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**NETHERLANDS
ASSISTED
PROJECT OFFICE**

AP III

HALF-YEARLY PROGRESS REPORT APRIL 2000 - SEPTEMBER 2000



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LIST OF ABBREVIATIONS

AP	Andhra Pradesh
AP I	First generation of Netherlands Assisted Projects in AP
AP II	Second generation of Netherlands Assisted Projects in AP
AP III	Third generation of Netherlands Assisted Projects in AP
CE	Chief Engineer
CO	Community Organiser
Dy. EE	Deputy Executive Engineer
EE	Executive Engineer
ENC	Engineer-in-Chief, Panchayat Raj Engineering Department
FA	Financial Assistance
GIS	Geographical Information System
GLSR	Ground Level Service Reservoirs
GO	Government Order
GOAP	Government of Andhra Pradesh
GOI	Government of India
GP	Gram Panchayat
HH	Household
HIS	Hydrogeological Information System
HO	Head Office
HP	Hand pump
IRS	Indian Remote Sensing Satellite
LWSS	Local Water Supply and Sanitation
JEE	Junior Executive Engineer
LPCD	Litres per capita per day
MANISA	Manchi Neeti Sangam (Drinking Water Users Association)
MDO	Mandal Development Officer
MLSR	Medium Level Service Reservoir
MRO	Mandal Revenue Officer
NAP	Netherlands Assisted Projects
NAPO	Netherlands Assisted Projects Office
NGO	Non Governmental Organisations
O&M	Operation and Maintenance
OHSR	Overhead Service Reservoirs
PRA	Participatory Rural Appraisal
PRED	Panchayat Raj Engineering Department
PTU	Pump Test Unit
PSP	Public Stand Post
PWS	Piped Water Supply
RNE	Royal Netherlands Embassy
RWS	Rural Water Supply
RWSS	Rural Water Supply and Sanitation
SE	Superintending Engineer
SPA	Special Project Assistant
SPO	Social Project Officer
SPU	Special Project Unit
SPWD	Society for Promotion of Wastelands Development
TA	Technical Assistance
WMC	Water Management Committee
WNA	Water Needs Assessment

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1. Introduction

This progress report describes the activities and progress of the NAP AP III project in Vizianagaram for the period April 2000 to 30 September 2000.

In accordance with the targets set in the project document, the Initiation Phase had basically reached its completion stage by December 1999. However the start of a new phase was made dependent on the outcome of further discussions between the Government of A.P. and the Netherlands Embassy on a selection of sectors.

While discussions between AP Government and RNE were ongoing, ETC / NAPO was requested to submit a revised workplan and budget for the completion of an extended initiation phase, which would now include the completion of all components and works started under this initiation phase.

As per request, the revised workplan and budget were submitted before 30 April 2000, for the period retroactive to January 2000 till end March 2001. Similar to the first quarter of the year 2000, the project operated under a letter of intent for the period April to June.

In June 2000 RNE approved the above mentioned revised workplan resulting in an extension contract for the TA component and the management contract for administering the NAP AP III investment fund for Vizianagaram, for the period January 2000 till end June 2001. The budget projected till March 2001, had been maintained and would be assessed for possible financial additions during the first quarter of 2001.

During the period described in this half yearly progress report the implementation in Vizianagaram has seen two EE's responsible for the project. The first EE appointed in January made very good progress in the progress of physical construction of the schemes. While the EE was very efficient in enhancing the technical and hardware component of the project, he was not very receptive to the needs and activities to be undertaken in the social and community participation component.

NAPO perceives the main reasons for the stagnation in the social progress as a lack of understanding and appreciation of the EE towards the social component. This has resulted in tensions between the EE and the social staff in the SPU, leading to a stalemate on the continuity of employment of the Social Project Assistant and the resignation of a number of the community organizers; the difficulties to enforce the agreement on the reporting formats and the quality thereof, earlier reached with the EnC in a meeting in January. This was followed by a complete renewal of the top layer of management in the PRED, where a new E-n-C and 6 new Chief Engineers were appointed.

As the Social component and community participation is perceived as the crux of the development of the new approach, NAPO brought these concerns about the stagnation in the social component to the attention of the newly appointed Engineer in Chief and the Chief Engineer RWS, who assured that the issue would be addressed as soon as possible. The issue was also discussed with the Principal Secretary PR & RD.

A workshop was organized by PRED management and NAPO in the field to restore the needed emphasis on the social component and community participation leading towards O&M by the MANISA. A drive to restore the attention and vigor for community participation in the field was conducted, MANISA's were reconstituted and streamlined in view of the post construction phase, while much attention was paid to the improvement of the collection of O&M fees in the habitations.

A new EE was appointed and the social staff in the SPU was strengthened with a new Social Project Assistant (SPA) and additional Community Organisers (CO's).

The process of gradually transferring responsibility to the MANISA is a main point of attention at this stage. NAPO has discussed the issue on the basis of a note that was drafted regarding the process of gradual transfer. This needs to be accompanied by certified completion and clear and simple procedures for management by the MANISA of the operation of the schemes, the maintenance of the schemes and the administration and accounting of finance for O&M.

In the absence of a legal foundation for the water user group, an issue that PRED and the AP Government are still working on, the major instrument available to make the O&M responsibility and payment binding, seems to be "awareness regarding the need to pay for O&M cost and peer group pressure". All habitations have now agreed to have one year of O&M cost in their deposits by 31 December.

Attention for sanitation plans is being stepped up during this period. This includes the upkeep of the facilities constructed for drainage and the general cleanliness in the habitation. The project is considering the introduction of compost production as a means to assist the MANISA in the processing of organic waste.

The physical progress has resulted in all the hand pump facilities and their drainage being reported as completed. Of the 12 schemes, the four schemes in Jami Mandal are reported as completed and in the stage of stabilization, while four schemes in Gantiyada are being operated while finishing touches are being made. The remaining four schemes in Gantiyada are in various stages of completion. The remaining schemes are scheduled to be completed by November / December.

The Social component is focussing on assistance to the MANISAs in learning how to manage the technical systems through operators and providing training on the management of their responsibilities for O&M and financial coverage of the O&M cost.

During the reporting period the hydrogeological component has completed its documentation and HIS (Hydrogeological Information System).

The laboratory, which is already in operation, is implementing the recommendations made by an external consultant regarding the bacteriological component and waste disposal and is expected to be completed by end November.

During the next six months NAPO will concentrate its attention on the documentation of the approach so far and possible recommendations for scaling up.

2. AP III Project, Vizianagaram

2.1 Basic Information

Project name:	Netherlands Assisted Project (NAP) AP III Vizianagaram
Project Phase:	Initiation Phase
Project duration:	Upto end of June 2001
Location:	Hyderabad and Jami Mandal and Gantiyada Mandal in Vizianagaram District Andhra Pradesh
Project Components:	Rural water supply Sanitation Increase institutional capacity
Implementing Institution:	Panchayat Raj Engineering Department (PRED) Special Project Unit, Hyderabad Special Project Unit, Vizianagaram
Technical Assistance:	NAPO / ETC / IWACO
Reporting period:	April 2000 to September 2000

2.2 Brief description of the Project

The overall objective of the project is to enhance and develop new RWSS approaches in the PRED, in line with the evolution of national and international policies for addressing the rural needs for water supply and sanitation and to operationalise and test these approaches in the field, before they are applied in the State at large scale.

This overall objective is also reflected in the set up of the project structure, with units at Hyderabad level, providing direction and supervision for the project activities, and monitoring these in terms of success or viability in the field and potential replication in other PRED projects in the State; and a field unit in Vizianagaram to implement and test the RWSS project with the new approach.

Some of the main issues identified for the new approach are:

- the users' participation in operation and maintenance as well as in the finance thereof, in order to make the O&M self-reliant and hence sustainable
- to depart from existing facilities and assess the need for improvements and/or augmentation
- to apply flexible and tailor made design to cater to the particular needs of the habitation
- to systematically apply improved hydrogeological methods to assess the scope for improvements within the over all water situation in the environment, and the projected use of water resources in the future
- to systematically apply water quality testing techniques, and analyses
- to monitoring the developments of water quality
- to coordinate with existing plans and projections for watershed development.

On the institutional development side, some of the issues to be addressed are identified as:

- to improve the institutional capability in planning and management and management information systems, towards improved operation and internal monitoring
- to improve the institutional capability in hydrogeological methods establishing the potential for quantity, quality and sustainability of RWSS
- to include the environmental water resources and sanitation problems into the design and implementation of water supply systems
- to include the users opinions and wishes into the RWSS concepts and to integrate the community participation component in to the responsibility and mandate of the implementing agency.

2.3 Objectives for the Short, Medium and Long Term

- 2.3.1 The short term objective of the Bridging / Initiation Phase is to continue the efforts towards development of improved approaches, with NAPO technical assistance to the PRED and to introduce the project approach into Vizianagaram in a limited number of habitations.

The approach, as described in the project document aims to create locally owned, managed and financed drinking water and sanitation facilities.

- 2.3.2 The medium term objective would be to implement the improved approaches in an increasing number of habitations and prepare the PRED staff for incorporating the new approaches at larger scale.
- 2.3.2 The longer term objective is to enhance PRED's institutional capacity towards innovative policy, planning and implementation, along the lines of the key features outlined in the AP III Project Document and field rested in Vizianagaram, for replication in the over all PRED programme.

2.4 Specific targets for the Initiation Phase

- 2.4.1 To assist the PRED in development and experiments with optimal solutions for local water supply and sanitation, along the lines of the new project approach as described in the AP III project document.

Output: advancing, fine-tuning and field-testing the new concepts.

- 2.4.2 To assist the PRED in the planning and execution, with the participation of the users, of habitation plans in a number of selected locations, resulting in the delivery of community owned and operated RWSS facilities.

Output: delivery of community owned and operated drinking water and sanitation systems in a number of selected habitations and field-tested methodologies.

- 2.4.3 To assist the PRED by increasing the institutional capability in improved hydro-geological methods, and improved facilities for water quality testing.

Output: improved PRED "in house" capability and resources to conduct these activities.

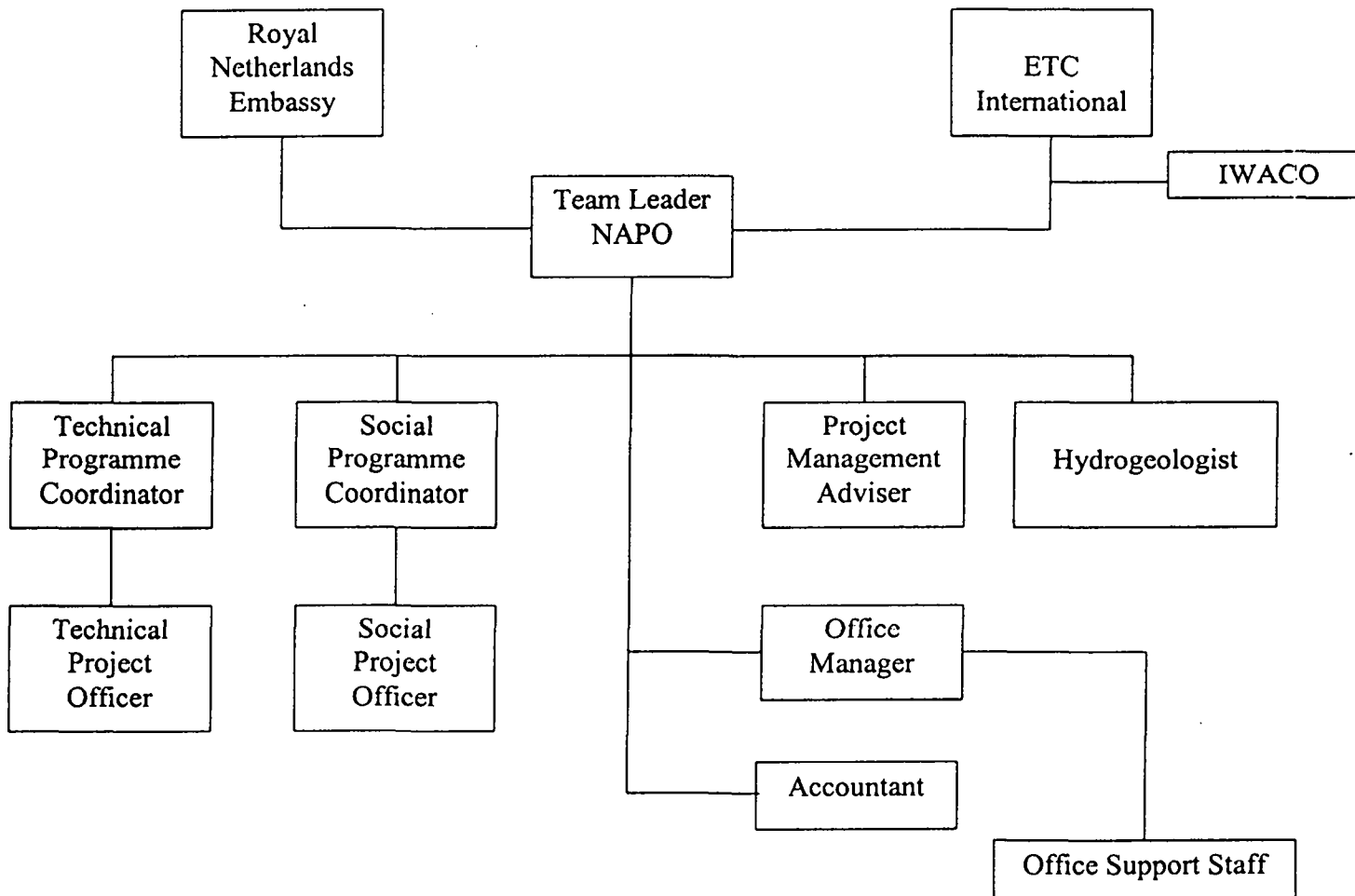
- 2.4.4 To assist the PRED with the set up of the Special Project Unit (SPU), targeted to provide direction and supervision to the field implementation and the evolution of the new approach.

Output: SPU able to lead the project in accordance with the stated objectives.

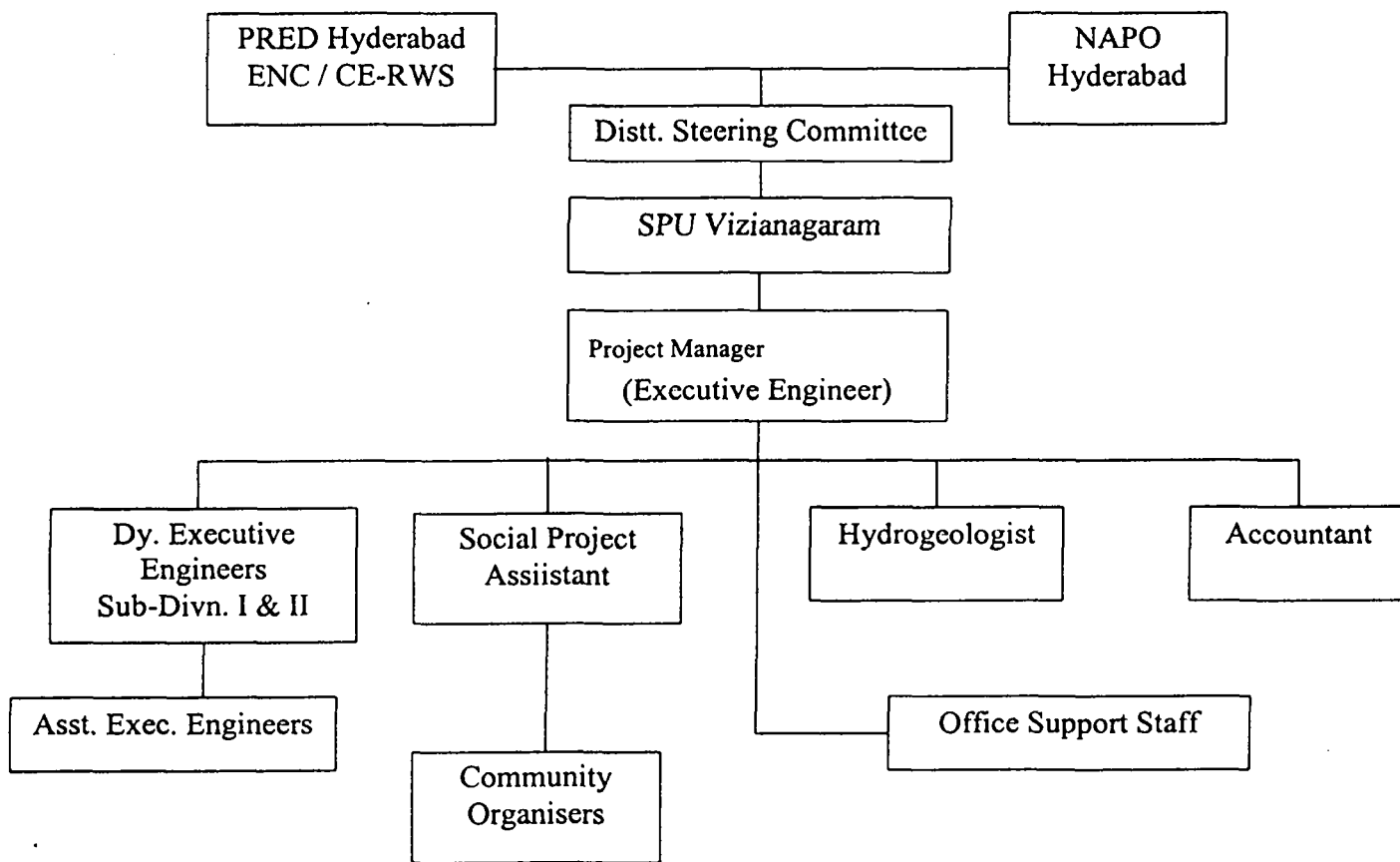
2.5 Project Structure

The project organisation structure and the organogramme of NAP Office are provided in the following pages.

Organogramme of NAP Office



AP III Project Organogramme



3. Progress of Activities

3.1 Development of the Project's Structure

The project structure reflects the objective of the project with a field unit in Vizianagaram to implement and test the new approach and monitoring it in terms of success or viability and potential replication in other PRED projects in the State.

Some of the main issues identified for the new approach mentioned in earlier Progress Reports are:

- Community Participation in O&M and sustainability of the system.
- Flexible and tailor made designs to cater to the particular needs of individual habitations.
- Systematic hydrogeological studies to assess the scope for improvements within the overall water situation in the environment, and the projected use of water resources in the future.
- Assessment and usage of water quality testing techniques, analyses and monitoring of water quality.

On institutional development, some of the issues to be addressed are identified as:

- To improve the institutional capability in planning and management and management information systems, towards improved operation and internal monitoring
- To improve the institutional capability in hydrogeological methods establishing the potential for quantity, quality and sustainability of RWSS.
- To include the environmental water resources and sanitation problems into the design and implementation of water supply systems.
- To include the users' opinions and wishes into the RWSS concepts and to integrate the community participation component into the responsibility and mandate of the implementing agency.

Though policy makers and the management levels of the various institutions involved subscribe to many of the issues mentioned above, operational efforts to implement the new elements in the approach and actual implementation in the field seem slow in starting.

3.2 General Activity Planning / Development of Schedule of Activities

A salient feature of this project phase in Vizianagaram has been the constant endeavor by the SPU-PRED staff, with assistance from NAPO to establish a time frame in terms of determining and accomplishing outputs. As a managerial procedure and monitoring input, NAPO has instituted a physical and financial reporting procedure on a monthly basis which has been reported earlier.

3.3 Institutional Development

3.3.1 SPU- Vizianagaram

As stated earlier, SPU Vizianagaram staff now have the receptiveness to perform and adapt new management techniques, time planning and community participation methodologies. The following staff is in place in the SPU Vizianagaram:

Executive Engineer	1 heading the SPU
Deputy Executive Engineers	2 persons, one for each Mandal
Assistant EEs	6 Persons (earlier - 8 persons)
Sociologist	1 Social Project Assistant, assisted by 6 Community Organisers (earlier - 4 persons)
Geologist	None, as hydrogeological activities have been completed in this phase (earlier - 1 Jr. Geologist)
Accounts Officer	Available
Drivers/Attendants etc.	Available

As part of manpower development and implementation towards the approach, various workshops had been held in the field office with emphasis on community participation, innovative and non-conventional designing, planning and implementation. The acceptance and implementation of the conclusions arrived in these workshops has been very encouraging to the project.

Another major departure favouring PRED has been the level of computer literacy within the division. Though in its infancy, the knowledge and usage of computers for various aspects of the project has improved and adequate computer resources have now been made available.

3.3.2 NAPO - Vizianagaram

The staff of NAPO has been located in the headquarters, Hyderabad with frequent travel to Vizianagaram. The NAPO staff has been constantly guiding the local personnel on a day to day basis. An office adjoining the SPU has been established as well as a guesthouse.

3.4 Hydrogeological Activities

The hydrogeological activities concentrated in particular on the following topics:

- source drilling;
- conduct of pump tests and interpretation;
- writing of a manual for pump test interpretation;
- preparatory activities for setting up a Hydrogeological Information System (HIS).

3.4.1 Source Drilling

Initially, there were some problems with the deployment of a combination rig. These problems could mainly be ascribed to the limited amount of sources that had to be

drilled. Eventually, the department's combination rig in Srikakulam District was made available. Accordingly, the remaining boreholes in Korlam (being the most populated project village) were drilled with this rig.

Boreholes in other villages were drilled with DTH rigs.

At present, all boreholes for the 25 pilot villages have been drilled.

3.4.2 Pump Tests and Interpretation

Pump tests were carried out on all the boreholes in the earlier reporting period. All the tests have been interpreted. An overview of all the wells drilled and pumping tests conducted in Jami and Gantyada Mandals was presented in the last report.

The interpretation of the pump tests in Chinna Madhupada and Korlam requires further attention.

The borehole in the village of Pushpagiri (Jami mandal) occupies a special position. Although the hydraulic properties of this well are considered good, its future proper functioning cannot yet be guaranteed as this source is only 9 meters deep. At the end of the dry season, the groundwater level in the borehole has to be checked in order to evaluate its functioning.

3.4.3 Manual

Interpretation of the pump test measurements can be carried out manually or by using specially developed computer programs. One of the advantages of using software is that the interpretation of the measurements is transparent. The interpretation will always lead to the same results; independent of the person using the software. NAPO has developed a pumping test interpretation program, based on Excel software. The program makes use of two different interpretation methods: the so-called Jacob and Avci methods.

A draft version of this interpretation program has been developed recently. Within a few months, the final version will appear.

3.4.4 HIS

A Hydrogeological Information System (HIS) has been developed and will be completed during the next few months.

When finished, this HIS should contain information on quantity data (pump tests), quality data (water quality), drilling logs and lithologs. Besides this, it should also contain village base maps (satellite imagery) and copies of topo sheets.

3.4.5 Hydrogeological Capabilities of SPU

In the preceding progress report, an overview was presented of the hydrogeological capabilities of the SPU. At that time, it was concluded that certain subjects still needed further attention. In the last six months SPU has worked on these subjects. An overview of the enhanced capabilities is given below.

Computer hard- and software

- Sounding interpretation of VES measurements: the staff used to manually interpret the measurements. At present, the SPU staff also uses specially developed software for this purpose.
- Pump test interpretation software: nowadays, the SPU staff makes use of this software.

Interpretation of yield tests

SPU is familiarized with the available interpretation software.

Well siting methodology

In larger villages, a "multiple sources approach" is recommended for well siting methodology. The SPU has successfully adopted this approach in Pensam and Korlam villages (Gantiyada mandal).

3.5 Technical Activities

3.5.1 General Issues

As mentioned in earlier Progress Reports, technical activities of the project are integrated into the overall sequence of the project's socio-technical processes, that leads to the establishment of a water supply scheme in a habitation. To recapitulate, these processes are listed below:

- Reconnaissance Visit
- Preliminary Socio-technical Investigations
- In-depth Socio-technical Investigations
- Detailed Assessment of Existing Sources
- Hydrogeological Investigations / source creation
- Evolution of Scheme Designs
- Habitation Planning Workshop
- First Draft of Design
- Presentation of Designs to MANISAs and Gram Sabhas
- Completion of Marginal Appraisal
- Tendering
- Construction

The above sequence of activities now have to be extended to satisfy the main objective of the project, i.e., to establish community ownership and management of constructed schemes. Hence, the additional steps in the project process now include the additional steps of :

- Stabilization of Schemes
- Technical Completion Certification
- Capacity building within communities
- Hand-over of schemes
- Monitoring of Scheme management, operation and maintenance

During the present reporting period, technical activities in all habitations of Jami Mandal and two habitations of Gantyada Mandal reached the stage of completion of construction. These schemes can now be considered in the stage of stabilisation. In the remaining habitations of Gantyada, schemes moved through the stages of completion of Marginal Appraisal, Tendering and Construction.

3.5.2 Progress in Anamrajapeta GP, Jami Mandal:

New bore wells had been drilled and hand pumps installed in ten out of the eleven outlying habitations. An additional eleventh hand pump was also at Bangarammagudi, a small habitation that had been ignored in earlier activities. This was done at the request of the local communities and after completion of habitation level social investigations.

All construction activities of the four PWS schemes at Pushpagiri, Harijanwada, Seethanagaram and Anamarajapeta/Jaggaipeeta were completed. Waste water disposal drains and renovation of existing water sources in these habitations were also completed.

These schemes are now under stabilisation and technical completion certification from the PRED is pending. The schemes are now operational under the responsibility of the SPU, with locally appointed operators. Certification of technical completion (adherence to tender specifications, testing for significant leakages, etc.), recording of basic scheme data through As-laid Maps, establishment of monitoring benchmarks (like pump, valve and tank calibration), formulation of an Operation & Management Manual, establishment of reporting procedures through production and maintenance of log books, are some of the steps required to be completed prior to hand-over of schemes to MANISAs.

The most recent assessment of the 4 PWS schemes in Anamarajapeta in September 2000, indicate the following:

Anamarajapeta/Jaggaipeeta: There is an operator who is looking after the operations of the PWS in the habitation. The operation timing of the PWS is in two shifts:

Pumping: 1:00 pm to 5:00 pm , 8:00 pm to 10:00 pm.
Distribution: 6:00 am to 9:00 am, 4:00 pm to 6:00 pm

Though effectively the pumping is done for 6 to 7 hours only, the water supplied is quite sufficient as of now. This low demand of water could be because of low utilisation of the new system or a high rate of pumping (which can be verified by discharge calibration of the pump).

Seethanagaram: There is an operator for the PWS in the habitation but there is a possibility of lack of interest on his part. No specific timings are maintained by the operator for pumping and distribution. Valves in the School GLSR need attention.

Harijanwada: Observations similar to that of Seethanagaram generally apply. The School GLSR is operational.

Pushpagiri: The operator appears more responsible. The School GLSR is operational. Valves in the system need attention.

There are however a few deficiencies in the system. Leakages in the distribution system have been reported persistently. The school GLSRs need attention such as installation of float valves, and proper covers to prevent access of small insects and reptiles to the tanks. In general, most valves need attention. These problems have been brought to the attention of the SPU.

3.5.3 Progress in Gantiyada Mandal:

PWS schemes have been approved for the habitations of Thatipudi, Chandrampeta, Chinnamanapuram, Pedda Madhupada, Chinna Madhupada, Pensam, Ginjeru and Korlam. A hand pump was approved for Karakaravari Kallau, the small habitation under the village of Korlam.

Marginal Appraisals for schemes for PWS schemes at Thatipudi, Chandrampeta Chinnamanapuram were received in the earlier reporting period. The construction of these three schemes have been nearly completed and these schemes are operational.

Thatipudi: One small length of drain remains to be renovated. An operator is in place and the scheme is operational. Regular operation timings need to be instituted.

Chandrampeta: The scheme is operational and an operator has been appointed. Rehabilitation work of existing water sources has to be taken up in the habitation. The PWS scheme needs to be checked for leakage.

Chinnamanapuram: No drainage work has been done in the habitation. This apparently needs some community level negotiations. The scheme is operational and an operator has been appointed. However, the routine maintenance of the system needs attention.

MLSRs at Thatipudi, Chandrampeta and Chinnamanapuram have been provided with MS ladders for maintenance. This needs to be changed to aluminium ladders, as the MS ladder would rust and affect the water quality. Timings need to be set for filling of MLSRs and operation of the distribution. Taps used in all three schemes are not satisfactory.

Approval of Marginal Appraisals for Chinna Madhupada, Pedda Madhupada, Pensam, Ginjeru, Korlam and Karakaravari Kallalu were received from RNE during May – June 2000 and construction of PWS schemes at these habitations has made good progress.

In Karakaravari Kallalu, installation of a hand pump has been completed.

The summary of the status of construction of schemes in the above habitations is reported in Table 1.

Table 1: Status of Construction of PWS Schemes in Gantiyada Mandal

Habitation	Source	Pump	Power	Pumping Main	MLSR/OHSR	Distribution	PSP's	Drainage	Remarks
Tatipudi	✓	✓	✓	✓	✓	✓	✓	✓	Drains are getting clogged. Small portion of drain is incomplete.
Chinnamanapuram	✓	✓	✓	✓	✓	✓	✓	✗	Scheme is operational but drainage has not been completed. Scheduled for compl. 15 Nov.
C. Madhupada	✓	✗	✗	✓	Under constr.	✗	✓	Under constr.	Scheduled for compl. by 30 Nov.
P. Madhupada	✓	✓	✓	✓	Under constr.	✗	✓	✗	Scheduled for compl. by 30 Nov. 2 new HP drilled in summer 2000.
Chandrapeta	✓	✓	✓	✓	✓	✓	✓	✓	Scheme is operational. Leakage in Distribution main
Ginjeru	✗	✗	✗	✓	✓	✗	✓	✗	Scheduled for compl. by 30 Nov. Pumping main alignment is directly over drain at one point.
Pensam	✗	✗	✗	✗	✓	✗	✓	✗	Scheduled for compl. by 30 Nov.
Korlam	✗		✗	✗	Under constr.	✗	✓	✗	Scheduled for compl. by 31 Dec.
Korlam K. Kallalu	✓	HP							Completed

3.5.4 Preparation for Completion Certification and Hand Over:

NAPO has prepared the following draft documents for Anamrajapeta GP and these have been discussed with the SPU in a series of meetings.

O&M Proposal: An overall O&M Proposal has been prepared by NAPO and undergone two rounds of discussions with SPU. In essence it has been agreed that:

- New hand pumps will be incorporated into the official Mandal source records and assigned registration numbers.
- These hand pumps will be maintained under the regular hand pump maintenance system operated by the Mandal and PRED, through Mandal level mechanics.
- Since O&M funds are being collected by MANISAs for these pumps, the MANISAs will pay for the cost of spare parts to the Mandal.
- PRED would be responsible for operation of PWS schemes till hand-over to MANISAs.
- PRED would train scheme operators in operation and maintenance of schemes till they were handed over.
- Completion Certification and Hand over of schemes to MANISAs for O&M would comprise of the procedures outlined in Table 2, which follows:

Table 2: Completion Certification and Hand-over Documentation Requirements

Documentation requirement	Data Source/Status
Basic Data Sheet: A fact sheet for the scheme, stating its basic design features and costs.	To be prepared by SPU, from approved estimate
As-Laid Maps: A civil survey map indicating locations of all valves, nodes, layout of pumping and distribution lines, locations of MLSR and Stand posts. Each stretch of pipe line to be numerically codified and technically described in a separate data-base.	Draft, as-laid maps have been prepared by NAPO, using AutoCad and CorelDraw software, based upon construction data supplied by SPU. Corresponding data bases have been prepared in spreadsheets. The SPU should provide NAPO with necessary reconciliation and comments. NAPO will finalise and provide to SPU
Completion Certificate: A report, detailing completion of all technical aspects, as per original/ revised provisions of the design/ contract, should be provided by the PRED	To be prepared by SPU in line with completion formalities of PRED such as technical audit.
Social maps showing layout of the households of the habitation, duly numbered, showing service areas under each MLSR and Stand post and accompanied by a data base providing details of the information collected during the Household Survey	This information is available with NAP and will be provided to SPU.
Technical data on source investigation, construction and evaluation, i.e., hydrogeological investigation report, yield and water quality test reports	Hydrogeological investigation reports, water quality reports, and drilling logs will be provided by SPU. Yield test results will be provided by NAPO. NAPO have provided draft Calibration procedures for source pumps, and inlet valves for multiple- MLSR schemes. SPU's has shown some reluctance in adopting these procedures.
O&M Manual , specifying detailed operation, maintenance, monitoring and management procedures, their frequencies, and location of responsibilities. Formats for Log Books for routine records and Job Cards for maintenance will also be included in the Manual. The O&M Manual will be prepared progressively, after due consultations with PRED and MANISAs	Formats for log books have been provided by NAPO to SPU. SPU stated that log books are being maintained for operational schemes. SPU have to provide information on areas of responsibilities between SPU and MANISA. NAPO will provide most of the inputs to formulation of O&M Manual, which will be finalised after comments from SPU.
Statement of Costs	SPU will provide a statement of actual costs of schemes as per major components of the estimates. NAPO has provided SPU with the necessary format.
Definition of Duties & Responsibilities of the Operator, maintenance functionary/ies, Mainsa's and PRED	SPU have to provide information on areas of responsibilities between SPU and MANISA in conjunction with NAPO and based on the working document distributed to all MANISAs.

3.6 Social Activities

The reporting period witnessed increased responsibility sharing by the MANISA and the communities. This preliminary step in the direction of ownership and community management also brought to light the need for the MANISAs/ communities to be further equipped with the skill and knowledge required to handle in the future the multifarious issues that would be part and parcel of effective management of the scheme.

The focus during the reporting period has been on activities facilitating improved O & M collection and enhancement of skills and knowledge to take on the task of total scheme management. Joint consultations were held between NAPO, PRED and the MANISAs to arrive at a consensus on specific issues related to the operationalisation of the scheme, pre and post monitoring tasks and supervisory responsibilities, and details of scheme handing over.

3.6.1 SPU- Social Desk

The social desk at SPU- Vizianagaram faced certain set backs in discharging its duties and functions under the SPU for a brief period of time. Change in leadership, differences in perceptions and understanding of the social and the technical desks, variance in styles of functioning of the personnel involved and some personal misunderstandings coupled with the 'administrative adjustments' that the PRED / technical wing had to make, resulted in the social activities being pushed back.

The issue was taken up by NAPO at the Management level of the PRED in Hyderabad and resulted in a reorganization of the project staff, which was strengthened with a new EE and a new SPA and 2 additional Community Organizers. The SPA has substantial experience in the field and it is expected that the social activities will get the needed attention and will be at par with the planning, under the new leadership.

Further, to facilitate a more intense coverage of HH and activities the COs will be working with the HHs as their base rather than habitation, which was the earlier practice. It is expected that this kind of an arrangement will produce the required outputs. The NAPO- Social Programme Officer (SPO) is placed in the field to assist the SPU on a daily basis.

3.6.2 Capacity Building Exercises

The capacity building activities were carried out in agreement with the training calendar prepared in January 2000. As per planning, awareness activities are a regular on going activity. During the reporting period focus has been on the MANISAs and mainstreaming the activities of the MANISAs. Keeping in mind the project's ultimate objective of the MANISAs taking over ownership and management of the schemes, the approach of guided management or management under supervision, was adopted. Attention was given to issues like the MANISA sharing and shouldering additional responsibilities like conducting meetings, minuting of the same in the minutes book, O &M collection and accounting, managing Operators and the HP mechanics, addressing issues related to water supply - leakages, breakages, vandalism and other village

development issues. Much work needs to be done in further capacitating the MANISA and the community.

Specifically in the area of capacity building 5 workshops / trainings were organized for the MANISAs, the HP mechanics and Scheme Operators for both Jami and Gantiyada Mandals. The PRED has been the main trainer and NAPO has assisted in conducting these trainings. The services of resource persons have also been utilized for specific inputs.

Given below is the list of trainings/workshops organized during the reporting period

1. II Training for the HP mechanics
2. Training on the operation and maintenance of the PWS schemes
3. Training on health and hygiene for women
4. Workshop on management and maintenance of the scheme
5. Workshop on sustainability and withdrawal strategy

Table 3: Details of Training Programmes and Workshops held

Sl. No	Training / Workshop	Objectives	Date, Place, Nos. Participants	Outcomes
1.	II Training for HP Mechanics	To enable MANISA to maintain the bore wells in their jurisdiction	11 Apr 00, Gantiyada, 14 12 Apr 00, Jami, 11	Trainees confident of attending to repairs of HPs Confident of obtaining spares
2.	Training on operation & maintenance of the PWS Schemes	To enable the identified Operators to maintain the PWS Scheme in their jurisdiction	17 Apr 00, Pushapagiri, 4 18 Apr 00, Thatipudi, 6 19 Apr 00, SPU	Functional clarity on the operation of the scheme Clarity on the roles & responsibilities of the Operator
3.	Training on health & Hygiene for women	To create awareness among women on safe drinking water & health & hygiene aspects	27 Apr 00, Jami, 8 28 Apr 00, Gantiyada, 27	Understanding on: 1. Water borne deseases 2. Importance of personal, domestic & environmental hygiene 3. Role of women in promoting the above
4.	Workshop on Mgmt & maintenance of the scheme	- To establish importance of O&M as crucial to management & maintenance of scheme - To review rocedures for collection & recording	10 May 00, Jami, 77 13 May 00, Gantiyada, 71	Clarity on the preventive maintenance & social aspects of the scheme. Importance of streamlining O&M collection procedures
5	Workshop on sustainability and withdrawal strategy	- To develop conceptual clarity on sustainability of the project - To develop role clarity among stake holders	30 May 00, Jami, 30 6 Jun 00, Gantiyada	Role clarity of MANISA. Understanding the importance of scheme management by community. Improved clarity on the importance of O &M. Fixing of deadlines for O&M collection

3.6.3 Management Capabilities of the MANISA

The MANISAs were constructively involved in management decisions / issues from the project initiation period itself. The levels and kind of involvement can be traced back to the identification of the COs to work in their respective habitations, their involvement in designs finalization and later on in getting the required written agreements from members for site selection for the construction of the PSPs, small and big tanks, place for the lay out of the pipe lines etc. Later, they got involved in their habitation sanitation activities, raising contributions to purchase bleaching powder and other requisites to maintain a clean village.

With the concurrence of the ENC the MANISAs were assured that they would be playing a very active role in all aspects of scheme construction - starting from selection of material to the supervision of the schemes. Unfortunately this has not been implemented as the arrangements made between the SPU and contractors did not leave room for participation of the community.

In several habitations the community expressed problems they had identified in the construction, such as leaking pipes and tanks and requested for rectification. The contractors, not used to being questioned, became very defensive, and complained to the PRED.

The SPU did not pay serious attention to these complaints and the opinions from the users, which resulted in the MANISA losing faith and even going to the extent of boycotting meetings. This was the origin of tensions and misunderstandings and created antagonism between the technical and the social sectors, which even spread to the SPU staff.

Dialogues, discussions and persuasion on the part of NAPO at all levels, led to intervention of the PRED senior officials and a change of personnel in certain key positions.

These developments clearly reflect some of the problems related to the process of changing towards new approaches, while working with institutions and people who are still largely used to traditional approaches.

Both the PRED staff and the users need to gradually get used to new roles and attitudes and to let go of old ones. The SPU needs to learn to perceive the users or community as the client, while the community needs to learn to behave and act as one.

The matrix below indicates some of the issues handled by the MANISA.

Table 4: Issues handled by the MANISA

Sl. No.	Name of the Habitation	Issue	Final Position
1.	Seethanagaram	1. Pumping main burst creating a pool in an individuals land. He took a decision to remove the pipe 2. The Operator after about 2 months of work, started demanding an unreasonable hike in salary	MANISA convened - pressurized individual and got the pipe replaced MANISA convened and tried negotiating- as he did not concede, the Operator has been replaced
2.	Pushpagiri	The last PSP was not functioning and the people were not getting water.	Representations were made to the PRED and the problem rectified.
3.	Pensam	The President of the MANISA had applied for the post of the Community Organizer and selected.	The MANISA decided that he will have to be replaced and then relieved to take up the new assignment
4.	Cheruvulopala	The HP chain broke and as a result the HP was disfunctional	Repeated representations to the PRED did not yield result. Finally the MANISA employed the services of an external mechanic and got the HP rectified.
5.	Ginjeru	The contractor employed the services of labourers from outside the habitation to do the earth - work. The MANISA members objected	The issue is yet to be resolved

3.6.4 Collection and management of finances

Collection of O&M:

The MANISAs are responsible for collection, accounting and management of the funds. In the earlier workshops the need for the MANISAs to take total responsibility for collection of the O&M amounts was reiterated. However, as the expected amounts were not being collected, the services of the COs and the SPA were pushed into action. The support of the Social Desk was more from the point of strengthening the hands of the MANISA members against village politics, pressures and also to communicate to the habitations the need to honor the tripartite agreement signed by them. The advantages of such a move has been that the MANISA/community yielded to pressure and paid up their contributions, which resulted in a substantial increase in the O&M collections. The disadvantages have been that the MANISAs tend to take shelter under the C O's / SPA and shirk their responsibility. The Engineers from SPU were also instrumental in mobilizing collections. All efforts are on to streamline the processes and procedures for payments, till people get habituated to the fact that payment is mandatory for the use of water.

It is interesting to observe that the various systems and procedures introduced by the MANISAs for O&M collection are still in vogue. The procedure of collection by the use of receipt books has helped in streamlining accounting procedures from the MANISA to the level of the SPU. As reported earlier, the main responsibility for collection rests with the MANISA members, who undertake collection streetwise. Each MANISA member maintains a personal record on the details of HH collection, which is handed over to the President / Secretary who further reports the matter in the MANISA meeting. The Minutes of the meeting / resolutions are verified, agreed upon and endorsed by all the members. The amount thus collected is deposited in the Post Office in an account that had been opened for the purpose earlier. The President and the Secretary are the co-signatories for the operation of the account. The CO accompanies the members to ensure smooth operations. All the MANISAs have the O&M collection deposited in their respective accounts in the Post Office and are well versed with the procedures and operation of the account.

The details of the O&M collection as of October 2000 is given in Table 5.

Table 5 : Status of O&M Collection as of 31 October 2000

Sl. No.	Name of Habitation	No. of HH	O&M - Rs./HH/ Month	Collection so far Rs.
Jami Mandal				
1	Anamrajapeta	319	10.00	5450.00
2	Seethanagaram	284	10.00	2426.00
3	Pushpagiri	69	10.00	1890.00
4	Harijanwada	50	10.00	900.00
5	Dibbagudibadi	6	5.00	670.00
6	Bangaramma Gudi	7	5.00	200.00
7	Musirikadabadi	20	5.00	451.00
8	Pathetibadi	13	5.00	870.00
9	Avanapuvarikallalu	4	5.00	560.00
10	Chellurivarikallalu	13	5.00	365.00
11	Vedurlapatti	13	5.00	520.00
12	Cheruvulopala	20	5.00	900.00
13	Kanakalavari Kallalu	13	5.00	500.00
14	Gummidibba	7	5.00	260.00
Gantyada Mandal				
1	Pedda Madhupada	500	10.00	3379.00
2	Chinna Madhupada	102	10.00	630.00
3	Tatipudi	115	10.00	2545.00
4	Ginjeru	324	10.00	3795.00
5	Chinna Manapuram	196	10.00	1487.00
6	Chandrampeta	223	10.00	6010.00
7	Korlam	501	10.00	3765.00
8	Karakavarikallalu	30	5.00	505.00
9	Pensam	359	10.00	2320.00

- Note: 1. In all the habitations the funds collected for O&M is deposited in the nearest Post Office.
2. The Presidents and the Secretaries are authorised by MANISAs to handle the finances.

The O&M collections in the past few months have improved but not yet reached the target. Factors responsible for this could be tracked down to delays in construction, delivery of water, a general sense of apathy towards payment of any kind compounded by the contradictory messages of the local politicians and differences among the MANISA members themselves. To a very great extent these differences were ironed out and the issue of collection streamlined. Initially it was agreed between the MANISAs and the PRED that MANISA members would take total responsibility for the collection (each member being responsible for their respective streets). However, support from other sectors became essential especially after the MANISAs themselves admitted that they have not been very effective and hence would require the services/support of the COs and the SPA. Additional COs were appointed to further enable individual MANISA members to effectuate collection.. It is very encouraging to report that the SPU - PRED Engineers also got involved in the O&M collection process.

Payment of Salary

The Operators and the HP mechanics were identified as early as November 99 and were imparted the required training. The Operators have been appointed from April 2000, and are already discharging their duties under the guidance of the SPU and the management of the MANISA.

The MANISAs today are being equipped to manage their own finances. The salary of the Operator is being paid by the MANISA. In their respective habitations, MANISA decides on the amount to be paid to the Operator after due consultation with the members and ratification in the meeting. The same gets recorded in the Minutes book. As of now, payments for the Operators vary from Rs.300/ to Rs.600/- per month. Across all the habitations the same procedure of recruitment, payment and ratification is followed.

At present the books of accounts are being maintained by one of the literate members of the MANISA. In the absence of a literate member, the MANISA seeks the help of other literate members of the community.

Purchase of Spares:

The present practice is that the contractor replaces the spares as per the requirements. There have also been a few instances where the MANISAs purchased the spares, after failing to get any response from the PRED. It is agreed that once the schemes are handed over, the MANISAs will have to purchase the spares both for the HP and for the schemes as and when the need arises. PRED and NAPO are working out details in establishing the required linkages and procedures between the MANISA and related institutions for the purchase of the spares. Though the MANISAs are enthusiastic to take on added responsibility for handling money and power, all efforts are being made to ensure that they don't burn out before being fully equipped to handle such responsibilities. In this direction, a series of interventions are planned.

3.6.5 Sanitation Plan

In the past sanitation plans were planned with the community per habitation. The issues targeted include handling and upkeep of the RWS facilities and the drainage facilities,

disposal of solid waste, relocation of manure pits, hygiene promotion and handling of drinking water in the household, and the general cleanliness in the habitation.

While the project's position is stronger on the environmental sanitation directly connected to the provided inputs and drainage, there are limitations on the issues not directly related to the inputs. Some of the MANISAs have looked at sanitation as work to be taken up on a voluntary basis, while the others have addressed specific issues like cleaning of the water tanks and the surrounding outlets, addressing issues related to open defecation and linking them with the Government latrine programme. NAPO is investigating the possibilities of compost production to process the organic waste.

3.6.6 Preparation for the handing over of the scheme

Handing over is another issue that needs another approach, deviating from the traditional approach. In the traditional approach PRED would hand over the system to the Gram Panchayat after certified completion of the technical works. In the approach of this project however the PRED is responsible for both the technical as well as the social components, including the preparation of the recipient MANISA to operate and manage the schemes.

NAPO has drafted a process for gradual hand-over, after certified completion. Such process includes a number of procedures to be followed for both the technical and the social component.

For the technical component such procedures include testing and certification of the system, the completion of a technical manual of the scheme with the design- and operational details and instructions, completed training for the operators and experience in operating under supervision, and the system for reporting and monitoring in place.

For the social component the procedures would require for the MANISA to be trained and prepared to manage the operation of the system through the operator, for their management capability to perform as the Water Management Committee to be in place, for the system of collection of O&M funds to be in place and working (as indicated by the needed amounts of funds in their deposit etc.)

Only after these procedures have been completed successfully could the schemes be handed over.

The SPU has been observed to be too eager to hand-over the schemes after these are technically functional (but not formally completed), disregarding the required outputs on the social component and the MANISA.

Obviously there is no question of hand-over if the recipient party is not prepared or ready. NAPO is presently stressing the importance of the process of hand-over and its procedures.

3.6.7 Future Directions

The AP III programme clearly states that the ultimate objective of the project is development of new approaches for sustainable water supply through a participatory process. Hence activities have been planned on the premise that every intervention will contribute in building up the capacity, skills and the confidence of MANISAs to take on the tasks at hand.

Based on an assessment of the present capacity of the MANISA's additional inputs should be made by the SPU social staff to reach the targeted capacity to manage the habitations' RWSS requirements. These activities can be undertaken while the schemes are being stabilized.

Future plans involve some of the major issues listed below:

1. Capacity building of the MANISA/ community to manage schemes.
 - 1.1 Re-orientation trainings on roles & responsibilities of MANISA, Scheme operation, responsibility sharing, Operator and HP mechanic, management of the scheme etc.
 - 1.2 Streamlining the O&M collection - strategies to enhance and systematization of the collections, dealing with defaulters, streamlining accounting systems, etc
2. Preparing the MANISAs/ communities to take over schemes, which includes imparting of the required skill & knowledge, delineation of responsibilities at PRED, GP, MANISA & community levels, supervision-hands on experience.
3. Documentation of the various processes, preparation for the village profile, etc.

The Work-Plan for social activities detailing interventions focussed in this direction is attached.

Work Plan for Social Activities: October-December 2000

Task Name	Start	October					November				December				
		01/10	08/10	15/10	22/10	29/10	05/11	12/11	19/11	26/11	03/12	10/12	17/12	24/12	31/12
SCHEDULE OF ACTIVITIES	10/10/00	[Redacted]													
Rorientation-meeting	12/10/00		■												
MANISA- Reorganisation	16/10/00			■											
Orientation/ Reorientation-MANISA	20/10/00			■											
Discussion-Sarpanches	20/10/00			■											
HP Mechanic/Operators Training-II	25/10/00				■										
Checking-Minutes/Accounts	03/10/00	■													
Training MANISA-Book keeping	19/10/00			■											
School Sanitation Clubs	03/10/00	■													
Health &Hygeine - Training II	05/12/00										■				
Community awareness- Round III	03/10/00	■													
Management & Maint. PWS II	21/11/00								■						
Hand over- O&M responsb.-MANISA	03/10/00	■													
O&M Collection for one year-St.procc	03/10/00	■													

3.7 Water Quality Testing Laboratory

As an integral part of the overall project rebudgeting, the revised budget for the Water Quality Testing Laboratory now stands at Rs.23.75 lakhs. The expenditure for the Laboratory has so far been Rs. 16.41 lakhs.

The Laboratory has been officially inaugurated by the District Collector on 19 February 2000 and is operational for chemical analysis. The modifications required are for rationalising the bacteriological testing capacity of the Laboratory. The necessary construction, modifications and procurement of equipment is expected to be completed during November 2000.

Contracted technicians have staffed the Laboratory. Hence, upgradations of skills through training programmes have not been undertaken.

4. Internal Monitoring

SPU- PRED has been fairly prompt in their reporting in the last six months. However the quality of reporting social aspects of the project has a lot of scope for improvement. It has been generally observed that reporting by SPU-PRED has been on quantitative terms, for example completed , in progress or not taken up. The social reporting needs much more to be accomplished wherein it is required to qualitatively describe the process and its outcomes. The SPU-PRED appreciates this requirement and is improving on their reporting accordingly. The reporting formats prescribed and agreed upon during the previous reporting period are adhered to.



CONSULTANTS INDIA PVT. LTD.



**NETHERLANDS
ASSISTED
PROJECTS
OFFICE**

Ref.No. 27.1/00/218

23 November 2000

International Reference Center (IRC)
P.O. Box 2869
2601 CW Delft
The Netherlands

INGEKOMEN 7 DEC. 2000

Dear Sirs:

Please find enclosed a copy of NAP Office's Progress Report for the period April to September 2000.

With kind regards,

Yours sincerely

F. Hanrath
Team Leader

Encl: as above

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