INDIA
PROJECT APPRAISAL-COMMITMENT DOCUMENT

Project Name: Rural Community Water, Andhra Pradesh, India (P102472)

Scope: Providing safe drinking water to poor segments of the coastal area population of Andhra Pradesh through an innovative village-based public-private partnership model.

Total Project Costs: US$1,250,000 representing 25 villages each at a cost of US$50,000
- GOPBA connection subsidy = $800,000 (64%). For the total Grant Award, retroactive financing up to 20% of total subsidy request will be permitted if carried out after July 14 2006. (thus, retroactive financing would be limited to about US$80,000.
- Community contribution = $250,000 (20%)
- Commercial borrowing by the operator (WHI) = $200,000 (16%)

Total GPOBA Funding Requested: $900,000
- Subsidy funding = $800,000
- Project implementation/auditing = $50,000
- Bank/GPOBA supervision = $120,000

GPOBA Funding: DFID 25%, IFC 25% and DGIS 25%

Outputs for each of the 25 villages: (NB. these are not domestic household connections)
- Construction and installation of water purification plant
- Registration of at least 500 households
- Three months of billed user fee consumption (represented by number of sold Water Coupons)

Expected Beneficiaries: 75,000 people (25 villages x 500 households x 6 people)

GPOBA subsidy “efficiency”: $64 per household or $10.6 per person

Grant Recipient: Naandi Foundation

Financial Management: Clearance pending. GPOBA subsidies disbursed to Naandi Foundation directly against quarterly reports.

Disbursement:
| Construction and installation of 25 UV water purification plants | 20% |
| Registration of the households | 60% |
| Three months of billed user fee consumption | 20% |

1 This is the date when IFC gave its approval for this project. DFID approval was received on 09/26/06.
Procurement: Clearance received. Single sourcing of technology partners Water Health International approved.

Environmental: Clearance pending by WB specialist but environmental assessment completed by local consultant.

Government Endorsement: yes

Economic rate of return: The economic-IRR is 31% with only expenditure savings taken into account. It increases to 52% when time savings are added and to 73% when health benefits are added. As a percentage of total benefits, expenditure savings account for c. 34%, time savings account for c.33% and health benefits for c.33%.
CURRENCY EQUIVALENTS
(Exchange Rate Effective January 4, 2007)

<table>
<thead>
<tr>
<th>Currency Unit</th>
<th>Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rs 44.3</td>
<td>US$1</td>
</tr>
<tr>
<td>US$0.023</td>
<td>Rs1</td>
</tr>
</tbody>
</table>

ABBREVIATIONS AND ACRONYMS

AP | Andhra Pradesh
APL | Above Poverty Line
BPL | Below Poverty Line
CAS | Country Assistance Strategy
CSWS | Community Safe Water Scheme
GPOBA | Global Partnership on Output-Based Aid
(hh) | Households
MPN/ml | Most Probable Number per milliliter
MOU | Memorandum of Understanding
NGO | Non-Government Organization
OBA | Output Based Aid
UV | Ultraviolet
WHI | Water Health International Ltd.
WHO | World Health Organization
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A. STRATEGIC CONTEXT AND RATIONALE

A.1. Country and sector issues
India is a low-income country with a gross national income (GNI) per capita of $720 in 2005 while the world average is $6,987. The population of India is 1,079 million, of which 71% or 766 million resides in rural areas and the rest in urban areas. 21% of communicable diseases in the country are water related, and the number of deaths due to diarrhea alone was 700,000 in a single year. Although 86% of the population had access to improved water source in 2002, only 18% of the rural households had access to improved water source. In addition, only 200,000 rural households are partially covered by drinking water schemes.

Specifically, the State of Andhra Pradesh (AP) - where the pilot project is proposed - is considered a leading reform state in India, with a clear long-term strategy toward infrastructure development laid down in its Vision 2020 document. It is the fifth most populous state in the country with approximately 80 million people, which account for nearly 8% of the country's total. AP has made considerable progress in its development agenda during the last few years. Back in the late 1990s, the state was relatively poor and in the midst of a fiscal crisis. In 1999/2000, AP's GNI per-capita was around US$385, nearly 22% of its population was below the poverty line, and the state's fiscal deficit to gross state development product (GSDP) ratio was reaching the 5% mark. Since then, the state has made impressive progress in all dimensions of development: per-capita income has risen to nearly US$700 in 2005, which is still slightly below the national average. The state has significantly improved water supply coverage in the past two decades, such that people who have access to water has increased from 3% to 65% of the total population.

Despite these improvements, approximately 17 million people, or over 22% of the total state population, experience bacteriological contamination of water. Especially, rural households at the coastal districts of AP (Krishna, East and West Godavari, Prakasam and Guntur) are the most affected. For example, it is estimated that over 500,000 people live with severe fecal contamination level of >2,000 Most Probable Number per milliliter (MPN/ml), whereas the World Health Organization (WHO) permissible limit for fecal contamination is <100 MPN/ml. In addition, the GNI per capita in AP is below India's average. Disparities between rural and urban development indicators in AP is noticeable, given that the rural population accounts for 73% of the state's total and is relatively poorer. Tremendous disparities in infant mortality rates (73 in rural areas versus 38 in urban areas) as well as in service coverage are found in the state.

Thus, there is a clear need for increased investment in the water sector to improve access to higher quality water resources for the rural poor in AP. In the case of water quality, education is important for preventing illness. Given various social, cast and other issues it is clear that the program needs to provide for the rural communities to be educated to improve awareness of the risks posed by the consumption of unsafe water.

A. 2. Rationale for GPOBA involvement
GPOBA has a mandate to fund pro-poor output-based subsidies in the delivery of the basic infrastructure services, including water and sanitation, with special emphasis on the poorest countries, of which the proposed OBA pilot in Indian State of AP would help fulfill that mandate. This project promotes public-private partnership in the water sector through the creation of a Community Supply

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2 World Development Indicators Database, World Bank, 1 July 2006.
3 2006 World Development Indicators, the data in 2004.
Water Scheme (CSWS) linking the village government (or “Panchayat”) with a Non-Government Organization (NGO) and a private sector provider.

**Project Implementers**

Naandi Foundation⁶, a leading NGO in India, together with Water Health International (WHI), a disinfection technology provider and an operator of community village water treatment facilities, will take on the major pre-financing risks prior to OBA disbursement. The World Bank’s Water and Sanitation Program (WSP) will act as the local project manager of the proposed GPOBA intervention. GPOBA’s due diligence has checked with IFC to ensure there are no reputational risks with WHI and Naandi.

Naandi has a proven track record of implementing community based water schemes on a fee-for-service model working at a grass root level and develop the sense of community engagement necessary to ensure the long term sustainability of such water supply schemes. From a financial perspective, Naandi’s accounts show a sound management over the last three years. According to their 2004/2005 Annual Report which was assessed by an independent auditor, Naandi is regarded as a financially sound NGO⁷. Their financial reporting system is in conformity with the accounting principles generally accepted in India. Additionally, Naandi’s founder is ranked as one of India’s richest men and biggest philanthropist.

Water Health International (WHI) is a privately-held company, whose investors include the International Finance Corporation, Acumen Fund, Plebys International, LLC, and Johnson and Johnson. WHI is currently in the process of seeking a US$10 million equity injection. A high-profile strategic corporate investor – likely to be the Gates Foundation - is poised to co-lead the investment. Furthermore, WHI India, a subsidiary of WHI, is about to sign a loan agreement with ICICI Bank in India which will enable WHI India to access a 400 million Rupee loan facility. ICICI has indicated a desire to expand this facility. Notably, the Acumen Fund is providing a first loss default guarantee of up to 30% of the total funds based on its own due diligence and confidence in both WHI and their respective business model. In summary, both entities are in a financially sound position to raise short-term borrowing from the local financial market. Specifically, the privately-held WHI is willing and able to share project implementation risks by providing financing and bank collateral guarantees. The scheme also allows for performance risk to be taken by Naandi/WHI by disbursing subsidies after the delivery of agreed outputs.

This project anticipates increased innovation and efficiency in the sector by: promoting community participation and ownership, sourcing of a cost-effective innovative water system technology, providing education and training programs on health and hygiene for the community; and fostering public-private partnerships.

Enhancing the sustainability of pilot water projects in villages in AP has been a key part of the project design. The scheme provides a one-off subscription subsidy linked to the provision of clean water and these subsidy payments are largely made after the delivery of agreed outputs. These outputs include three months of billed user fee consumption (represented by number of sold Water Coupons). The OBA pilots require that tariffs paid by users for consumption should cover operation and maintenance costs,⁸ user-fee collection costs, and loan repayment. This requirement helps to ensure that the project is sustainable in the long-term without subsidies.

It is anticipated that lessons learned and methodology developed for each CSWS can readily be applied

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⁶ Naandi’s financial is available on http://www.naandi.org/download/Naandi_AR(04-05).pdf
⁷ Of their over $3 million income, approximately 63% was funded by the Government of AP and 25% by DFID.
⁸ Each village will have a plant operator who will be employed and trained by WHI.
to other villages in the State of AP and ultimately in the whole of India. Naandi is confident that scaling up is possible as the demonstration effects of each pilot will motivate adjoining villages to engage in similar projects and increase their willingness to pay for water through user fees. In such a scenario, with prior approval from the pilot village, the water treatment facility benefits could be extended to the adjoining villages (subject to suitable promotional interventions and appropriate logistical arrangements). GPOBA will help Naandi leverage its experiences of bringing safe water to villages, across India.

In summary, the project meets GPOBA operational criteria, as well as the core OBA principals of:

- explicit use (i.e. targeting) of subsidies;
- increasing accountability of service providers;
- attracting increased private participation in operations and financing;
- providing incentives for innovation and efficiency;
- enhancing sustainability; and,
- monitoring of results.

A. 3. Higher level objectives to which the project contributes

The proposed project is consistent with the Bank Group Country Assistance Strategy (CAS) for India and India's Tenth Five Year Plan (2002-2007). Both recognize that provision of adequate infrastructure, including water, is critical to sustaining economic growth access to improved and safe drinking water and lists support for private sector participation in the water sector program. At the state level, the Government of AP has the political will and commitment to implement reforms. Currently, the Bank is in the early stages of negotiations for a loan with the State (estimated to be US$250 million) which has as OBA based rural water schemes, such as this one, as a key component. Lessons from this project will be critical for the design of the Bank loan and it will contribute to achieving the Millennium Development Goals, which emphasizes safe and sustainable drinking water and sanitation as well as their important health impacts.

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9 Naandi has already identified 100 villages in Krishna district for expanding the program.
B. PROJECT DESCRIPTION

B.1 Project development objectives and key indicators

The objective of the project is to provide safe drinking water to 75,000 inhabitants (earning less than US$20 per month) in the coastal area of AP. Achieving this objective should result in:

- Health benefits from reduced exposure to environmental risks posed by unsafe water.
- Economic benefits from reduction in medical expenses to treat water-borne diseases, increased productivity and capacity to work due to fewer water-borne disease related to days off from work (especially for mothers of children under five who are prone to diarrhea), and lower household expenditure on LPG/Kerosene for boiling water.
- Environmental benefits accruing from an energy efficient and non-polluting method of water purification (U.V. technology) with no wastage of water and no harmful by-products.
- Social benefits from equitable access to safe drinking water for villagers from different religions and social backgrounds.
- Use of local inputs and material to ensure cost effective solutions for system design.
- Improved financial viability/sustainability of the existing water supply systems due to full participation and ownership of the beneficiary community.
- Transparent use of funds in the water sector.
- Replication of affordable village water treatment technology with an OBA approach to bring safe water to other villages.

Key performance indicators to measure achievements will be:

(a) number of households making upfront cash contribution for the project against number of households planned to be mobilized;
(b) number of households registered to the CSWS represented by paid subscription fees;
(c) number of consumers actually using the CWSS represented by number of sold Water Coupons;
(d) number of below-poverty level (BPL) households reached with safe drinking water;
(e) number of households discontinuing use of unsafe water for drinking purpose;
(f) percentage decrease in incidences of water-borne diseases and deaths; and
(g) Percentage reduction in medical/health expenditure.

B.2. Project design

The project is for the development of 25 individual Community Supply Water Schemes. Each CSWS will have a water treatment plant connected to a water distribution point from which users will purchase water in jerry cans. The project does not envisage domestic connections. Each CSWS involves the community (represented by the village Panchayat), Naandi, an NGO as project manager, and a water operator WHI. 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 WHI, the ownership of the assets will transfer to the Village Panchayat.

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10 Subscription fee: This means a user having paid a subscription fee which entitles the user to procure water from the CSWS.
11 Water Coupons are to be numbered and each hh will have a unique identifying code. The plant operator will verify the code to ensure that the Water Coupon is used only by the family it was sold to.
12 The project implementers will, as part of the CSWS, have to establish the baseline data for each village in terms of health so that monitoring can be done on a regular basis.
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 International**: WHI will construct and install 25 ultraviolet (UV) filter water purification plants (with associated storage tanks) for each village\(^{13}\). WHI will provide long-term loans to the different villages to cover part of the construction costs (why is WHI providing loans?). In addition, WHI will share project implementation risks by issuing operational performance guarantees.

**Choice of water disinfection technology**

Under this pilot project, all sub-projects in respective villages will involve the use of the same technology. This will help reduce costs and make replication easier. WHI was selected based on the basis of the supplier market analysis conducted by Naandi and validated by the Bank’s procurement staff. WHI’s technology and approach was found to be most viable for this project, not only on an operating cost basis, but also with regard to long-term sustainability (see section C6). WHI provides the least cost solution, integrates technology with education and shares project implementation risks, which no other potential suppliers are willing/able to do. In addition, GPOBA’s assessment concluded that competitive procurement may not produce a more efficient and economical outcome than the one offered by WHI, and opening a bid process may not attract responsive suppliers. Naandi provided GPOBA with detailed information and corresponding supporting documentation on the following:

- Technical specifications for the water plants and associated tanks.
- Other suppliers' market availability and prices based on the technical specifications for similar plants (with indication of whether they information was obtained by request or through advertisement).
- Advantages considered and grounds for rejection of another make or source of equipment.
- Evidence that WHI technology is the least-cost solution and most suitable as compared with other available products.
- Confirmation that the required equipment is proprietary and obtainable only from WHI.
- Price and performance records of WHI equipment both in India projects and in other countries.
- The official price quote from WHI; and
- The draft contract, including the agreed technical specifications, terms of payment, insurance, delivery mechanisms, operation and maintenance, and performance guarantees.

Further details are provided in Annex 3.

**B.3. Unit costing and subsidy level**

Providing safe drinking water by setting up a water purification plant to 25 villages (500 households per village), represents a total project cost of $1,250,000 million 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 to WHI. Since the three Project districts are contiguous, it is expected that the average unit cost for setting-up and

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\(^{13}\) WHI has provided community-based organizations with the same operating model in the Philippines, and it is planning to replicate this model in several countries in West Africa (Ghana and Nigeria). For information about Water Health International (WHI), see [www.waterhealth.com](http://www.waterhealth.com).
operationalising the CSWS will be almost the same across all Project villages (possible variation of +/- 1 to 2% on account of certain local influences on input cost).

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)

<table>
<thead>
<tr>
<th>Overall investment and GPOBA subsidy</th>
<th>Per village (US$)</th>
<th>For 25 villages (US$)</th>
<th>% of Total Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial investment per water purification plant</td>
<td>50,000</td>
<td>1,250,000</td>
<td></td>
</tr>
<tr>
<td>Community Contribution</td>
<td>10,000</td>
<td>250,000</td>
<td>20%</td>
</tr>
<tr>
<td>GPOBA connection subsidy (500 hh @ $64 per hh)</td>
<td>32,000</td>
<td>800,000</td>
<td>64%</td>
</tr>
<tr>
<td>Commercial borrowing</td>
<td>8,000</td>
<td>200,000</td>
<td>16%</td>
</tr>
</tbody>
</table>

User and other Contributions

The result of the project evaluation phase shows that the target communities are willing to pool their resources together to cover up to 20% (US$10,000) of the initial costs of the systems. Depending on the village, this 20% contribution may come:

- As a total contribution from the users in the form of subscription fees
- Local Self Government i.e. Panchayat funds for drinking/infrastructure schemes.
  - Contribution from the funds earmarked for infrastructure development for the local area available at the discretion of democratically elected local representatives
  - Contributions from philanthropists and charitable organizations with an interest in the development of the village

Different scenarios of fund mobilization will be considered as part of the community contribution to the project with at least 1%-2% of the 20% community contribution coming from the users themselves.

B.4. Eligibility Criteria

Pilot selection

The project targets coastal districts in AP as the water contamination situation is more pronounced than in other districts in the state. Naandi is very familiar with the area and will take the lead in applying selection criteria to help determine which villages are chosen. The selection criteria for the initial 25 villages will be based on the following factors:

a. Presence of a perennial water source (surface water, ground water etc)
b. Presence of severe fecal contamination (above the WHO permissible limit of 100 MPN/ml) of drinking water resources
c. Test reports to indicate that the existing water quality can be purified by U.V. Waterworks technology to meet the criterion set by the Bureau of Indian Standards
d. Willingness and ability of the Panchayat to opt for a Community Safe Water System 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.
e. Existence of a segment of the population that is capable of paying or obtaining the 20% contribution of the total capital cost (i.e. US$10,000) required for setting up the water purification plant.
f. The Panchayat is able and willing to:
   - allow Naandi and WHI 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 Project), and facilitating an enabling environment for promotion of safe water on a user fee mode,

- mobilize public support and take measures for reducing /preventing activities leading to contamination of the water source and also taking-up upkeep and maintenance (including fencing) of the raw water source

**Targeting of the poor through the subscription subsidy**

People in the state of AP are poorer than the national standard with an average GNI per capita of about US$700 while the national average is US$720. The average income of people living in rural areas of AP is even lower. Targeting the poor will be done by identifying individuals entitled to the Government’s “white ration card”. This system entitles low-income individuals to obtain basic commodities (e.g. rice, flour etc) at a lower price. About 500 households with white ration cards will be identified per village. In addition, further eligibility to the CSWS will be assessed through the following indicators:

- Family size >5
- Only one main earning member in the family
- Families with one or more children in the age-group of 0 to 10 years
- None or defunct piped water supply at the beneficiaries’ home at present
- No possession of durable goods such as T.V. or two wheeler
- Construction of house from low cost material (typically mud)
- Reliance on traditional non-paid sources of drinking water
- High level of involvement and time spent by women and children of the house in fetching water
- One or more member of the family who is either physically handicapped or destitute

User fees will not be a deterrent to consumers gaining access to the proposed GPOBA projects. This was validated by GPOBA's due diligence through the Center for Economic and Social Studies (India) which conducted a study whose findings demonstrate there are no significant issues related to willingness to pay. This is further detailed in Section B6. Economic and financial analysis.

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14 Despite the measure to promote the use of the CSWS in each village, the possibility remains that there will continue to be households, who, despite being aware of the benefits of safe water, are not accessing water from the Community Water System because of cost considerations. These households will continue to rely on lower quality and cheaper sources of water until their income levels change. The project does not disturb existing traditional sources of drinking water and hence access to lower cost sources of water will continue to be available.
B.5. Outputs and subsidy disbursement

The subsidy disbursements will be made upon delivery of the following outputs for each village:

<table>
<thead>
<tr>
<th>Indicator #</th>
<th>Output Item</th>
<th>Description of the Output</th>
<th>Proposed Means of Verification</th>
<th>% Disbursement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Construction and installation of 25 UV water purification plants</td>
<td>Completion and Commissioning of the Community Water Systems</td>
<td>Completion report for each plant available from the Independent Verification Agent</td>
<td>20%</td>
</tr>
<tr>
<td>2.</td>
<td>Registration of the households</td>
<td>Represented as paid Subscription fees</td>
<td>Minimum 500 hh registered for paid usage of Water ; Subscription Fee available from such HH</td>
<td>60%</td>
</tr>
<tr>
<td>3.</td>
<td>Three months of billed user fee consumption</td>
<td>Represented by number of sold Water Coupons</td>
<td>Continued usage of Paid Water by a minimum 500 HH</td>
<td>20%</td>
</tr>
</tbody>
</table>

B.6. Economic and financial analysis


Economic Analysis

The economic analysis yields a positive economic Net Present Value (NPV) of $4,401,182 and an overall economic IRR of 73%. The project economic IRR is 31% with only expenditure savings taken into account. It increases to 52% when time savings are added and to 73% when health benefits are added. As a percentage of total benefits, time expenditure savings account for c. 34%, time savings account for c.33% and health benefits for c.33%. The project assumes a 12% discount rate and a 15 year useful life for the project.

Financial Analysis

The financial analysis is based on the investment costs proposed with the OBA subsidy accounting for 64% of total investment costs, user contributions at 20% and commercial borrowing at 16% of investment costs. The commercial loan is assumed taken for a 15 year period at 11% with repayments starting during the first full year of operation. The project is financially sustainable from the operators’ perspective.

Affordable user-fee

A full cost recovery user fee of US$0.05 for a consumption of 30 liters per day has been established. This translates to $1.79/cubic meter. Assuming that users consume 30 liters per day, and given that the average monthly hh income is US$20, this tariff represents c.8% of a hh income (the standard percentage assumes 3 to 5% of income for water services). User fee covers operation and maintenance costs\(^\text{15}\), user-fee collection costs, and loan repayment.

Willingness to pay and avoiding pricing exclusion

The Center for Economic and Social Studies, Hyderabad, conducted a study on the Social Cost-Benefit Analysis of improved water quality in the proposed GPOBA project villages. The report concludes that given the situation in the sample villages (6 of the proposed pilot size of 25 villages) households are willing to pay (WTP) for improved water quality. Not a single household has expressed ‘no’ to the WTP question at suggested tariffs. The report thus concludes that there is sufficient demand for the scheme as well as ability and willingness to pay. Further details on the study for ability and willingness to pay are available in the project files\(^\text{16}\).

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\(^{15}\) Each village will have a plant operator who will be employed and trained by WHI.

\(^{16}\) Key findings include:
- Most of the households prefer house delivery of cans and they are willing to pay extra for the transport.
- The differences between APL and BPL households in the WTP bids relate chiefly to affordability.
The Willingness to Pay in relation to household income and expenditure shows that:

- The purchase of an empty can signifies registration with the scheme. Majority of the households are willing to pay Rs. 30 (US$0.69) and above as fees to purchase an empty 12 liter can. Majority of the APL households are willing to pay Rs. 40 (US$0.92) and above to purchase an empty 12 liter can.
- When asked about the possibility of increasing the water price in future above the proposed levels, more than 80% the households, APL as well as BPL, are willing to pay an extra Rs. 0.50 (US$0.01) per 12 liter can. 8% of BPL families are willing to pay Rs. 1.0 (US$0.02) extra in the future as against 19% in the case of APL families.

<table>
<thead>
<tr>
<th>Willingness to pay for water purchase per 12 liters (80% of respondents)</th>
<th>Rs</th>
<th>US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.50</td>
<td></td>
<td>0.03</td>
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</table>

<table>
<thead>
<tr>
<th>Full cost recovery fee for 12 liters of water (based on 30 lt consumed /hh/day)</th>
<th>Rs</th>
<th>US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00</td>
<td></td>
<td>0.02</td>
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</table>

WTP findings suggest that the GPOBA proposed tariff is affordable and thus is not an undue burden to hhs. In fact the proposed tariff provides a positive reduction (savings) as a percentage of household expenditure, both for APL and BPL households. The tariffs set are below 50% of tariffs currently paid for water (from private vendors). Tariff levels have been purposely set below current levels to ensure a full uptake of service. In fact, due to the health benefits of using additional water in daily activities, it is the goal of Naandi Foundation to increase average daily consumption from the current approx. 20 liters per household to 30 liters per household through this scheme. The tariffs have been set accordingly.

B.7. Lessons learned and reflected in the project design

Naandi has experience in community based water schemes such as the one proposed. These lessons have been incorporated through:

- Improved selection procedure for village selection and setting-up of a CSWS Project
- Evolved procedures for resolution/agreement with Panchayats which have been incorporated into the draft Performance Agreements
- Constituting water users committee in each project village
- Improved specifications and water carrying can models (10 Ltrs, 12 Ltrs, 15 Ltrs, 20 Ltrs, with/without taps)
- Evolved models for distribution for far-off habitations in a project village
- Linkages with the RWS Department and other Community-based Organisations
- Developing more sustainable projects through use of localized and cost effective solutions for system design, improved definition of roles, responsibilities and obligations in the Tripartite Agreement.

In addition, Naandi has provided GPOBA with detailed information and corresponding supporting documentation on the rationale behind the selection of WHI as the preferred technology\(^\text{17}\) as compared to similar technologies, in terms of operational efficiency, relative costs and long term commitment of

\(^{17}\)The plants from most suppliers are suitable for urban, semi-urban, municipal and industrial conditions and cater to a much higher population load at a time as compared to that normally available in rural areas. This is on account of the higher degree of technical components in such water purification plants that in turn necessitate maintaining a team of skilled technical personnel to address breakdowns, downtime, component replacement etc. Compared to this, rural settings where provision/availability of a skilled technical human resource base is both difficult to find and economically unsustainable to maintain, mandate the introduction/installation of a cost-effective, low-technology, low–maintenance community water purification plants, catering to a beneficiary population of 3000 to 10,000 persons.
the technology partner to continue to support the installations in rural areas.

C. IMPLEMENTATION
C.1. Institutional and implementation arrangements

Legal context
The responsibility for managing Rural Drinking Water Supply and Sanitation (RDWSS) services rest with the Village Panchayats as the appropriate agency for village level governance (specifically, the Panchayati Raj Engineering Department in the case of AP). The other levels of Panchayat Raj institutions and governance i.e. Mandal panchayat, Zilla Parishad, State and Central Governments have a supportive role to play. Under the current decentralized scheme a Village Panchayat has undisputed powers in all matters pertaining to the sector, including engaging services of a suitable entity for the provision of drinking water and sanitation services to its constituents.

Implementation arrangements
The following institutional arrangements are envisaged:

1. Grant agreement between GPOBA and Naandi Foundation

2. Tripartite Performance Agreement: a legally binding document between Naandi and each Village Panchayat. In each agreement, a village will commit to:
   • Providing unencumbered access to a raw water source
   • Land for the treatment plant and storage tank
   • Providing electricity at a pre-agreed tariff for the treatment plant
   • Constructing a perimeter fence for the plant, and
   • Village contribution equivalent to 20% of the total cost of setting up and operating the plant in the village (US$10,000).

   Land tenure for the CSWS site will be a condition precedent for the Performance Agreement effectiveness. In addition, the agreement will set out the eventual transfer of ownership of the assets after the loans have been repaid by Naandi/WHI. This time period is anticipated to be seven years.

3. The relationship between Naandi and WHI will be regulated by a Memorandum of Understanding (MOU). The roles and responsibilities of the various actors will be:
   • Naandi Foundation: (i) Project coordinator, (ii) education and consumption adherence campaign, (iii) together with WHI provides pre-financing for the sum of US$32,000 per project to cover a portion of the subscription fee from 500 hh (subject to the GPOBA subsidy)\(^{19}\), and (iv) user-fee collection agent.
   • WHI: (i) Installation, operation and maintenance of water purification plant and tank, (ii) long term lender for the sum of US$8,000; and (iii) provider of operational performance guarantees.

C.2. Partnership arrangements
The Water and Sanitation Program (WSP)\(^{20}\), a partnership program between the World Bank and the United Nations Development Program to provide safe water and sanitation to developing countries, will provide support for monitoring and output-verification. Agreement has been reached that WSP

\(^{19}\) Commercial borrowing is expected to be raised by Naandi by using GPOBA award letter as collateral and Operational Guarantees provided by WHI the technology partner.
\(^{20}\) http://www.wsp.org
staff in India will produce a comprehensive report of project process and outcome, which serves as a reference for verification of subsidy disbursements.

C.3. Contractual Arrangements and Funds Flow

**Flow of Funds and disbursement arrangements**

Payments / reimbursements will be made on a per village basis as 20% on plant commissioning (implies that a technical test has been undertaken and the plant produces water to the agreed standard), 60% verification of 500 hhs registered and paid subscription fees, and the remaining 20% upon verification of three months of billed user fee consumption (represented by number of sold Water Coupons for a minimum of 500 hhs). 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 invoice 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. Payments application would be accompanied by the relevant written issued opinion of the Independent Verification Agent.

Disbursement will be made as a direct payment to Naandi as the Grant recipient. GPOBA will make no advance payments and as such no special account will be needed.

The written confirmation by the Independent Verification Agent will include the corresponding CSWS commissioning certificate, 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.

To provide for an independent verification of outputs, Naandi will in coordination with the Bank’s Water and Sanitation Program (WSP) and with the no objection of GPOBA, be responsible for the contracting of an independent verification agent firm that would conduct ex post reviews of the
completeness, accuracy and authenticity of documentation provided for each village as well as undertake ex post physical spot checks. Such technical audits would be conducted every three months.  

Administrative Arrangements
Naandi Foundation will oversee compliance with the conditions agreed on with GPOBA for all villages. It will process and submit applications for funds to GPOBA, maintain accounting records for ex-post reviews and manage the external annual audit.

Financial Management
Naandi will maintain an administrative unit responsible for financial and budget management, reporting and accounting. GPOBA is in the process of completing its assessment of Naandi’s financial management systems. If GPOBA’s evaluation on these systems is satisfactory, Naandi will utilize their respective financial management and reporting systems and will be detailed in the Operating Manual, which must be followed during the project’s life. Naandi will maintain project financial and auditing records for a minimum period of five years after completion of the project.

Annual project financial statements will be audited by the independent verification agent based upon the opinion of an independent auditor to be paid for by Naandi in accordance with International Standards on Auditing issued by the International Federation of Accountants (IFAC).

C.4. Milestones for project implementation

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Expected completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPOBA provides subsidy commitment</td>
<td>Mid January, 2007</td>
</tr>
<tr>
<td>GPOBA Grant Agreement signed</td>
<td>March, 2007</td>
</tr>
<tr>
<td>Tripartite agreements signed between Village Panchayats, Naandi and WHI</td>
<td>End March, 2007</td>
</tr>
<tr>
<td>Plant installation / construction begins</td>
<td>April, 2007</td>
</tr>
<tr>
<td>OBA subsidy disbursement begins</td>
<td>April, 2007</td>
</tr>
<tr>
<td>OBA subsidy disbursement ends</td>
<td>July, 2008</td>
</tr>
</tbody>
</table>
C.5. Monitoring and evaluation of outcomes/results

<table>
<thead>
<tr>
<th>SHORT TERM OR CONCURRENT OUTCOMES/RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outcome/Result area</strong></td>
</tr>
</tbody>
</table>
| 1. No. Of Households making upfront cash contribution for the project against No. of households Planned to be mobilized. | The project design envisages 1 to 2% upfront cash contribution from all the households of the respective Habitation/ Village out of 20% community contribution. Village Panchayat will mobilize this with the support of Naandi Team. | 1. Register of household contribution  
2. Minutes of Panchayat meeting  
3. Bank statement of Village Panchayat demonstrating community contribution in place |
| 2. Registration of households | Represented as paid Subscription fees | Minimum 500 HH registered for paid usage of water; Subscription Fee available from such HHs. |
| 3. No. of BPL households reached with safe drinking water. | One of the prime objectives of GPOBA support is to reach at least 500 households below the poverty line. Above this the project may reach additional no. of households who are either BPL or APL. | 1. No. of water coupons sold in the proceeding months to BPL households in the project operation  
2. Register of BPL households |
| 4. No. of households discontinuing use of unsafe water for drinking purpose | A project inventory will be developed on safe drinking water sources available for the Village Panchayat. A household visit questionnaire will be developed and will be canvassed by Naandi ‘Safe Water Promoter’ on a quarterly basis to each and every household. The outputs of the questionnaire will be tabulated and developed as a quarterly report. | Report of Household visit questionnaires on healthy practices |

**LONG TERM OUTCOMES/RESULTS FOR MID-TERM OR END PROJECT EVALUATION**

<table>
<thead>
<tr>
<th>Outcome/Result area</th>
<th>Description of the Outcome Area</th>
<th>Proposed Means of Verification</th>
</tr>
</thead>
</table>
| 5. Reduction in the incidence of water borne diseases | A 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 | 1. Report of Baseline survey  
2. Report of annual reconnaissance survey |
| 6. Reduction in the expenditure on medical and health grounds | Same as above | Same as above |

Note: On every monitoring visit by the Representative of World Bank’s Water and Sanitation Program (WSP), a comprehensive report of process and outcomes/results will be submitted. This will serve as a ready to use reference to verify the outcomes/results on the field.

C.6. Sustainability

The GPOBA Project incorporates sustainability into the project design itself and will work towards handing over the CSWS to the communities. Sustainability is ensured through the Tripartite Agreement that sets out the roles and responsibilities of all actors, the education campaign that accompanies the project development (and which is one of the verifiable indicators for GPOBA payment) and the mechanism to ensure  00% mobilization/collection of user charges, as well as the continued access to drinking water by at least 50% of total households in each village. Additionally, the proposed scheme ensures that there is accountability through regular reporting to Village Panchayat and feedback to appropriate government agencies at Mandal, District and State level. Critical for sustainability is that the project envisages, through the user fee charge scheme, the ability to plan and generate replacement funds towards continuing water treatment process beyond the life of the plant.
Naandi will work towards enhancing the capacities of the community to ensure project sustainability. The community will be:

- Allowed to grow in role and responsibility
- Take ownership of the CSWS Project
- Made aware of the benefits of safe drinking water practices and initiate changes in consumption behavior.

Other activities to ensure sustainability will include:

- The Village Panchayat will be encouraged to delegate its responsibilities to functional committees from among its members and also co-opted ones to not only generate demand for safe water, but also in promoting hygiene practices at personal, home and community level.
- Regular and meaningful monthly meeting of Functional Committee/User group will be convened, preferably with full quorum, to discuss and make decisions on:
  1. Quality and distribution of water supply
  2. Protection of raw water source and its catchments
  3. Mechanism/s for sale of water coupons and collection (of user charges)
  4. Environmental sanitation
  5. Hygiene practices in general, and practices related to water handling and use, in particular
  6. Setting user charges
- The existing water supply system that is useful for washing, bathing and other purposes will be effectively managed. The project will also strengthen the Village Panchayat to optimally utilize and protect these sources.
- Promoting water and sanitation bye-laws for the Panchayat

**Technical Sustainability:** The estimated service life of the CSWS is 15 years. The CSWS requires low maintenance and WHI has full responsibility for maintenance for the initial 8 years. Thereafter, maintenance will be on a contract basis as approved by the Village Panchayat. One of the ground rules that will be followed in this project is to recruit local people in all community level activities of the project. The process of recruitment will involve participation of Village Panchayat and will ensure that local capacities are built in managing the scheme and are available to the Village Panchayat beyond the term of Naandi/WHI management of the CSWS.

**Financial Sustainability:** As the CSWS Model is quite robust, it requires low maintenance and other associated expenditures. As per the socio-economic study, the willingness to pay is higher than the proposed price for provisioning water in the Project. Therefore it is expected that the O&M expenses and other associated costs of the CSWS will always be well within the user fee received ensuring the financial sustainability.
TECHNICAL ANNEXES

ANNEX 1. FINANCIAL MANAGEMENT (OP/BP 10.02) AND DISBURSEMENT (OP/BP 12.00) - To be completed
ANNEX 2. PROCUREMENT (OM, JULY 15, 2002)
ANNEX 3. ENVIRONMENT (OP/BP 4.01) To be completed
ANNEX 4. RESULTS FRAMEWORK AND MONITORING MECHANISMS
ANNEX 5. PROJECT PREPARATION AND SUPERVISION
ANNEX 6. DOCUMENTS IN THE PROJECT FILE
ANNEX 7. SAMPLE MOU BETWEEN THE VILLAGE PANCHAYAT AND NAANDI FOUNDATION
ANNEX 1. FINANCIAL MANAGEMENT (OP/BP 10.02) AND DISBURSEMENT (OP/BP 12.00) - To be completed
ANNEX 2. PROCUREMENT (OM, JULY 15, 2002)

A. General
Naandi Foundation will carry out all required procurement for the proposed project. Project procurement will be conducted in accordance with the World Bank’s “Guidelines: Procurement under IBRD Loans and IDA Credits” dated May 2004, and the “Guidelines: Selection and Employment of Consultants by World Bank Borrowers,” both dated May 2004, and the provisions stipulated in the Grant Agreement. The general description of various contracts under different expenditure categories is below. The specific arrangements will be further detailed in the Operational Manual.

B. Procurement Arrangements

B.1. Water Service Management Contract (WSMC)
The World Bank funds will help finance water service provision for target users in the 25 selected villages. Service provision will be provided by Service Units which consist of UV water purification plants and associated storage, and will be partly paid with output-based subsidies. The output-based subsidies will cover approximately 64% of the service package unit costs, and will be disbursed against outputs, which will consist of (i) the supply and construction of 25 UV water purification plants and associated storage tanks for each of the 25 selected villages, (ii) provision of service for the plant’s operation and maintenance for a defined period of seven years; (iii) local market awareness plan; and (iv) monitoring and evaluation of performance and consumption indicators.

The provision of these services will be delivered under a Water Service Management Contract (WSMC). The WSMC will be procured on the following basis:

• A temporary exclusive access and system installation right will be awarded to Naandi Foundation, which will service the largest number of users at a given total subsidy, for a time of seven years following the installation of the UV Service Units and associated storage tanks in each selected village.
• The subsidy payments will be tied to achievement of defined and measurable outputs and performance indicators measured after system installation.
• Naandi Foundation will reach the desired outputs from the UV Service Units water purification systems to match varying demand patterns of the rural population.
• Naandi Foundation will pledge to offer financing options to the users, allowing payments in installments.

B.2. Selection of the WSMC Provider
A sole sourcing arrangement has been judged to be a suitable solution for meeting the technical and financial requirements of the project. The contract for the selection of the WSMC Provider, estimated to cost more than the US$25,000 threshold, will follow World Bank’s procurement guidelines relating to sole source of goods and works. A sole source contract between Naandi Foundation and WHI has been assessed as a suitable solution to meet the Project’s needs.

The contract documents for the WSMC Provider will include performance specifications for the installation services. These specifications, among others, will include requirements for the compliance of the installations services with as defined by Indian legislation and regulations governing environmental, technical, metrology and quality standards.

Contract supervision of the goods and small works required to implement the WSMC for each of the selected villages will be conducted following the operational manuals and internal control procedures of
Naandi Foundation. The timing and sequencing of procurement and contracting decisions, including payment schedules to the WSMC Provider, and choice of the WSMC Provider of sub-contracts for the installation services will be at the discretion of Naandi Foundation, and therefore, preparation of detailed procurement plans will not be required.

The sole source selection will be conducted using World Bank’s standard bidding documents and contracts, in accordance to the technical and performance specifications subject to a no objection of the World Bank.

B.3. Consultants' Services
Consulting Services under this Project will include services to be provided by firms and individual consultants, such as: (i) auditing services; and (ii) 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 selection will be conducted using World Bank’s standard bidding documents and contracts will be carried out in accordance to the terms of reference subject to a no objection of the World Bank.

C. Capacity Assessment of the Naandi Foundation
Luis Tineo, a World Bank Senior Procurement Specialist, conducted a procurement capacity assessment based on OP/BP 11.00. Operational Memorandum on the Application of Paragraph 3.13 of the Procurement Guidelines to Cases Involving Incumbent Concessionaires (OPCS, October 14, 2005), for the expansion of existing facilities by an incumbent service provider not selected through internationally competitive bidding procedures. The assessment is recorded in files with GPOBA. The assessment focused on the issues and risks concerning the procurement by sole source means of WHI as the WSMC Provider for implementation of the Project. To conduct the assessment, Naandi Foundation provided information and corresponding supporting documentation of the market analysis it conducted when it selected WHI as technology and equipment provider in other projects. Specifically:

- Technical specifications for the water plants and associated tanks.
- Other suppliers’ market availability and prices based on the technical specifications for similar plants (with indication of whether they information was obtained by request or through advertisement).
- Advantages considered and grounds for rejection of another make or source of equipment.
- WHI technology as the least-cost solution and most suitable as compared with other available products.
- Confirmation that the required equipment is proprietary and obtainable only from WHI.
- Price and performance records of WHI equipment both in India projects and in other countries.
- The official price quote from WHI.
- The contracts, including the agreed technical specifications, terms of payment, insurance, delivery mechanisms, operation and maintenance, and performance guarantees, previously signed between Naandi Foundation and WHI.
The assessment also reviewed the organizational structure and capacity of Naandi Foundation to implement the Project, including the legal, financial and operational standing of WHI, its performance record both in India and in other countries under similar agreements as the proposed by Naandi Foundation, a review of IFC-financed operations with WHI, and interviews with World Bank water specialists with experience with WHI in India.

The assessment resulted favorable to Naandi Foundation’s proposed arrangement with WHI as the WSMC Provider, and recommended the following measures to be in place by Grant effectiveness:

- All procurement packages will be prepared by Naandi Foundation directly, and will be carried out in accordance with the Procurement Plan as agreed with the World Bank.
- The performance and technical specifications for the UV Water Service Systems will be certified by appropriate specialists appointed by Naandi Foundation.
- Naandi Foundation will forward the procurement packages to the World Bank for prior review and no objection. This includes specifically: (i) prior review and no objection of the proceedings for the sole source of the WSMC Provider; and (ii) prior review and no objection of the Terms of Reference of the project’s auditor and the consultants needed for contract supervision and monitoring and verification of outputs.

With these measures in place, the overall project risk for procurement is average.

D. Procurement Plan
The procurement and consultant selection methods, estimated costs, prior review requirements, and time frame have been agreed upon between Naandi Foundation and the World Bank in the Procurement Plan (see, table below). This plan has been prepared during project preparation by Naandi Foundation. The Procurement Plan will be updated in agreement with the World Bank as required to reflect the actual project implementation needs.

<table>
<thead>
<tr>
<th>Contract</th>
<th>No. &amp; Type</th>
<th>Total US$</th>
<th>Method</th>
<th>Preparatio &amp; Invitation</th>
<th>Evaluation &amp; Prior Review</th>
<th>Award &amp; Signing</th>
</tr>
</thead>
<tbody>
<tr>
<td>WSMC Provider</td>
<td>25 OBA</td>
<td>800,000</td>
<td>Sole Source</td>
<td>March 07</td>
<td>March 07</td>
<td>March 07</td>
</tr>
<tr>
<td>Monitoring &amp; verification of output services</td>
<td>1 Lump Sum</td>
<td>50,000</td>
<td>CQs</td>
<td>September 07</td>
<td>September 07</td>
<td>September 07</td>
</tr>
<tr>
<td>Auditing services</td>
<td>1 Lump Sum</td>
<td>50,000</td>
<td>LCS</td>
<td>January 08</td>
<td>January 08</td>
<td>January 08</td>
</tr>
</tbody>
</table>

E. Prior and Ex-Post Review
The World Bank will conduct a prior review of all contracts both for the selection of the WSMC Provider, and for consultant services. To streamline output-based project operations, the World Bank will not review any contract under the WSMC. These contracts will be subject to ex-post review by independent audit.

F. Frequency of Procurement Supervision
One supervision mission, at the end of the project, to carry out post review of procurement actions.

ANNEX 3. RESULTS AND MONITORING
Monitoring Indicators
The monitoring and verification of actual outputs for certification and subsidy disbursement will be undertaken by the Water and Sanitation Program (WSP), and supplied to Naandi and copied to the Government Authority [The Department of Drinking Water, Ministry of Rural Development, AP] for monitoring and tracking purposes. The Fiduciary Agent, 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.

<table>
<thead>
<tr>
<th>Output Based Aid to India State of Andhra Pradesh for Rural Community Water Project</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Verifiable Project Indicators</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project output(s)</td>
</tr>
<tr>
<td>Poverty targeting (surveys, community decisions, geographic)</td>
</tr>
<tr>
<td>OBA design period</td>
</tr>
<tr>
<td>Planned implementation period for outputs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financing</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPOBA</td>
</tr>
<tr>
<td>Donors</td>
</tr>
<tr>
<td>Govt</td>
</tr>
<tr>
<td>Local</td>
</tr>
<tr>
<td>Investment grants</td>
</tr>
<tr>
<td>Private sector investment finance, if any (own funds/loans)</td>
</tr>
<tr>
<td>Private sector finance mobilized for investments</td>
</tr>
<tr>
<td>Guarantors (if any)</td>
</tr>
<tr>
<td>Guarantee amount</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tender Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public tender of contracts (Y/N)?</td>
</tr>
<tr>
<td>Type of contract(s) tendered (if applicable)</td>
</tr>
<tr>
<td>Number of prequalified firms (if shortlisting)</td>
</tr>
<tr>
<td>OBA bidding variable</td>
</tr>
<tr>
<td>Use of incumbent providers (Y/N)?</td>
</tr>
<tr>
<td>Contracting period for operations (if applicable)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment cost per connection established</td>
</tr>
<tr>
<td>Subsidy per connection</td>
</tr>
<tr>
<td>Grant assistance per household connected</td>
</tr>
<tr>
<td>Outreach of OBA grant(s) to poor population</td>
</tr>
<tr>
<td>GPOBA payments proceeding according to plan (Y/N)?</td>
</tr>
<tr>
<td>Payments delay, if any</td>
</tr>
<tr>
<td>Local co-funding supplied as planned (Y/N)?</td>
</tr>
<tr>
<td>Tariff adjustment clauses respected</td>
</tr>
<tr>
<td>OBA service provider before project (public/private)</td>
</tr>
<tr>
<td>OBA service provider after project (public/private)</td>
</tr>
<tr>
<td>User assessment of project (no/poor/fair/good/very good)</td>
</tr>
<tr>
<td>Degree of local capacity building (none, low, medium, high)</td>
</tr>
<tr>
<td>Means of dissemination of lessons learned, if any</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of beneficiary households</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connection rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metric</td>
<td>Value</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------------------------------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>No. of new connections established</td>
<td>no.</td>
<td></td>
</tr>
<tr>
<td>Water sales per year</td>
<td>m3</td>
<td></td>
</tr>
<tr>
<td>Service availability (daily average)</td>
<td>h/day</td>
<td></td>
</tr>
<tr>
<td>Unscheduled water supply failures lasting more than 30 min.</td>
<td>no./yr.</td>
<td></td>
</tr>
<tr>
<td>Water tariff</td>
<td>UGX/m3</td>
<td></td>
</tr>
<tr>
<td>Affordability ratio (^1)</td>
<td>pct.</td>
<td></td>
</tr>
</tbody>
</table>

**Replicability**

- Pilot scheme or replication?
- Scheme introduced to other potential financiers (Y/N)?
- Scheme considered for replication/replicated (Y/N)?
- Funding of replications if any (government, donors)

\(^1\) Average water bill per household per month divided by average monthly household expenditure
ANNEX 4. SAFEGUARD POLICIES TRIGGERED BY THE PROJECT

<table>
<thead>
<tr>
<th>Safeguard Policies Triggered</th>
<th>Yes</th>
<th>No</th>
<th>TBD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Assessment (OP/BP 4.01)</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural Habitats (OP/BP 4.04)</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Forests (OP/BP 4.36)</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Pest Management (OP 4.09)</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Cultural Property (OPN 11.03)</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Indigenous Peoples (OP/BP 4.10)</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Involuntary Resettlement (OP/BP 4.12)</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Safety of Dams (OP/BP 4.37)</td>
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<td>X</td>
<td></td>
</tr>
<tr>
<td>Projects on International Waterways (OP/BP 7.50)</td>
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<td>X</td>
<td></td>
</tr>
<tr>
<td>Projects in Disputed Areas (OP/BP 7.60)</td>
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<td>X</td>
<td></td>
</tr>
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ANNEX 5. PROJECT PREPARATION AND SUPERVISION

GPOBA/World Bank Team:

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<tr>
<th>Name</th>
<th>Title</th>
<th>Unit</th>
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<tbody>
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<td>Luis Tineo</td>
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<td>Priyanka Sood</td>
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<td>Kumaraswamy Sankaravadivelu</td>
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<td>Ranjan Samantaray</td>
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<td>Suryanarayan Satish</td>
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<tr>
<td>Shellka Arora</td>
<td>Legal Associate</td>
<td>SARIM</td>
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Advisory team:

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<tr>
<th>Name</th>
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<th>Role</th>
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<tbody>
<tr>
<td>Patricia Veevers-Carter</td>
<td>Program Manager</td>
<td>Peer Review/Advisory</td>
<td>GPOBA/IEF</td>
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<tr>
<td>Irving Kucynski</td>
<td>Panel of Experts</td>
<td>Advisory</td>
<td>GPOBA</td>
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<tr>
<td>Alejandro Jadresic</td>
<td>Panel of Experts</td>
<td>Advisory</td>
<td>GPOBA</td>
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ANNEX 6. DRAFT MOU BETWEEN A VILLAGE PANCHAYAT AND NAANDI FOUNDATION

1. PROJECT OBJECTIVE
To supply potable water against collection of user fees to the inhabitants of (name of village) village for drinking and cooking

2. PROJECT DESIGN
To achieve the above objective, a water purification plant will be set up with the following main features:

2.1. Technology- Water purification technology that utilizes Ultra Violet radiation to eliminate disease-causing pathogens from water – ‘U.V. Waterworks’ patented by WaterHealth International

2.2. Minimum Capacity: 2500 liters per hour conditional on availability of sufficient water and electricity

2.3. Water Quality: Raw water purified by the system will fulfill water quality norms laid out by the government under BIS: 10500 –1991

2.4. Plant: A plant will be constructed to house the system and facilitate the convenient and regular supply of potable water to village inhabitants

3. ROLES & RESPONSIBILITIES
3.1 PANCHAYAT
The Panchayat shall be responsible for providing the following facilities to achieve the project objective

3.1.1. Common Water Resource: The Panchayat shall pass a resolution granting Naandi Foundation the right to use a common perennial water resource for the water purification project for a minimum period of 10 years. In addition, the Panchayat shall pass a resolution that prevents the water resource from being used for non-human consumption purposes on site. This rule must be binding on all village inhabitants

3.2.2. Land and Labour: The Panchayat shall provide sufficient land in a suitable location to set up the water purification plant. In addition, The Panchayat shall bear the cost for the work to make both water resource and land suitable for the water purification plant. e.g.- deepening of the tank, building a boundary wall. The final amount required will be decided jointly by Naandi and the Panchayat.

3.1.3. Electricity Connection: The Panchayat shall apply for a separate electricity connection in its name for the water purification plant

3.1.4. Financial Contribution: The Panchayat shall contribute $ 5000 or its equivalent in Indian Rupees towards the cost of the water purification plant. This amount shall be remitted into an account maintained with a Scheduled Commercial Bank within a week of this MoU being signed.

3.2 NAANDI FOUNDATION
Naandi Foundation shall be responsible for the following activities to achieve the project objective

3.2.1 Feasibility Survey: Naandi Foundation shall undertake a survey of village covering all aspects that are relevant to the design and feasibility of the water purification plant. Survey will include information such as existing water resources, water quality, and population and consumption pattern.

3.2.2. Financial Contribution: Naandi Foundation shall bring in the balance financial resources of $ 32,000 or its equivalent in Indian Rupees to meet cost of the water purification plant.
3.2.3. Civil Works: Naandi Foundation shall undertake the civil works to construct a plant to house the water purification system at a suitable location on a plot of land jointly identified by Naandi and the Panchayat.

3.2.4. Water Purification System - Design and Installation: Naandi Foundation shall design and install a water purification system to facilitate the continuous unhindered supply of potable water.

3.2.4. Norms for Supply of Water: Naandi Foundation shall facilitate the unhindered supply of treated water to those households covered by the (name of village) Panchayat subject to their registration as members of the service and timely payment of user fees. Naandi Foundation shall supply treated water to inhabitants of other Panchayats subject to the prior consent of the (name of village) Panchayat and their registration as members of the plant.

3.2.5. Water Purification System- Testing: Naandi Foundation shall test the quality of water purified by the installed system on a weekly basis. Water purified by the system shall fulfill the norms laid down by the Bureau of Indian Standards in BIS: 10500 –1991

3.2.7. Operations and Maintenance: Naandi Foundation shall facilitate the operations and maintenance of the water purification plant for a period of ten years from the commencement of sales of purified water to the community subject to a revision after every three years.

4. PROJECT TIMELINE
4.1 Naandi shall complete the constriction and installation of the water purification plant within 60 days of receiving the Panchayat’s contribution towards the cost of the water purification plant in the bank account created for the project.

4.2. In case of delays up to 30 days beyond the stated timeframe Naandi shall pay interest @ 5% to the Panchayat on the advance received from the scheduled date of completion to the actual date of completion.

4.3. In case of delays of 60 days or more beyond the stated timeframe, Naandi shall refund the advance received with interest of 10% from the scheduled date of completion to the actual date of completion.

5. CONDITIONS FOR NON-SUPPLY OF WATER
5.1 Naandi Foundation reserves the right to stop supply of treated water under the following circumstances:
Depletion of common water resources beyond a pre-specified level
Lack of electricity
Non-payment of user fees by registered members
Any other circumstances beyond Naandi’s control including natural calamities

6. TERMINATION OF THE PROJECT
6.1 In case of non-payment or non-cooperation by the Panchayat on any of the items from 3.1.1 to 3.1.4, Naandi reserves the right to stall the construction of the water purification plant or withdraw from the project.

This agreement shall be binding all successors of the signatories to this MoU.

For Naandi Foundation For (name of village) Panchayat

Chief Executive Officer President/Sarpa