

# Andhra Pradesh Rural Water Scheme

## **Operational Manual**

16 May 2007

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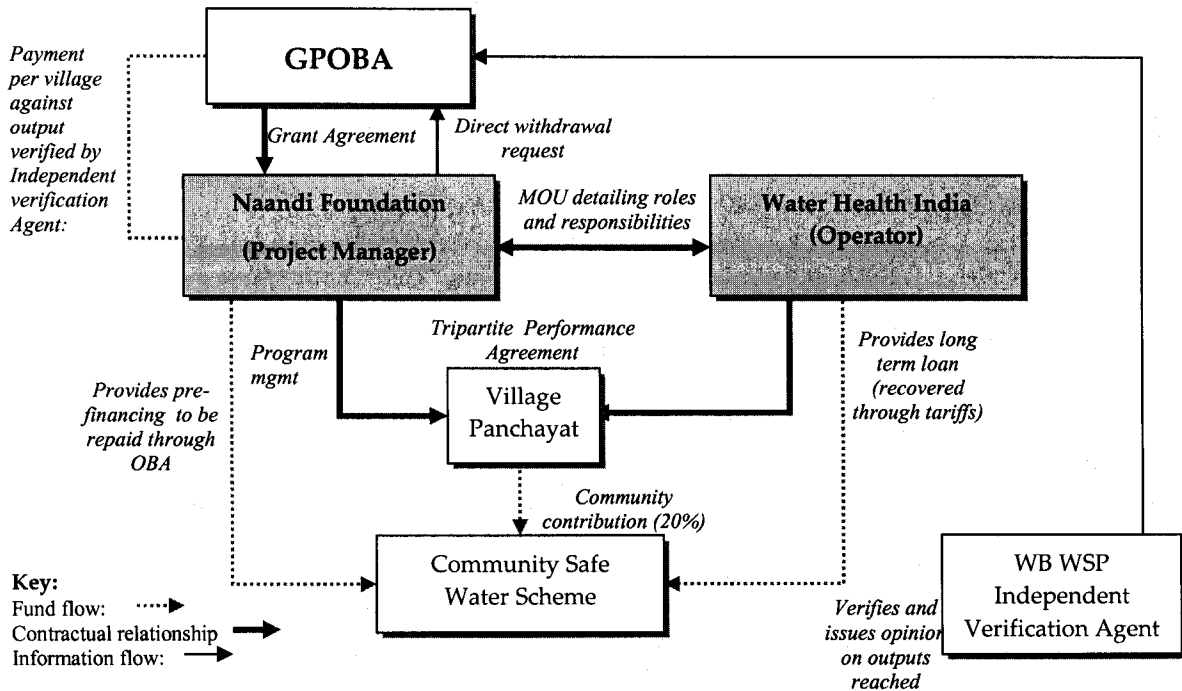
Annex 1: Output Verification Report (OVR)

Annex 2: Monitoring and Verification Indicators

## B. OVERVIEW OF THE OPERATIONS

### B.1. Contractual arrangements

Figure 1 below summarizes the contractual arrangements of the OBA scheme.



Each CSWS involves the community (represented by the village Panchayat), Naandi, an NGO as project manager, and a water operator WHIN. The roles of each are defined below.

1. *Community, as represented by the Village Panchayat (village council):* The Village Panchayat will provide a regular source of water and land for the water purification system with the necessary perimeter fence to secure the location for the treatment facility. It will further assist the project by providing electricity at a pre-agreed tariff. Upon termination of the loan repayments by Naandi and WHIN, the ownership of the assets will transfer to the Village Panchayat.

2. *Naandi Foundation:* Naandi will act as the Project Manager and coordinator. Naandi will be the signatory to the Grant Agreement with GPOBA. It will ensure that the project meets its deliverables. As well as being responsible for delivering the overall CSWS, Naandi will be responsible for undertaking campaigns to educate rural communities on the importance of safe drinking water and incentivising the local community to use the treated water of the CSWS to meet their basic needs. Upon completion of the construction of the purification plant, Naandi will also be responsible for collecting user-fees.

3. *Water Health India:* WHIN will construct and install 25 ultraviolet (UV) filter water purification plants (with associated storage tanks) at identified village sites. WHIN will be responsible to operate and maintain the plants and will provide long-term loans to the different villages to cover part of the construction costs. In addition, WHIN will share project implementation risks by issuing operational performance guarantees.

## B.2. Project size and investment details

The total project cost is \$1,250,000 of which 64% (\$800,000) will be covered by the GPOBA subsidy. A further 20% (\$250,000) will be sourced as a community contribution, and the remaining 16% (\$200,000) through a commercial loan to be provided through WHIN. Minimum number of households expected to benefit from the CSWS is 500 (considering an average population of each Project village to be 8,000-10,000)

| Overall investment and GPOBA subsidy            | Per village (US\$) | For 25 villages (US\$) | % of Total Investment |
|---|--------------------|------------------------|-----------------------|
| Initial investment per water purification plant | 50,000             | 1,250,000              |                       |
| Community Contribution                          | 10,000             | 250,000                | 20%                   |
| GPOBA connection subsidy (500 hh @ \$64 per hh) | 32,000             | 800,000                | 64%                   |
| Commercial borrowing                            | 8,000              | 200,000                | 16%                   |

## B.3. Project Preparation and Implementation

### B3.1 Village Selection & Needs Assessment

#### B3.1.1 Village selection

Villages will be selected on the basis of the following criteria:

- a. Undertake a needs assessment of a village with regard to issues related to drinking water quality, after meeting the Village Panchayat (the elected village governing body). This will include briefing the Village Panchayat on the Project Model involving provision of appropriate technology, community-mobilization activities, individual and Community level benefits e.g. health, economic, productivity-linked, etc.
- b. Presence of a water source (surface water, ground water etc)
- c. Confirmation that there is no imminent planned purified drinking water supply project in the village
- d. Presence of severe fecal contamination (above the WHO permissible limit of 100 MPN/ml) of drinking water resources
- e. Test reports to indicate that the existing water quality can be purified by U.V. Waterworks technology to meet the bacterial contamination criterion set by the Bureau of Indian Standards. In the event that these tests produce negative results (i.e. water cannot be satisfactorily purified by U.V. technology) Naandi will proceed to the selection of another village.
- f. Willingness and ability of the Panchayat to opt for a Community Safe Water System (CSWS) under the paid water usage scheme. This will involve initial permission, willingness/ability to provide a raw water source, in-kind contribution of land for plant installation, entering into and following a mutually agreeable tripartite agreement.
- g. The Panchayat is able and willing to:
  - allow Naandi or its authorized representatives to collect user fees and charge O&M expenses to any such fee collected
  - allow Naandi to carry out culturally-appropriate promotional activities in the village (including access to schools and school children for promotion of Safe Drinking Water

### ***B3.2 Project preparation activities***

Once the village and beneficiary population has been selected the following activities will be undertaken in preparation of the signature of the Tripartite Agreement, namely:

#### *B3.2.1 Baseline Survey and Pre-launch Awareness Campaign*

Based on the initial beneficiary population identified under B3.2.1, the Safe Water Promoter engaged by Naandi Foundation will conduct a household level baseline survey which reveals water consumption patterns in the village. This survey must capture a range of demographic and socio economic data and will enable the identification of 500 poor households whose consumption of safe water will be tracked in intervals of three, six, nine, twelve and eighteen months after the plant is commissioned (one of the projects key 'outputs')

Naandi is also required to undertake a door-to door awareness campaign on the project, the institutions involved and the benefits of safe water. The Safe Water Promoter shall be trained to handle queries from households regarding various aspects of the project including:

- Charging for Water and Price of water ( user fees)
- Mode of sale-Access e.g. at the CSWS Plant and /or through distribution in the village
- Registration charges
- Efficacy of purification technology
- Plant timings

#### *B3.2.2 Community contribution*

Naandi initiates the process of raising funds for the 20% Community Contribution.

#### *B3.2.3 Human Resources*

An important sustainability feature in this pilot is the recruitment and training of local men and women from the village to operate the system and run a village wide educational campaign on the benefits of consuming pathogen-free water. Naandi and WHIN will be required to employ on fair and reasonable market terms, three (3) staff for each village. Of these staff, two positions will be as technical operators and one will be the Safe Water Promoter. Naandi will ensure that at least one of these positions is covered by a woman, and will guarantee and warrant that all necessary training, support and supervision will be provided to these staff for the adequate fulfillment of their respective job descriptions. Accordingly Naandi will be responsible for any substitution of any of these positions should they be required for the successful running and operation of each CSWS.

Only after the above conditions set out in sections B3.2.1 to B3.2.3 are completed, will the parties proceed to the signature of the Tripartite Performance Agreement.

transferred to the ownership of the Village Panchayat, WHIN and or Naandi may provide further services to the respective village.

#### B.4. Project schedule

| Activity                                   | 2007     |          |          | 2008     |          |          |          | 2009     |          |          |          |
|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
|  | <u>2</u> | <u>3</u> | <u>4</u> | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> |
| Quarters/Activities                        |          |          |          |          |          |          |          |          |          |          |          |
| <b>Project Support:</b>                    |          |          |          |          |          |          |          |          |          |          |          |
| <b>GPOBA Grant agreement</b>               |          |          |          |          |          |          |          |          |          |          |          |
| Preliminary selection of eligible villages |          |          |          |          |          |          |          |          |          |          |          |
| Appraisal                                  |          |          |          |          |          |          |          |          |          |          |          |
| Signing of Tripartite Agreement            |          |          |          |          |          |          |          |          |          |          |          |
| Construction                               |          |          |          |          |          |          |          |          |          |          |          |
| Contract implementation                    |          |          |          |          |          |          |          |          |          |          |          |
| <b>Independent Verification Agent</b>      |          |          |          |          |          |          |          |          |          |          |          |
| <b>GPOBA Subsidy Payments</b>              |          |          |          |          |          |          |          |          |          |          |          |
| <b>Prog. Supervision Review</b>            |          |          |          |          |          |          |          |          |          |          |          |

Naandi will compile in the form of a Direct Withdrawal Request, and on the basis of the progress for each village CSWS and its achievement of agreed outputs, a summary application for withdrawal will be sent to GPOBA detailing the name of the village, the respective output reached, the corresponding amount for the reached output and a summary of the total amount to be reimbursed by GPOBA. The format will be in accordance with World Bank Disbursement Guidelines for Projects, dated May 1, 2006, (“Disbursement Guidelines”). Application for withdrawal or payments application would be accompanied by the relevant Output Verification Reports (OVR) by the Independent Verification Agent. Reimbursement will be on the basis of the outputs that have been confirmed by the verification agent and appropriate evidence thereof. The unit costs of each type of output will be agreed in advance and the reimbursement will be on the basis of “number of outputs times unit cost of output” as per the percentages indicated above.

Disbursement will be made by GPOBA as a direct payment to Naandi as the Grant recipient. GPOBA will not make any advance payments.

The written confirmation by the Independent Verification Agent through the OVR will include the corresponding CSWS commissioning certificate by WHI, the records demonstrating registered and paid subscription fees, and the billing records for three months providing evidence for actual use. GPOBA will subsequently make direct payments to Naandi into their existing Foreign Currency account, provided the account and such payment are in compliance of all relevant Indian laws. This aspect will be examined by Naandi and verified by the GPOBA.

### **C.3. Project Audit**

There will be two types of audit: (a) Technical Audit to be undertaken by the Independent Verification Agent, and (b) Financial Audit.

#### *(a) Technical Audit to be undertaken by the Independent Verification Agent*

The Technical Audit will be funded through the proceeds of the Grant in an amount not to exceed US\$50,000. Naandi in consultation with WSP will draw up terms of reference for the Independent Verification Agent and submit to GPOBA for approval. The technical audit engagement is expected to cover at least two years. The Independent Verification Agent will perform the following services:

1. Semi-annual technical audit of output deliveries to include:
  - a. verification of installations;
  - b. billing records for new connections
2. Ex-post review for each village of:
  - technical test undertaken after plant commissioning and the plant produces water to the agreed standard,
  - verification of registered and paid subscription fees,
  - verification of three months of billed user fee consumption.

#### *(b) Financial Audit*

The Financial Audit costs will be the responsibility of Naandi and will not be financed through the proceeds of the Grant. Naandi shall have its own entity financial statements audited as per the auditing standards of the Institute of Chartered Accountants of India. These financial statements will contain a separate disclosure on the project activities/accounts and will be submitted annually no later than six months after the end of the financial year.

For project accounts, the Independent Verification Agent will verify that the payments as per the defined unit costs have been made to the subcontractors for the outputs certified by technical audit.

#### ***C4.2 Consultants' Services***

Consulting Services under this Project will include services to be provided by firms and/or individual consultants, to include technical auditing services and monitoring and verification of outputs.

The following selection procedures would be used for Consultants' Services:

- (a) Quality-and-Cost-based Selection and Least-Cost Selection: All consulting service contracts valued at more than US\$50,000 equivalent would be awarded through the Quality and Cost Based Selection (QCBS) and Least-Cost Selection (LCS) methods. To ensure that priority is given to the identification of suitable and qualified national consulting firms, short-lists for QCBS and LCS contracts may be comprised entirely of national consultants, provided that at least three qualified firms are available.
- (b) Consultant's Qualification Selection (CQ) may be used for Consultants' Services contracts below an estimated contract amount of US\$50,000 equivalent, for auditing, and monitoring and verification of outputs.

The procurement method will be conducted using World Bank's standard bidding documents namely Consultant's Qualification Selection cf. section 4.2.1. The appointment of the Independent Verification Agent will be subject to the approval / no objection of GPOBA, and will be effective within six months of the signature date of the Grant Agreement. Site visits will be part of the technical audit.

#### **C.5. Environmental and Social Compliance**

The project staff of Naandi will be directly responsible to monitor environmental compliance for each village both at the time of site selection and during project implementation. The following activities will be carried out by Naandi on a bi-annual basis:

1. The project will develop a baseline database on the existing status of water quality sources in the project villages. Baseline data will be obtained mainly from secondary sources such as the Public Health Department or any other water supply agency and a comparison is to be made by baseline data to be undertaken by Naandi. This baseline data to be undertaken by Naandi prior to installation of the unit. Both Naandi and WHIN will ensure that raw water samples at are analyzed at least three to four times for bacteriological as well as chemical contamination. The interval between analysis should be around 10 days between samples.
2. The project will also create a base line data base on the disease burden in the proposed 25 villages. This will be done mainly from information available from secondary sources from public health centres or any other health assessment report.
3. Naandi will be responsible to create an environmental screening criteria using its existing site screening criteria but strengthened by adding critical environmental indicators to include for example Indian standards for coli form count, fluoride concentration, chloride and other chemical and heavy metal contamination.
4. The project will undertake chemical and heavy metal residue water quality analysis (for the raw water) twice a year for the initial two years.
5. The project will undertake pesticide residue analysis (for the raw water) once every year.

Naandi will conduct a social assessment in every village before initiating the project so as to enable developing a socio-economic profile in the context of a rural water scheme. Simultaneously, this will help in identifying issues relevant in the context of accomplishing the objectives of Inclusion, Equity, Participation, Transparency, and local level institutional development. Accordingly, interventions too will be planned for. This will also include a monitoring and evaluation framework and the indicators thereof Results of these will be captured in a village level micro plan. Naandi will share all the micro plans with and seek comments from WSP.

### **C.7. Reporting Obligations**

Naandi shall be responsible to monitor and evaluate the progress of the Project and prepare Project Reports for each of the 25 villages. Each Project Report shall cover the period of one calendar quarter, and shall be furnished to the World Bank not later than one month after the end of the period covered by such report.

*Baseline Survey Report:* At the inception of the project, Naandi will give a report of incidence of water borne diseases. Subsequently an annual reconnaissance survey will be conducted to review the results of each CSWS. The IVA will be responsible for verifying this data and will report on it in his OVR.

*Progress Monitoring Reports:* Implementation monitoring will focus on progress of the project relative to planned implementation schedules. Naandi, using its own records, will develop and submit to GPOBA semi-annually implementation reports describing project progress. The format of such report will be agreed with the Bank within one month from Grant Effectiveness.

*Output Verification Reports (OVR):* Output monitoring is the verification of the delivery of outputs to trigger GPOBA subsidy payments. The monitoring and verification of actual outputs for certification and subsidy disbursement will be undertaken by the Independent Verification Agent supported by the Water and Sanitation Program (WSP) for monitoring and tracking purposes. Copies will be furnished to Naandi and the Government Authority, the Department of Drinking Water, Ministry of Rural Development, AP for information purposes. Annex 1 contains the template for such reporting obligations.

#### *Post Project Completion Report*

At the end of the Grant period, Naandi will prepare a *Post Project Completion Report* no later than six months after the Closing Date according to the data sheet for Monitoring and Verification Indicators attached as Annex 2. In addition, Naandi shall furnish the *Post Project Completion Reports* to GPOBA no later than one month after the first and second anniversaries of the Closing Date, respectively.

## Annex 1: Output Verification Report (OVR)

| Output Verification Report |  |   |                      |                       |
|----------------------------|--|---|----------------------|-----------------------|
| Village Name & Location    |  |   |                      |                       |
| Date of verification:      |  |   |                      |                       |
| No. of OVR issued:         |  |   |                      |                       |
| Name of verifier           |  |   |                      |                       |
|                            | Outcome/Result delivered   | Means of Verification   | Date of verification | Comments/Observations |
| 1                          | Construction and installation of 25 UV water purification plants | Completion report for each plant available from the Independent Verification Agent          | 1.                   |                       |
|                            | Registration of the households                                   | Minimum 500 hh registered for paid usage of Water ; Subscription Fee available from such HH | 2.                   |                       |
|                            | Three months of billed user fee consumption                      | Continued usage of Paid Water by a minimum 500 HH   | 3.                   |                       |
| Comments to verification:  |  |   |                      |                       |
| Recommendations            |  |   |                      |                       |

### Attachments:

1. List of participants in output verification
2. Map of project area showing location of output(s)
3. List of registered households
4. Billing records for water sold
5. Commissioning certificates

## Annex 2: Monitoring and Verification Indicators for total number of villages

Naandi Foundation, will also conduct audits of the project as designated in the Grant Agreement, and will provide the necessary information to complete the table below.

| <b>Project Characteristics</b>   |         |              |               |                           |
|--|---------|--------------|---------------|---------------------------|
| Project output(s)  |         |              |               |                           |
| Poverty targeting (surveys, community decisions, geographic)   |         |              |               |                           |
| OBA design period  |         | months       |               |                           |
| Planned implementation period for outputs  |         | months       |               |                           |
| <b>Water borne diseases</b>  |         |              |               |                           |
| Baseline survey of project villages will be done at the inception of the project, which will give a report of incidence of water borne diseases. Subsequently an annual reconnaissance survey will be conducted to see the results |         | <u>2007</u>  | <u>2008</u>   | <u>2009</u>               |
| <b>Financing</b>   |         |              |               |                           |
|  |         | <u>GPOBA</u> | <u>Donors</u> | <u>Govt.</u> <u>Local</u> |
| Investment grants  | USD ths |              |               |                           |
| Private sector investment finance, if any (own funds/loans)  |         |              |               |                           |
| Private sector finance mobilized for investments   | USD ths |              |               |                           |
| <b>Project Outcome</b>   |         |              |               |                           |
| Investment cost per hh   | USD     |              |               |                           |
| Subsidy per hh   | USD     |              |               |                           |
| Equivalent Grant assistance per household connected  | USD     |              |               |                           |
| Outreach of OBA grant(s) to poor population  | pct.    |              |               |                           |
| GPOBA payments proceeding according to plan (Y/N)?   |         |              |               |                           |
| Payments delay, if any   | months  |              |               |                           |
| Local co-funding supplied as planned (Y/N)?  |         |              |               |                           |
| Tariff adjustment clauses respected  |         |              |               |                           |
| OBA service provider before project (public/private)   |         |              |               |                           |
| OBA service provider after project (public/private)  |         |              |               |                           |
| User assessment of project (no/poor/fair/good/very good)   |         |              |               |                           |
| Degree of local capacity building (none, low, medium, high)  |         |              |               |                           |
| Means of dissemination of lessons learned, if any  |         | <u>2007</u>  | <u>2008</u>   | <u>2009</u>               |
| No. of beneficiary registered households   | no.     |              |               |                           |
| No. of sold water cans (12 lts and/ or 20 lts)   | no.     |              |               |                           |
| Water sales per year   | m3      |              |               |                           |
| Service availability (daily average)   | h/day   |              |               |                           |
| Water tariff   | US\$/m3 |              |               |                           |
| Affordability ratio <sup>1)</sup>  | pct.    |              |               |                           |
| <b>Replicability</b>   |         |              |               |                           |