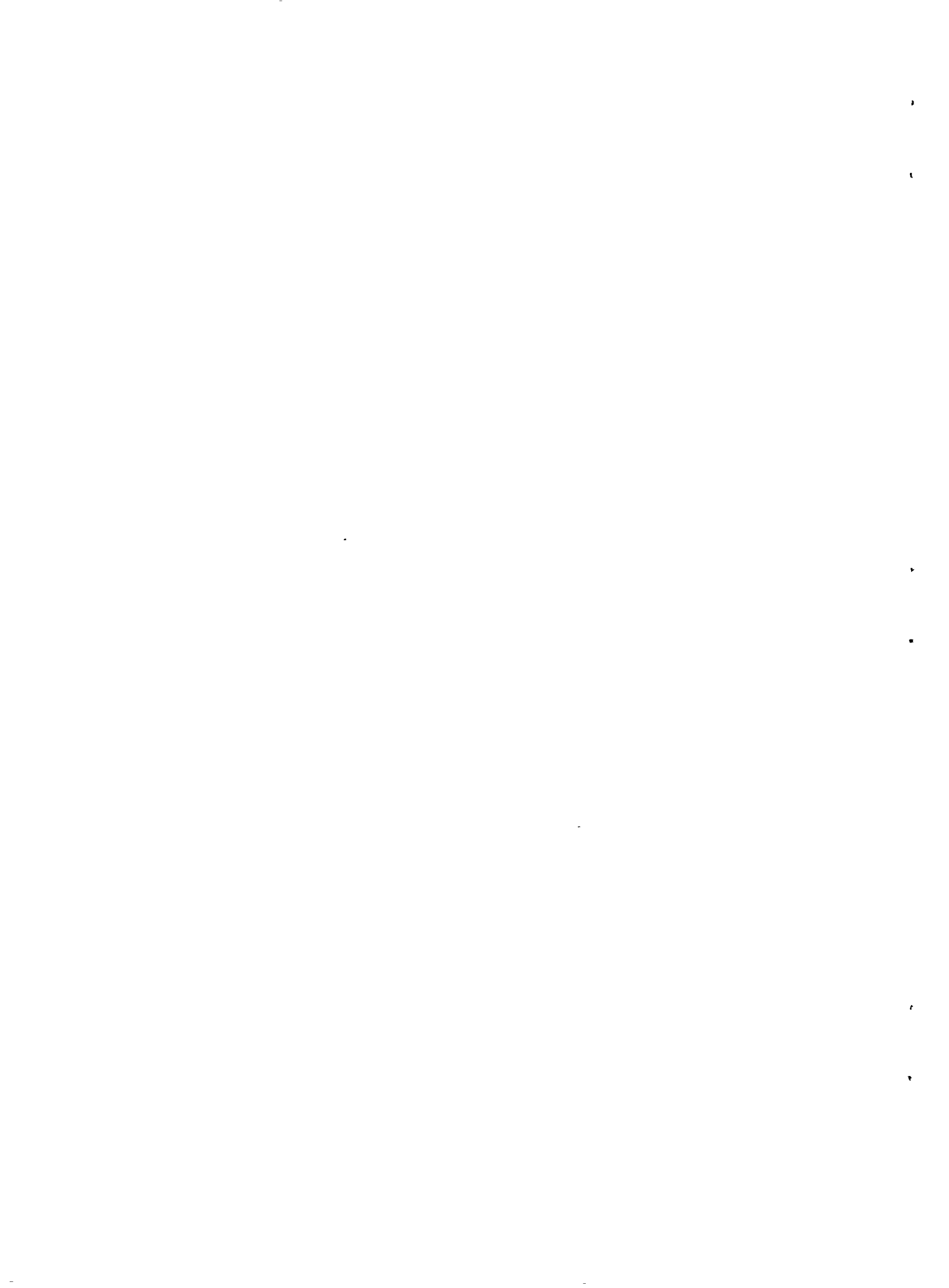
- One Motivator cum Mechanic for each pump will be selected



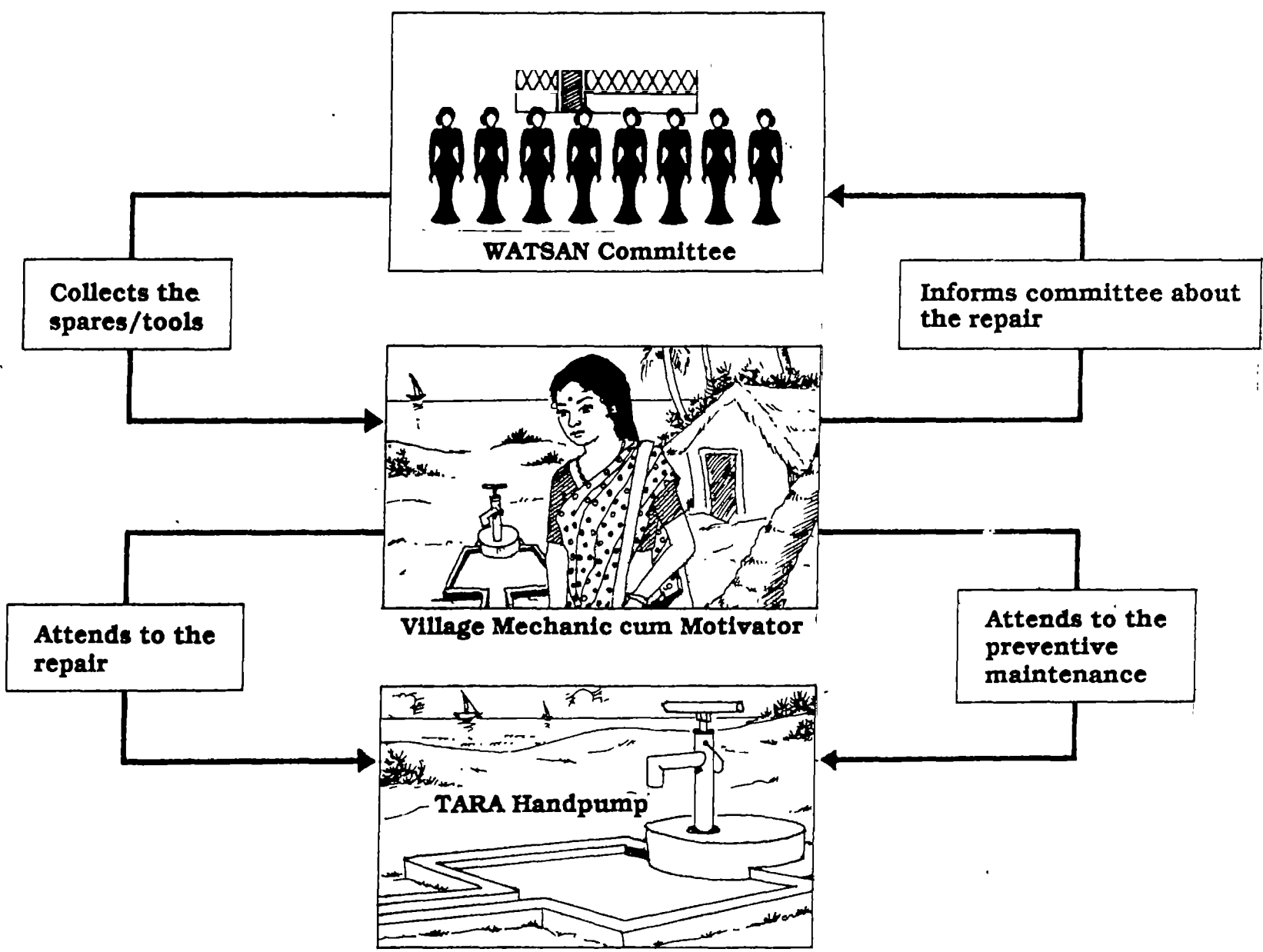
### Panchayat Level

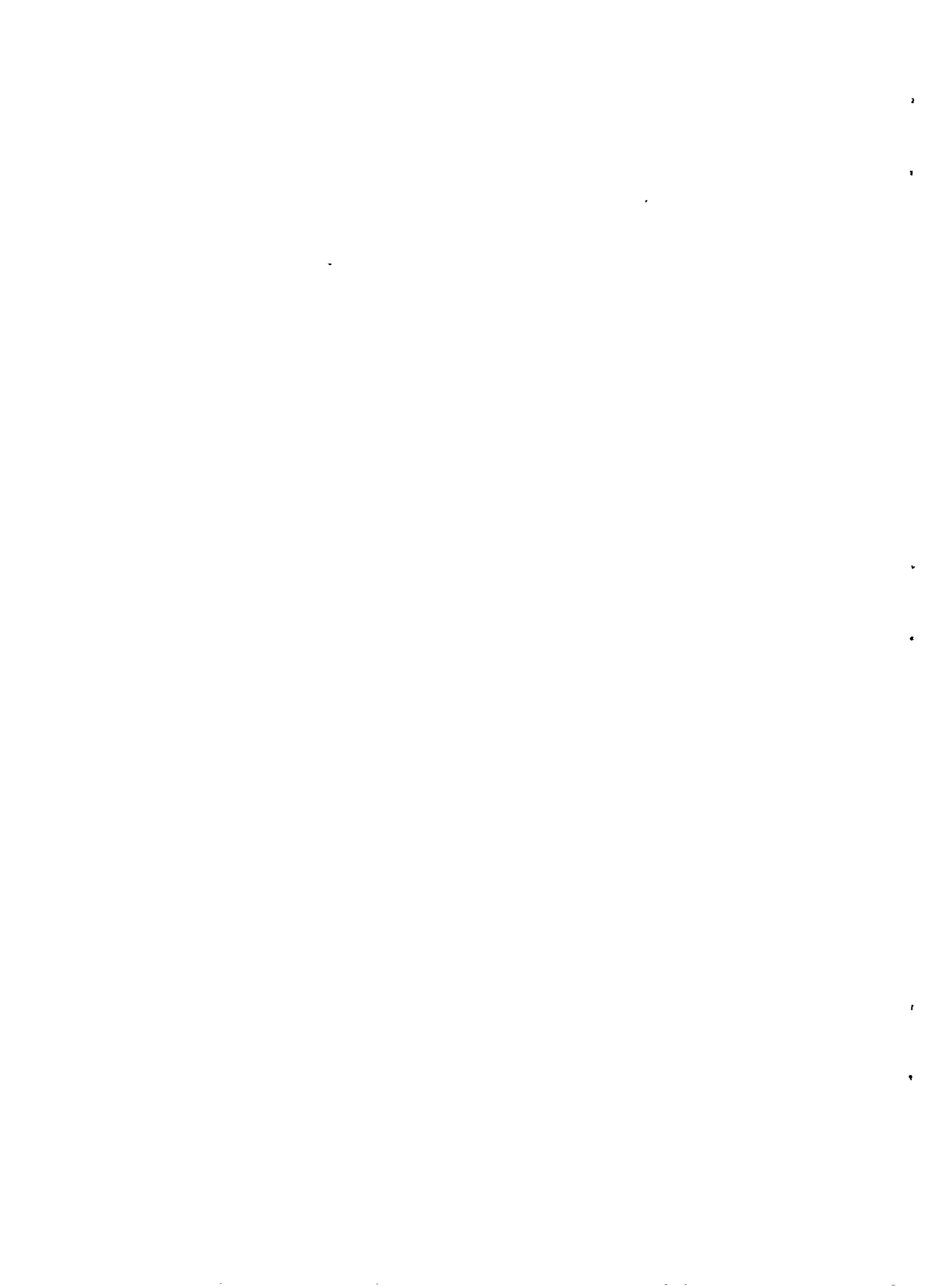
- One or two Representatives from each village (Preferably woman)



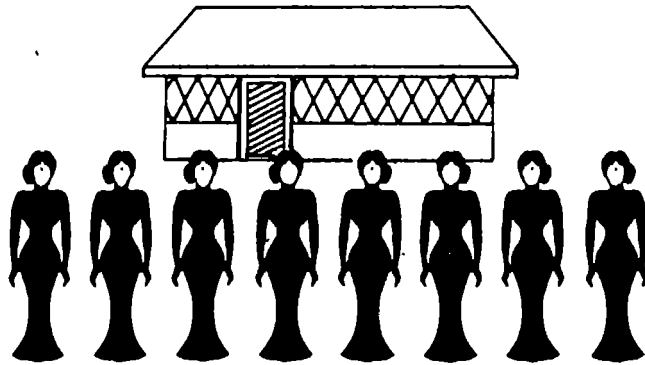


# FUNCTIONING OF THE VLOM

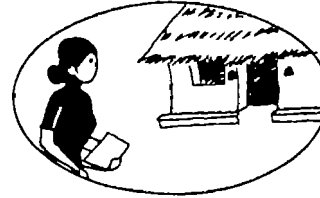




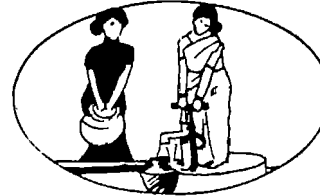
## CRITERIA FOR SELECTING WATSAN COMMITTEE MEMBERS



**WATSAN Committee Members**



**Must be a resident of the village, willing to serve the community voluntarily.**



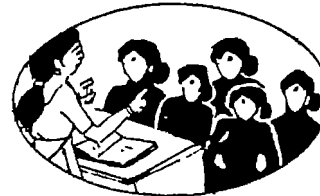
**Preferably a WOMAN from user-community**



**Able to read and write**



**Have leadership qualities**



**Willing to undergo training**

2

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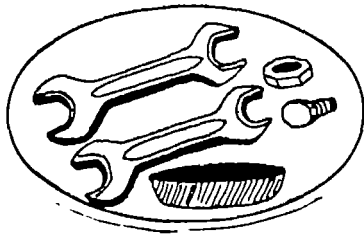
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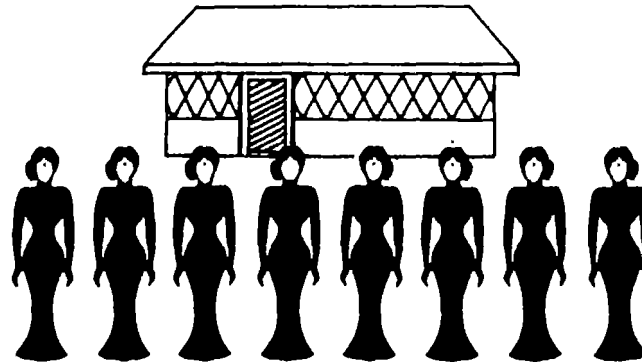
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# ROLE OF THE WATSAN COMMITTEE ON OPERATION AND MAINTENANCE OF VILLAGE WATER SUPPLY SYSTEM



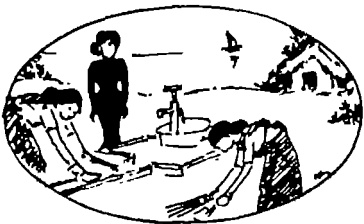
**Provide tools and spare parts for repairs to Village Mechanics**



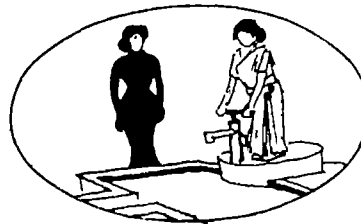
**WATSAN Committee**



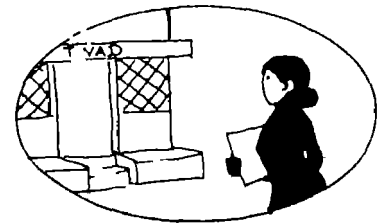
**Maintain records on Handpump repairs**



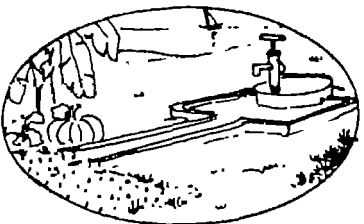
**Keep HP surroundings and Drainage areas clean**



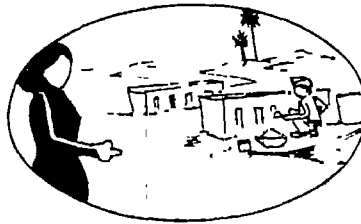
**Monitor Motivators, Village Mechanics Activities**



**Refer major replacements to TWAD Office**



**Promote use of safe-water and proper disposal of waste water**



**Participate in other development activities**



**Collect nominal contributions from the community for repairing the Handpump and paying the Village HP mechanic for carrying out repairs**

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## SELECTION OF HANDPUMP MECHANIC.

Since the maintenance of TARA Handpump is very simple one or two motivator cum mechanic can be selected for each pump by WATSAN Committee to undertake the repair work.

### CRITERIA FOR SELECTING VILLAGE MECHANIC CUM MOTIVATOR

- A Woman from user - community
- To be a permanent resident of that area
- To be able to read and write
- To be willing to undergo training
- A bicycle mechanic or any other mechanic may also be selected



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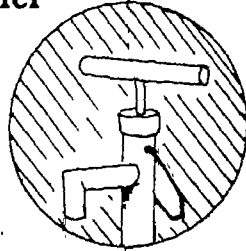
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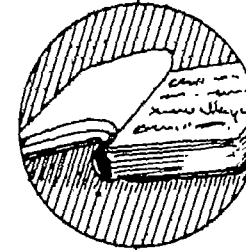
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## ROLE OF VILLAGE MECHANIC

To attend to preventive maintenance and the repair of the Pump assigned to her



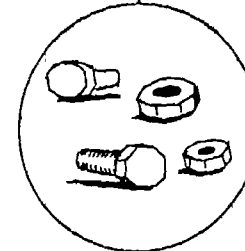
To maintain a Register indicating all the repairs done



To report the breakdown to the WATSAN Committee



To account to WATSAN Committee all the spares used for repairing



To educate the community on proper usage of the handpump and its maintenance



To impart Health Education





# **TRAINING PROGRAMMES FOR THE SELECTED WATSAN COMMITTEE MEMBERS / VILLAGE MECHANICS CUM MOTIVATORS**

## **INTRODUCTION**

The training programme is an important cog in the wheel of the maintenance system. To ensure an efficient and result-oriented training schedule, a separate training team will be formed in the project area.

## **METHODOLOGY**

After the successful completion of the village contact drive in each panchayat, the list of selected WATSAN Committee Members, Village Mechanics cum Motivators will be sent by the NGOs to the block office and AEE, PPM.

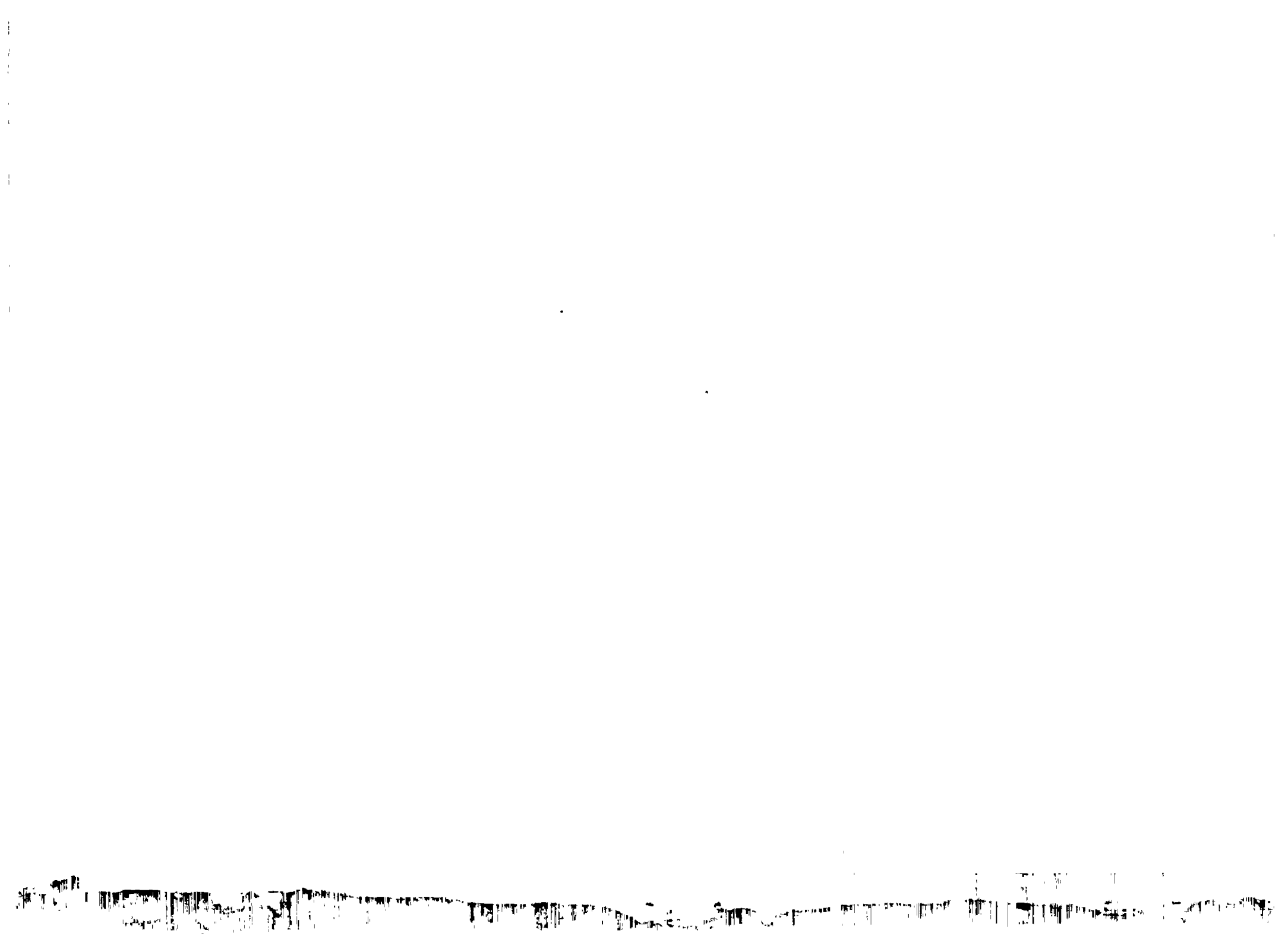
Block Development Officer sends the list to the Divisional Development Office.

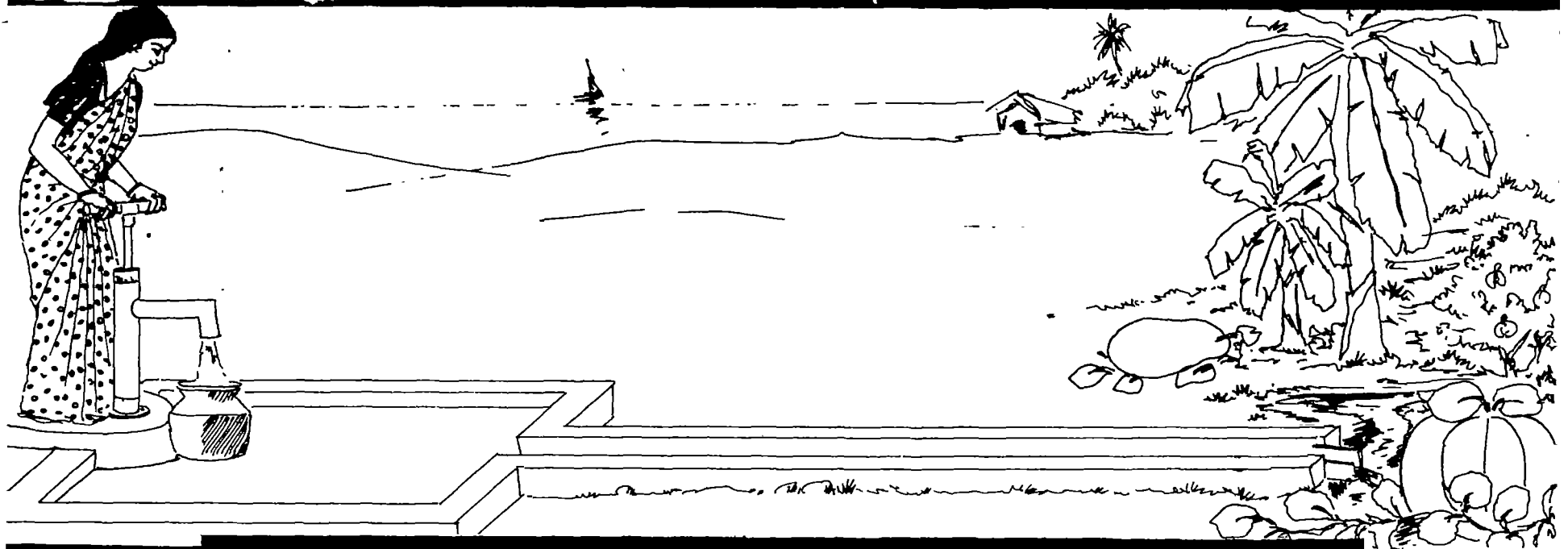
On receiving the list the AE will finalise the dates of the training programme in consultation with the BDO & AEE.

Duties of the officials/staffs involved in the training programme:

- EE - Overall supervision and functioning
- AEE, PPM - Incharge of providing training materials and supervising the programme.
- AE,MO,  
NGO,  
Fitter - Resource persons
- BDO - Incharge of training programme arrangements

A certificate will be given to all the trainees at the end of the training programme.





**Avoid stagnation of water near the water sources by draining the excess water into a Kitchen Garden or Drainage.**

