INDIA

Kerala Rural Water Supply and Environmental Sanitation Project

Project Appraisal Document

South Asia Regional Office
Rural Development Sector Unit, South Asia Region

Date: October 11, 2000
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Project ID: P055454
Sector(s): WR - Rural Water Supply & Sanitation
Lending Instrument: Specific Investment Loan (SIL)
Theme(s): Water
Poverty Targeted Intervention: N

Project Financing Data

☐ Loan ☒ Credit ☐ Grant ☐ Guarantee ☐ Other (Specify)

For Loans/Credits/Others:

Amount (US$m): SDR 50.1 million ($65.5 million equivalent)

Proposed Terms: Standard Credit

Grace period (years): 10
Years to maturity: 35
Commitment fee: 0.75
Service charge: 0.50%

Financing Plan: Source	Local	Foreign	Total
GOVERNMENT	0.00	0.00	0.00
IDA	63.30	2.20	65.50
BORROWING AGENCY	6.80	0.00	6.80
LOCAL COMMUNITIES	10.70	0.00	10.70
LOCAL GOVTS. (PROV., DISTRICT, CITY) OF BORROWING COUNTRY	6.80	0.00	6.80
Total:	87.60	2.20	89.80

Borrower: GOVERNMENT OF INDIA
Responsible agency: GOVERNMENT OF KERALA
Kerala Rural Water Supply and Sanitation Agency
Address: PTC Towers, 3rd Floor, Thampanoor, Thiruvananthapuram 695 001
Tel: (91 471) 337006 Fax: (91 471) 337004 Email: krwsa@satyam.net.in

Other Agency(ies):
Rajiv Gandhi National Drinking Water Mission
Address: Paryavaran Bhavan, CGO Complex, Lodi Road, New Delhi 110 003
Tel: (91 11) 4361043 Fax: (91 11) 4364113 Email:

Estimated disbursements (Bank FY/US$M):

FY	2001	2002	2003	2004	2005	2006	2007	
Annual	3.5	9.6	14.2	15.0	11.9	9.1	2.2	
Cumulative	3.5	13.1	27.3	42.3	54.2	63.3	65.5	

Project implementation period: 6 years
Expected effectiveness date: 02/28/2001 **Expected closing date:** 12/31/2006

A. Project Development Objective

1. Project development objective: (see Annex 1)

The overall project development objective is to assist Government of Kerala (GOK) in improving the quality of rural water supply and environmental sanitation (RWSS) service delivery to achieve sustainability of investments. Specific project development objectives would be to: (a) demonstrate the viability of cost recovery and institutional reforms by developing, testing and implementing the new decentralized service delivery model on a pilot basis; and (b) build the state's capacity in improved sector management in order to scale up the new decentralized service delivery model statewide. This will assist GOK in furthering its sector related goal of increasing the access of Kerala's rural population, particularly the poor and socially disadvantaged groups, to drinking water supply and environmental sanitation services.

2. Key performance indicators: (see Annex 1)

Development objective 1: (a) by the midterm review (MTR), the cost recovery reforms and new decentralized service delivery model will be developed, tested, and successfully implemented in the first two batches of Gram Panchayats (GPs); (b) by the MTR, existing single panchayat water supply schemes currently owned by the state utility, the Kerala Water Authority (KWA) and/or GPs are taken over and managed by beneficiary groups (BGs) in the first two batches of GPs; (c) at the end of the project, operation and maintenance (O&M) of water supply and sanitation schemes fully financed and managed by BGs in the project GPs; and (d) at the end of the project, sanitation and hygiene behavior in the first three batches of GPs is significantly improved.

Development objective 2: (a) before the MTR, statewide sector information management system developed and operational; (b) by the MTR, the long-term sector policy and strategic plan for implementation will be developed; and (c) before the end of the project, GOK will have made a policy decision to scale-up the new service delivery model to cover all GPs in the state and will have begun its implementation in the four project districts.

B. Strategic Context

1. Sector-related Country Assistance Strategy (CAS) goal supported by the project: (see Annex 1)
Document number: R99-12 [IDA/R99-10] **Date of latest CAS discussion:** Progress Report: 02/18/99

The Bank's support will be in line with its Country Assistance Strategy (CAS) for India. The CAS details the strategic dimensions of future Bank support. These are to: (a) support states that commit strongly to reform; (b) build consensus and ownership of key areas of policy reforms with the partner clients; (c) focus on poverty alleviation activities; (d) give priority to social and environmental impacts; and (e) promote private sector development. Bank assistance to rural development will focus on supporting policy (e.g., cost recovery, privatization) and institutional reforms at the state-level (e.g., beneficiary participation, demand-driven development activities, and reorientation of the role and functions of the public sector's agencies).

The Bank finalized its lending strategy for future support to the RWSS subsector in India and outlined it in a generic project concept document (G-PCD) of October 1998. The G-PCD identified the minimum key policy and institutional reforms that would be implemented in the future Bank-assisted RWSS projects in India. These are to: (a) adopt a demand-responsive approach and use of participatory processes; (b) change the role of the government at all levels (state, district, and village) from direct service delivery to that of a facilitator; and (c) for the end-users, create partial capital cost sharing and 100%

financing and management of O&M.

The G-PCD is based on substantial sector work undertaken jointly by the concerned ministry of the Government of India (GOI), and the Bank (*India: Water Resources Management Sector Review, Rural Water Supply and Sanitation report, January 1998*), as well as knowledge gained from the Bank's global operational program, and thus represents a jointly-owned and promoted reform strategy between the Bank and GOI.

The GOI used the G-PCD to assess the interest of the candidate states leading to preparation of a short list of states, which were recommended to the Bank. Among the interested states, the Bank identified Kerala as the first state for assistance. Though Kerala is not a focus state for the Bank, it has been selected on the basis of its unusual sectoral merit. The main factors contributing to Kerala's unusual sectoral merit are: (a) political support and conducive policy environment for changing the role of the government and community empowerment; (b) devolution of substantial administrative and financial powers to local governments (GPs); (c) evidence of successful bottom-up community driven development planning and implementation; (d) evidence of targeting development programs to the poor and disadvantaged community groups; (e) good experiences in communities treating water as an economic good; (f) existing high levels of social capital; and (g) implementation capacity in the state, particularly through user groups, nongovernmental organizations (NGOs), and the private sector.

2. Main sector issues and Government strategy:

India: In India, drinking water supply and sanitation is a state subject. However, the GOI plays a major role in the sector. It formulates guiding policies, sets standards and provides technical assistance as well as substantial financial assistance to the states. Since the beginning of the Sixth Five Year Plan (1980–85) and the launch of the International Drinking Water Supply and Sanitation Decade, India has increased its commitment to the water supply and sanitation sector. Sector investments have increased and now constitute about 3% of the national budget (of which 60% is allocated to rural areas). Central government funding constitutes about 40% of total investment in the sector. The remainder is provided by the states and only a small amount (less than 5%) comes from external support agencies. Significant achievements in coverage have been realized, with over 75% of the rural population provided with public water supply facilities. Achievements in sanitation coverage have been far less (less than 10%) than in water supply.

National guidelines and investments have traditionally focused on extending coverage to rural areas, without ensuring the quality of services. Today, public RWSS services clearly do not adequately serve the needs of user communities. They are typically poorly designed and constructed, and often they are designed and positioned at sites without consideration to community needs or preferences. The planning of RWSS services also takes place without due attention to resource availability or quality, and are rarely financially viable; resulting in a government dominated and target driven service that has become unsustainable institutionally, financially, and environmentally. A major contributing factor has also been the availability of unconditional RWSS sector funding from the central to the state governments.

The GOI now recognizes the need to improve functionality and sustainability of the sector and has taken some bold initiatives in launching significant sector reforms. As stated in the Ninth Five Year Plan (1997 to 2002), GOI is committed to principles that: (a) treat water as an economic good; (b) increase people's participation; (c) reserve 20% of central funds to states promoting sector reforms; (d) create stronger links to watershed programs; and (e) control the over-extraction of groundwater. The principles that would be followed in allocating 20% of sector reform funds to states are to: (a) adopt a demand driven

approach and empowerment of villagers; (b) focus on village-level capacity building; (c) maintain an integrated approach to water supply, sanitation and hygiene promotion; (d) obtain a partial capital cost recovery and 100% O&M financing by the users; and (d) promote groundwater conservation and recharge measures [ref: Accelerated Rural Water Supply Programme Guidelines, Government of India, Rajiv Gandhi National Drinking Water Mission (RGNDWM), 1999].

The broader concept of financial sustainability for the RWSS sector has yet to catch hold in India. Though GOI is now moving towards 100% O&M cost recovery, it is not ready to initiate a policy of full cost recovery for RWSS projects (nowhere in the world are rural communities ready to cover costs of a major overhaul and/or the complete replacement of their systems).

Kerala: GOK has largely followed the GOI's policies and priorities for its RWSS programs. Until recently, drinking water services have been the sole responsibility of the KWA, a statutory agency set up in 1986. Most new capital investments (about $50 million annually) were implemented by KWA. Its emphasis has been on enhancing coverage for rural water supply services and on achieving full coverage for access to safe drinking water supply. The emphasis has been on building large piped water schemes based on distant surface water sources and covering multiple panchayats per scheme. The planning has been supply-driven without a demand perspective, and scheme operations have rarely satisfied the end-users.

Since 1997, decentralization received a major boost in Kerala with the "people's plan campaign" for decentralized planning through devolution of over a third of the state plan funds to local authorities as "untied grants". The main features of decentralization comprise transfer of functions and staff to local authorities, financial allocation through statutory and formula based transfers, and a participatory and rational local level planning process to ensure appropriate and equitable utilization of funds. It aims to be flexible while ensuring accountability and transparency in the process (details of Kerala's decentralization efforts are in **Annex 2, Attachment 1**).

With decentralization, GOK has taken a major policy decision to entrust the local authorities with the responsibility for RWSS, and to transfer all small rural water supply schemes to GPs with concomitant powers to levy and collect user charges for providing water services. Increasingly, most new capital investments in rural water supply, will be through GPs. In May 2000, a step to move closer to community driven development (CDD), GOK implemented a policy to empower BGs to make investment decisions, independently manage development funds, plan and construct water supply schemes, and manage scheme operations. A major spin-off of devolution of funds has been a quantum jump in internal resource generation by the GPs and BGs, accelerating the pace of rural development in Kerala. In addition since 1998, the GOK has focused its attention on sanitation, as well through setting up the Total Sanitation and Health Mission (TSHM); which aims to facilitate a self-sustained health and environmental sanitation program managed and replicated by local initiatives.

Major sectoral issues in Kerala are: inadequate coverage, poor quality of service, inability of investments to generate resources for operations and expansion, and renewal and failure of the KWA. Some related issues are:

(a) Lack of perenniality of water resources: Despite the high rainfall throughout the state (annually 3,000 mm), many rivers run dry in summer, resulting in drought conditions in several districts. In addition, most drinking water wells dry up during three to four summer months, and during this time women have to fetch water from long distances--which causes severe hardship, inconvenience, and results in lost time.

(b) Small versus large water supply schemes: In view of the past failure of large schemes based on nonlocal water sources, extensive availability of traditional local water sources and their demonstrated success, as well as user preferences for them, the emphasis of future schemes needs to shift to smaller schemes. Large multivillage schemes should be considered only in a few cases, where the bottom-up planning process has clearly established that local sources are not feasible (e.g., in coastal GPs).

(c) Decentralization and transfer of small rural schemes: Making the GOK policy operational will be a challenge, in view of the range of ownership, past liabilities, and legal issues as well as likely resistance from KWA and lack of incentives to GPs and BGs. Thus, the transfer strategy will have to address these issues and develop incentives to beneficiaries by providing higher service level at lower costs.

(d) Sanitation and water quality: Sanitation coverage in terms of availability of household latrines is relatively very high in Kerala (over 50%) as compared to the national average (less than 10%). However, because of the high permeability of soil in most parts, the type of technology used for latrines and the proximity and high density of open wells in Kerala, there is a possibility of pollution of drinking water sources, especially the open dug wells which are used by a large proportion of the population. Water quality monitoring is not practiced and measures to control water quality are rarely taken. This requires closer investigation, attention, and corrective measures.

(e) KWA's Role: Under the Kerala Water Supply and Sewerage Act, 1986, KWA aimed to become a largely autonomous and commercially-oriented organization. In practice, its powers are limited and its role restricted by the GOK. KWA has no control over personnel policy and water supply tariff revision remains subject to government approval. Tariffs are not raised regularly, as needed to meet full operational cost (the last tariff increase was in 1999, after a gap of five years). KWA is given only limited powers to decide on contract awards. Every year KWA has incurred an operating deficit due to low tariffs, excessive operating costs, and low cost recovery from the users. The GOK capital grants are diverted to meet KWA's administration costs. Overall, KWA's effectiveness is seriously eroded because of a range of reasons, both within and outside its control. With the beginning of decentralized service delivery, the role of KWA in RWS service delivery will be very limited. Thus, there is a need to identify a new role for KWA (bulk supply, technical advice, planning, regulatory body) and to implement the necessary organizational restructuring.

(f) Financial issues: Self-financing of new or upgrading existing infrastructure through cost recovery will be difficult to implement in the near future in rural areas, but a beginning needs to be made through appropriate policy changes and political support and a reorientation of users' perceptions that they should pay for good quality services.

(g) Improving sector information: Good information on sector status, sector institutions, resources and their performance is not available in a systematic manner. Developing and managing sector information and access to comparative information and best practices is necessary to enable local suppliers to assess their performance and attain quality improvements.

3. Sector issues to be addressed by the project and strategic choices:

Kerala and India, with support from the Bank, intends to make a number of strategic choices in implementing the project. These are aimed at moving from a demand-responsive approach to one that is community driven, and to initiating the process of scaling-up the sector reforms nationwide. These are:

(a) Community driven development: The project will provide the community organizations with the authority and control over decisions and resources and direct responsibility to manage internal and external resources and to make allocation decisions. This is expected to make allocations more responsive to the poor, lead to more sustainable outcomes, and increase the power of poor communities to negotiate. Key principles of CDD that would be operationalized are: (i) self-selection of GPs and BGs, (ii) empowering BGs, (iii) focusing on sustainability, and (iv) learning by doing. Empowerment will be supported by providing a legal framework to the BGs through autonomy, subsidiarity, inclusion, transparency, accountability, convergence, and using the community contracting procurement method. Sustainability will be addressed through cost recovery, local capacity building, policy support, conducive institutional framework, and institutional sustainability for scaling-up.

(b) Integrated approach: The project will integrate implementation of the water supply with sanitation and environmental management, promote sanitation and hygiene awareness, and recognize and promote cross sectoral linkages (education, health, rural development, women's development programs, etc.) to maximize the health and economic benefits of improved water supply service.

(c) Targeting the poor: The project includes specific interventions to target the poor, tribal population, and women. The higher proportion of the population "below the poverty line" (BPL) in a GP is one of the main criteria for selection of GPs. Separate programs for women and tribal development would specifically aim to increase their capacity and empower them.

(d) Improving water resources management: The project will support improved water resources management in Kerala by promoting water conservation and recharge measures, enacting and implementing groundwater legislation, promoting integrated management of local water resources by the BGs and GPs, and promoting roof-water harvesting. In September 2000, GOK approved the draft groundwater act, and it is expected to be endorsed by the Legislative Assembly in the near future.

(e) Scaling-up sector reforms: In addition to implementing the project in Kerala, the project will contribute to the sector reforms by conducting policy studies and workshops, improving the sector information data bases, and building the capacity of GOK and GOI in implementing sectoral reforms.

C. Project Description Summary

1. Project components (see Annex 2 for a detailed description and Annex 3 for a detailed cost breakdown):

The key objective of the project is to build the new decentralized service delivery model and finance sustainable water and sanitation facilities in some 2,500 communities. In order to achieve this, technical assistance (TA) will be provided to BGs, GPs, and to the Kerala Rural Water Supply and Sanitation Agency (KRWSA) for learning and project management (Components A and B). Further, policy lessons

will be monitored, evaluated, and mainstreamed by GOK in the state policies (Component C) and by GOI in national policies and programs (Component D).

Component	Sector	Indicative Costs (US$M)	% of Total	Bank-financing (US$M)	% of Bank-financing
(A). Institution Building covering project management and capacity building	Institutional Development	11.10	12.4	8.70	13.3
(B). Community Development and Infrastructure Building	Rural Water Supply & Sanitation	75.20	83.7	53.40	81.5
(C). Statewide Sector Development	Agency Reform	1.30	1.4	1.30	2.0
(D). National Sector Development	Agency Reform	2.20	2.4	2.10	3.2
Total Project Costs		89.80	100.0	65.50	100.0
Total Financing Required		89.80	100.0	65.50	100.0

2. Key policy and institutional reforms supported by the project:

Key policy and institutional reforms focusing on sustainability and CDD that would be implemented under the project are to:

- adopt a demand-responsive approach to service delivery and use of participatory processes;
- shift the role of the government (at the state, district, and GP levels) from direct service delivery to that of planning, policy formulation, monitoring and evaluation (M&E), and partial financial support; and
- partial capital cost financing and 100% of O&M financing by BGs.

The major institutional reform would be the change in the public sector function so that in the future, all levels of the government will give up the current function of direct service delivery and take on a facilitating role by assisting the BGs in planning, designing, and constructing schemes in their sustainable operations. The new service delivery model will essentially consist of a partnership between the state-level facilitating agency, GPs, and the BGs. Accordingly, a state-level agency was set up in November 1999, and its memorandum of association (MOA) and bylaws agreed with the IDA. KRWSA will initially be responsible for managing the project's implementation and later for scaling-up its operations to cover the entire state in a phased manner. Kerala has begun adopting a demand-responsive approach and using participatory processes under the decentralized planning process (People's Plan Campaign). The project will further strengthen these reforms by empowering the BGs and BCs to define and implement their own RWSS development agenda.

Cost recovery reforms: As an expression of their commitment to participation and ownership in the scheme, beneficiaries and GPs will contribute to the capital cost of the scheme, with a portion to be paid up-front in cash. GPs and beneficiaries have agreed to the following rules for cost sharing:

Component	Beneficiary and GP Contribution * (percentage of construction costs estimated at market prices as contained in the Detailed Scheme Reports)
Drinking water schemes (up to 70 lpcd) with associated groundwater recharge measures	15% plus cost of private connection (additional 10% by GP)
Drainage and pilot environmental management schemes	0% (but 30% by GP)
O&M of water supply and drainage schemes (recurrent costs, maintenance and repairs, pump replacement, and water source insurance)	100% (0% by GPs)

* Detailed rules for implementation of cost recovery (when, how) and their link to positive triggers have been agreed (refer **Annex 2, Attachment 6**). For the tribal development plan, lower levels of beneficiary contribution will apply, as included in the PIP.

For the new household latrines, the project will provide a fixed subsidy of Rs. 2,000 per unit only to BPL families in the participating BGs. All costs above the subsidy amount will be borne by the beneficiary. The project will also promote the conversion of existing unsanitary latrines into sanitary ones. The project will provide a fixed subsidy of Rs. 500 per unit to the members of the participating BGs for such conversions, subject to a ceiling of about 100 latrines per GP. Depending on the response in Batch 1, KRWSA will consider providing this subsidy to a larger number of existing latrines per GP, but within the GP's overall budget allocation.

3. Benefits and target population:

Benefits: The project is expected to directly benefit 1.5 million people (about 5% of the state's population). Communities in project villages (particularly the poor and vulnerable groups) would benefit from an improved and sustainable water supply and environmental sanitation services through time savings in collecting water, better health from more and cleaner water, and improved sanitation and hygiene practices. Women would be the primary beneficiaries. In addition to these direct benefits, women would benefit through their full membership in the BCs responsible for the project at the user-group level, and through specific components designed to empower them and provide them with additional income opportunities.

GPs participating in the project will benefit from the GP strengthening programs, increased generation of internal resources from the beneficiaries, and full O&M burden sharing by the BGs. The NGOs and private sector would benefit from the increased opportunities to provide efficient services, technical assistance (TA), and setting up supply chains to rural communities. Their participation would provide additional employment opportunities to the skilled technicians and professionals in the project area.

GOK will benefit from the improved institutional capacity to facilitate and scale-up community driven and decentralized RWSS service delivery in the state. GOK's financial position would improve because of lower scheme costs when built by the communities, and capital cost sharing by the beneficiaries and local governments. The communities' assumption of full responsibility for O&M would reduce the state's recurrent expenditure budget; and the presumption of the investments' longer life due to better O&M would reduce the capital replacement interval. The cost recovery and institutional reforms promoted under the project would eventually bring similar benefits to rural communities throughout the state. GOI will benefit from strengthening its capacity to move forward with its national sector reform agenda.

Target population: The project will be implemented in about 80 GPs in four contiguous districts: Kozhikode, Mallapuram, Palakkad, and Thrissur. GOK has selected these districts because they have severe problems with the availability of drinking water, and a larger proportion of poor and socially disadvantaged people. GPs will be included in the project by adopting a self-selection process, a prerequisite of demand-driven development. The four selection criteria for GPs are: (a) higher proportion of poor and vulnerable groups; (b) severity of water scarcity; (c) low-level of latrine coverage; and (d) higher level of implementation capacity. About 25 BGs in each selected GP will be included in the project. In addition to these 80 GPs, the project will provide targeted assistance to the tribal population in nine GPs in the project districts.

4. Institutional and implementation arrangements:

Institutional Arrangements

GOK has overall responsibility for implementing the state project and the national component with the GOI's RGNDWM. The main implementing agencies will be:

Component A (Institution building)	KRWSA on behalf of its general body
Component B (Community Development and Infrastructure Building)	BGs, GPs, SOs, and KRWSA
Component C (Statewide Sector Development)	Secretary Irrigation and Water Supply GOK, and KRWSA
Component D (National Sector Development)	GOI's Rajiv Gandhi National Drinking Water Mission

State Project (Components A, B, and C)

The project's implementation model has four main partners: KRWSA with its four district project management units (DPMUs), GPs, BGs, and SOs. BGs will be responsible for defining their RWSS development agenda, preparing and implementing the schemes, and managing scheme operations on a sustainable basis. KRWSA and GPs will be responsible for facilitating project activities and providing financial assistance to BGs. SOs will assist KRWSA, GPs, and BGs in providing community development, engineering, and management support.

GOK and KRWSA

GOK's Irrigation and Water Supply Department (IWSD) will be the nodal department for the project. The Secretary of IWSD will be the focal point for the liaison activities between IDA and GOK. The Secretary of IWSD will be responsible for implementing statewide sector development programs (Component C) with KRWSA's active sharing of responsibility, but in collaboration with other state-level agencies, notably the KWA. GOK has set up an exclusive state-level institutional structure, KRWSA, to plan and complete project preparation and later take on management responsibility for project implementation. KRWSA has been set up as an autonomous registered society with the secretary of IWSD as its chairman. DPMUs will be set up to manage the project at the district-level, with state-level support from KRWSA. Two DPMUs have been set up and are fully functional; the two remaining DPMUs will be set up before March 31, 2001.

KRWSA will have the overall responsibility to ensure that the project's development objectives are fully achieved. Its main functions will be to: plan and facilitate implementation, build the capacity of all project partners, recruit and manage support organization (SOs), provide technical, financial and

management support to GPs and BGs, ensure appropriate procurement practices, high quality of engineering designs and construction, manage project funds, and M&E. It will also be responsible for statewide sector development activities and reporting the project's progress to IDA.

While recognizing that all government departments/agencies have some connection with the RWSS sector, it should be linked with project activities, their role would be generally in the form of information, guidance, and capacity building. Thus, KRWSA will primarily act as a single delivery channel for providing assistance to GPs and BGs in implementing the project.

GOK will ensure that KRWSA's "autonomous" status is not compromised and only those decisions are referred to GOK which do not fall in KRWSA's own authority and mandate as per its MOA and the bylaws agreed with IDA. KRWSA's composition, functions, and operational procedures have been agreed and are included in the project implementation plan (PIP). KRWSA will be headed by an officer of the Additional Secretary (at least) of GOK, and have a multidisciplinary team of about 25 specialists in finance, human resource development (HRD), M&E, water supply and sanitation engineering, and sanitation and hygiene promotion, policy and strategy development, and procurement. At least half of the staff of KRWSA and DPMU will be from the private sector and NGOs, and will be recruited on contract basis. The staff composition will also reflect an adequate gender balance. Most of the staffing and other actions have been completed and reflect these principles. To facilitate implementing statewide sector development (Component C), the executive director of KRWSA would be designated as an ex-officio secretary of corresponding rank to the GOK's IWSD.

DPMUs will be the district offices of KRWSA and will assist KRWSA in discharging its district-level functions. On completing the first batch of schemes, KRWSA will delegate many of its operational functions to the DPMUs and it will mainly focus its attention on: (a) monitoring and evaluation, (b) distilling lessons learned and adapting the project implementation rules, processes, and procedures, (c) long-term sector policy formulation and developing strategic plan for statewide implementation, and (d) finalizing plans for scaling-up the project's decentralized service delivery model to cover the entire project districts, and to operationalize these in the final year of project implementation.

Gram Panchayat

GP will be the focal point for project activities in the GP area. GPs will be mainly responsible for seeking project assistance following a self-selection process, preparing the implementation phase proposal during the planning phase, and for facilitating project implementation by BGs during implementation phase. GPs will provide counterpart funding to BGs as a percentage of infrastructure building costs. During the post-implementation phase, the GPs will monitor the sustainability of scheme operations and ensure that the BGs satisfactorily discharge their O&M management function including levying and collecting user charges from the beneficiaries to fully recover the recurrent O&M costs.

Beneficiary Groups and Committees

The BGs will be responsible for planning, technology selection, and constructing their RWSS facilities, providing their part of the capital cost contribution, managing O&M of the improved facilities, and levying and collecting sufficient user charges. Representative BCs will be set up by each of the participating BGs. Their composition, functions, method of selecting members, bylaws, legal framework, and relationship with the GP and KRWSA have been agreed. The project would make vigorous efforts to maximize women's representation and management role in the BCs. The project rules require that membership of BCs would be at least 50% women, and 20% from socially disadvantaged groups (where

available). At least one of the top management positions of the BC (president or treasurer) will be held by a woman.

Support Organizations

NGOs and private sector consultants will play an important role in the project as SOs. There will be three categories of SOs. The first will support the GPs, BGs, and beneficiar committees (BCs), on a day-to-day basis in planning and implementing the project's activities, and providing brief support to BGs during post-implementation to stabilize scheme operations. The second will be a range of government-supported local autonomous institutions that will assist the project in its capacity building programs, or providing specialized assistance--such as in the of preparing groundwater recharge schemes, water quality monitoring, or in developing strategy and materials for sanitation and hygiene promotion programs. The third category will be private sector consulting firms which would provide assistance in computerized financial management systems, audits and accounts, design engineering of multipanchayat water supply schemes, independent construction quality monitoring, management information systems (MIS), and M&E in statewide sector development activities.

National Component (Component D)

The objective of the component is to provide technical assistance to GOI (represented by RGNDWM) in furthering its sector reform agenda, countrywide. This will be achieved through building RGNDWM's capacity in reform implementation. This will include policy workshops, HRD, training and study tours, developing knowledge banks, and their networking. RGNDWM will prepare a detailed report covering activities and implementation plan before March 31, 2001. It will designate an officer to GOI (not below the rank of deputy secretary), to be responsible for implementing the national component.

Implementation Arrangements

Schedule: The project will be implemented in 80 GPs in five successive but overlapping batches, consisting of 5, 15, 20, 25, and 15 GPs respectively. A detailed project implementation schedule has been developed for a six-year project implementation period from January 2001 to December 2006 (**Annex 2, Attachment 4**). Each batch would follow a 27-month scheme cycle consisting of four distinct phases (preplanning-3 months, planning-12 months, implementation-8 months, and post implementation-4 months). Because of their special community empowerment needs or technical complexity, the scheme cycle for a few multipanchayat schemes and the tribal schemes will last longer and will be spread over a 30- to 36-month period. Agreement has been reached on the scheme cycle to be adopted for small schemes. The scheme cycle for large schemes and tribal schemes will be developed during the first year of implementation.

The scheme cycle for implementation of Component B (**Annex 2, Attachment 5**): An innovative scheme cycle has been developed in partnership with all the key stakeholders during the preparation missions. This will be an important tool for implementation planning and monitoring of project activities and provides a unique calendar for all the project partners to precisely know the activities, scheduling and sequencing, respective responsibilities, the interdependence of activities, and the tools required to perform each activity. The scheme cycle is not intended to be a process blue-print, but would be flexibly used to accommodate the needs of the people, GP and the schemes on a case-by-case basis. However, experience has shown the need and utility of using such a tool to bring order and cost effectiveness in implementing the project's CDD approach. This process is also synchronized with GOK's annual decentralized planning process. The main activities and outputs of each phase are summarized below.

(a) Preplanning (about 3 months - August to October). The main activities would be SO prequalification, GP selection, and the signing of a planning phase tripartite agreement (PPTA) between KRWSA, GP, and SO. A rigorous SO prequalification process (**Annex 2, Attachment 7**) has been agreed and will be strictly followed. GPs will be selected based on an agreed systematic self-selection process (advertising, receiving applications, ranking and prioritizing in line with agreed selection criteria and final selection). The process will be carried out at the commencement of each batch. The preplanning phase will conclude with signing of the PPTA between KRWSA, GP, and SO. There will be one PPTA per GP. Model agreements (stipulating roles and responsibilities of each party) have been developed for the PPTA and agreed with IDA.

(b) Planning (12 months - November to October). The sequential main outputs in the first four months will be: orientation and capacity building for GPs and SOs, take-over of existing KWA schemes by GPs, BG registration, forming the BCs, opening bank accounts, resource mapping, and preparing and signing the "agree to do" reports between KRWSA and GP. Subsequent activities will be: technology selection, preparation of engineering designs and community action plans, and finally a comprehensive implementation phase proposals (IPP) for the GP as a whole. The GP, BC, and BG capacity building, sanitation and hygiene promotion (SHP), and women's development programs would be parallel activities throughout the planning phase. The planning phase would conclude with signing of an implementation phase quadrilateral agreement (IPQA) between KRWSA, GP, SO, and the participating BGs. There would be one IPQA per BG. A separate implementation phase tripartite agreement (IPTA) would be signed between SO, GP, and KRWSA for managing SO contracts. The GP and BGs would also deposit further installments of their cash contribution to make the implementation phase effective. Model agreements have been developed for IPTA and IPQA and agreed with IDA.

(c) Implementation (8 months - November to June). The main activities will be: procurement of materials and construction of schemes as per agreed plans and procedures and management of project funds. BCs will carry out these activities. The SOs will have daily responsibility for providing technical and management support to the BCs. Communities may decide to use small local contractors or build the schemes themselves. During the implementation phase, KRWSA will conduct O&M skills and management training programs for the BCs and the prospective scheme operators. Sanitation and hygiene promotion activities, and women's development programs will continue during the implementation phase. KRWSA and GPs will oversee the performance of the BCs. KRWSA and GPs will jointly manage the SO contract. Collecting 50% of the estimated annual O&M costs by the BCs will be the condition of release of GOK's third and final installment of construction funds. KRWSA will also conduct concurrent and independent audit of the quality of construction. The model document will be prepared for implementation completion report (ICR) for each scheme.

(d) Post-Implementation Phase (4 months - July to October). During this phase, the GPs (supported by SOs) would provide advisory support to the communities in efficient O&M of improved services, on billing and collection of water charges, and in simple book-keeping. The signing of ICRs in public gatherings by KRWSA, GP, and BCs will mark the formal exit of KRWSA from a project GP. KRWSA will conduct sample sustainability monitoring and later impact evaluation studies to measure sustainability and assess the project outcome.

Financial Management

GOK has committed to release to KRWSA the project funds included in the approved annual state budget as equity grant. GOK recognizes the importance of externally-aided projects in its internal financial management, and during negotiations assured IDA that it would endeavor to provide advance funds to

KRWSA to match the requirements of the agreed project implementation schedule. The ongoing Kerala Forestry Project (Credit 3053-IN) has received adequate budgetary support and funds from GOK. The agreed funds flow arrangements are described in detail in **Annex 6**.

KRWSA, with the help of consultants, is in the process of implementing computerized financial management systems, that are compatible with IDA's Loan Administrative Change Initiative (LACI) requirement. KRWSA has appointed a finance director to head the finance and accounting function; and is assisted by a finance manager who is a chartered accountant with private sector experience.

KRWSA will appoint an independent chartered accountant firm to audit KRWSA's and the DPMU's account books, and to certify the annual project financial statements. KRWSA will also appoint separate audit firm(s) to audit and certify the use of funds by SO, GP, and BC during the preplanning, planning, and implementation phase of each batch. For providing training and implementation assistance in accounting and reporting to SOs, GPs, and BCs, KRWSA will appoint two chartered accountant firms.

Monitoring and Evaluation

Monitoring and operational learning are a central aspect of this project. Improving project management and implementation and effectiveness of all relevant players and stakeholders--BGs, GPs, SOs, KRWSA/DPMU, and GOK--is an ongoing activity and will be developed over the course of implementation. Benchmarks to measure this would be agreed at an early stage of implementation. Details of the proposed M&E system are given in **Annex 2, Attachment 8**. A three-part M&E system has been proposed: (a) progress monitoring (physical, financial and milestones); (b) process monitoring by which development outcomes are to be achieved; and (c) impact evaluations; (a) and (b) would be conducted continuously throughout the project.

- KRWSA will be responsible for monitoring the progress at all levels through a an MIS (computerized). Activities to be monitored would include both physical and financial progress, as well as milestones in the scheme cycle.
- The process monitoring is crucial for rapid adjustment to project design/approach based on implementation experience. KRWSA will undertake this through data generated by the MIS. It would use this information and its own assessments to judge the quality of project implementation, particularly, client satisfaction at the BG-level with project inputs and mechanisms to ensure inclusiveness. The approach to process monitoring would encourage self-assessment by BGs. There would be periodic monitoring by user groups themselves of progress in implementation of agreements, and in the performance of project staff, GPs, and SOs in facilitating implementation.
- Impact evaluations by an independent agency will be carried out in three stages. The first stage would establish the baseline. The second stage would coincide with the MTR of the project--by this time it will be possible to evaluate the project's success in developing the institutional model. The third stage would evaluate the sustainability of the institutional model and its impact in reaching the rural poor as well as degree of participation by the poor and vulnerable in decision making bodies. A list of indicators to be tracked by the M&E system is given in **Annex 1**. These will be refined during implementation.

Reporting--Midterm, and Completion Reviews

KRWSA will be responsible for preparing a consolidated (every six months) progress reports to be submitted no later than September 30 and March 31 of each year for the preceding six months, in the format agreed with IDA. The purpose of these reports will be to provide IDA and GOI with timely

information on the project's progress, and to highlight problems in achieving the development objectives. The progress reports would focus on the agreed monitoring indicators.

A MTR will be held no later than June 30, 2003, and the recommendations of the review will thereafter be implemented no later than December 31, 2003. The MTR would establish progress of the main project objectives. To this end, the review would focus on the key indicators presented in **Annex 1**. The MTR would be an in-depth assessment of implementation experiences and an opportunity to change course where appropriate.

D. Project Rationale

1. Project alternatives considered and reasons for rejection:

Centralized service delivery: One option was to simply provide funds to the existing lead sector institution (KWA) for project implementation and attempt to introduce statewide policy and institutional reforms. KWA's transformation from a supply driven, target oriented entity, into a service oriented organization will not be practicable in the short-term. Further, GOK has taken a policy decision to decentralize RWSS service delivery to Panchayati Raj institutions in general, and to the GPs in particular. This option was therefore rejected.

Decentralized service delivery through district governments: A second option was to assign complete responsibility for project activities to the district governments (district panchayats). Under the 73rd Amendment to the Constitution, the GOI, and state governments are committed to decentralized administration and to devolution of RWSS service delivery responsibilities to the Panchayati Raj institutions. In Kerala's decentralization process, the GPs have been given the lead role in decentralized planning and implementation of development programs. Thus, the focus of empowerment in future will be GPs and the decision making and implementation capacity of the district administration will continue to be very limited. Making the district governments a centerpiece of development planning would be against the GOK's decentralization approach and against the principle of CDD. This option was therefore rejected.

Decentralized service delivery through GPs: A third option was to channel funds directly to the GPs as a part of their broader multisectoral development program. This approach is already established in Kerala under its decentralized planning and implementation and would have been an ideal candidate for this project. This option has therefore been selected except that the GPs will implement the project in partnership with KRWSA, BGs, and SOs and not by itself for the following reasons: (a) need to empower individual BGs within a GP to ensure CDD and to include the poor and socially disadvantaged groups, (b) need to provide external support for building the capacity of the BGs and GPs in planning, construction, O&M management, and consideration of the high scale of investments, in financial management, (c) to provide continued, reliable O&M back stopping, there is a need to build the private sector's capacity. All this would require development of state and district organizations. Hence this stand-alone option was rejected.

Single sector vis-à-vis multisectoral approach: RWSS development is not a single sector approach since it will involve integrated delivery of water supply, environmental sanitation, health and hygiene promotion, and improved water resource management at local levels. It will build womens' and the communities' capacity for a specific task to which they give top ranking in terms of its potential to improve the quality of their lives. Adding additional sectors in one project would put unsustainable stress on the implementing agencies and may dilute the quality of implementation. The project support will be

voluntary, and only those GPs will participate that give the highest ranking to improving drinking water and sanitation services. Though the project will finance only water and sanitation related development activities, GPs will continue to implement other sectoral developments which will be financed from the substantial plan funds devolved to the GPs by GOK. In addition, a flexible fund of Rs. 5 lakhs ($11,300) will be provided to each GP to carry out their choice of development work. Thus, the project will be nicely placed in the GPs multisectoral development agenda, and finance the most important part of their agenda.

The proposed option. Experience from various Bank-assisted and other donor-assisted projects in India (and elsewhere) have already shown that the intended cost recovery and institutional reforms are viable. However, considering the size of the Indian states and the large diversity in their social, cultural, economic conditions, and their natural resource endowments, what is needed is operationalizing the reforms in a "learning by doing" mode and then scale them up for statewide implementation. The project would therefore develop a new institutional model for facilitating decentralized RWSS service delivery and establish the *modus operandi* for functioning on a pilot basis. The new model is designed to overcome the weaknesses of the various current models.

2. Major related projects financed by the Bank and/or other development agencies (completed, ongoing and planned).

Sector Issue	Project	Latest Supervision (PSR) Ratings (Bank-financed projects only)	
		Implementation Progress (IP)	Development Objective (DO)
Bank-financed			
Rural Water Supply and Sanitation (ongoing)	Uttar Pradesh RWSS	S	S
Rural Water Supply and Sanitation (ongoing)	Karnataka RWSS	S	S
Rural Water Supply and Sanitation	Maharashtra RWSS	S	S
Urban Water Supply (ongoing)	Second Chennai WSS	S	S
Urban Water Supply and Sewerage	Third Bombay WSS	U	U
Urban Water Supply and Sewerage	Second Bombay WSS	U	S
Urban Water Supply and Sanitation	Hyderabad WSS	S	S
Water Supply and Sanitation	Tamil Nadu WSS	S	S
Water Supply and Sanitation	Kerala WSS	U	S
Water Supply and Sanitation	Gujarat WSS	U	S
Water Supply and Sanitation	Rajasthan WSS	S	S
Urban Water Supply and Sanitation	Madras (Chennai) WSS	S	S
Other development agencies			
UK DFID	Maharashtra RWS		
DANIDA	State projects in Karnataka, Orissa, Tamil Nadu, Kerala		
The Netherlands	State projects in Gujarat, UP, AP, Karnataka, Kerala		

IP/DO Ratings: HS (Highly Satisfactory), S (Satisfactory), U (Unsatisfactory), HU (Highly Unsatisfactory)

3. Lessons learned and reflected in the project design:

International experience: The sector reform principles from the Dublin-Rio conference (1992), the Global Community water and sanitation conference (Washington, May 1998) organized by the World Bank Institute and the findings of the Bank's Operations Evaluation Department's (OED's) global study of 12 RWSS projects (February 1999) synthesize the lessons learned from international experiences in implementing RWSS projects over the past two decades. The emerging international policies call for treating water as an economic and social good managed at the lowest appropriate level. For the provision of RWSS this requires that the consumers be engaged in the process of selecting, financing, implementing and managing systems that meet their demands and willingness to pay. Yet putting demand-responsive principles into practice presents significant challenges. The experiences from the Bank assisted projects in Bolivia, China, Ghana, Indonesia, Nepal, Paraguay, and Sri Lanka, have demonstrated the effectiveness of these approaches in improving the sustainability of investments.

Indian experience: Over the past decade, the partnership between the GOI and the Bank has made impressive progress in successively developing and implementing innovative strategies to improve the sector's performance. These are in line with the global consensus on the principle of "management at the lowest appropriate level", an important prerequisite for sustainability. Thus, it moved from fully government implemented top-down approach in Maharashtra (Cr. 2234-IN) to community participation approach in Karnataka (Cr. 2483-IN) to "demand-responsive approach in partnership with NGOs and user groups" in Uttar Pradesh (Ln. 4056-IN), (in 1997, the Bank declined to negotiate a loan to RWSS project in Punjab because it introduced a policy of free water and power to farmers. This was because of the unavoidable impact such a policy would have on the sustainability of Punjab's financial resources, and on the already constrained groundwater resources). The successive projects show the evolution of the key strategies needed to improve sustainability. The Bank-assisted RWSS project in Uttar Pradesh has been acknowledged nationally and internationally as a best practice example in implementing demand-responsive approach. Similarly, the participatory evaluation methods of sustainability monitoring using the village immersion process were pioneered in Karnataka and have become an integral part of implementing supervision.

The OED's Impact Evaluation Report on five recent Bank-assisted RWSS projects (May 1998), as well as lessons learned from projects supported by other donor agencies (Dutch, DANIDA, DFID)

in India have also provided valuable lessons in the design of participatory projects and are reflected in the design of this project.

Some experiences and key lessons learned so far from these national experiences are:

(a) Policy: (i) ownership of the project design, both at political and bureaucratic level is a prerequisite for success of a project, (ii) conducive policy environment and willingness to learn by doing are equally vital for success, (iii) the design of the project should respond to the village's desire for high service standards, (iv) prospects of sustainability are in direct proportion to the degree of control the beneficiaries have in planning and implementing their development programs.

(b) Institutional and implementation: (i) women's participation improves local ownership and the quality of implementation. Imaginative approaches rooted in their needs and sociocultural environment have been considered and vigorously implemented to draw women into project activities, (ii) changing mandates and mind-sets of state agencies, capacity building of all

stakeholders through providing resources and quality time, need to be at the core of project design, (iii) implementation arrangements and procurement procedures should be in line with community empowerment principles in participatory projects; the state level institutions in particular should have the appropriate mandate and functional autonomy to play an effective facilitating role, (iv) generally due to the stronger credibility of NGOs by the communities, they seem to be the best available option to build the beneficiary's capacity. To facilitate scaling-up, private sector participation should be experimented with and promoted, (v) concurrent M&E, innovate and experiment with learning from experiences, and adapting these into implementation strategies to make a positive contribution to improving the project's performance, (vi) observing, listening, and learning through cross visits to best practice examples, within the state, in-country and overseas pays rich dividends towards increasing ownership to participatory approaches by all stakeholders; (vii) miscommunication of the project rules, roles, and responsibilities of various partners, is the greatest danger to smooth implementation; and (viii) the concept of scheme cycle and correct activity sequencing has to be fully developed and well-entrenched in the project's design.

(c) Financial: (i) partial financing of capital cost by the users has proved a viable development concept; however, the cost recovery rules should be simple and their administration user-friendly. User management and financing of O&M has also proved to be viable, and (ii) rural water projects are part of the social safety net that government provides. The Bank should explicitly support this decision, while it helps governments to improve their economies to the point where all citizens can afford to drink water that will not make them ill.

4. Indications of borrower commitment and ownership:

India, with the Bank's support, has developed a national sector strategy for RWSS that has been widely discussed with the states and the donor community. GOI's line ministry, the Ministry of Rural Development (MRD), is strongly committed to nationwide implementation of the sector reform agenda contained in the national sector strategy. The MRD has recently finalized its contribution to the Ninth Five Year Plan with emphasis on the following: institutionalizing the demand-driven, community-based approach; institutionalizing water quality monitoring and surveillance systems; supporting water conservation and groundwater recharge programs; modifying rules for central

assistance to the states; and reserving 20% of central funds in the sector to states implementing reforms promoted by GOI and beyond.

The MRD's RGNDWM has initiated follow-up actions to disseminate throughout the nation the new reform strategy, and to create an enabling environment for its implementation. GOI is also taking a lead to encourage and support the states to undertake comprehensive sector reforms through the implementation of pilot projects. In addition, GOI is taking steps to develop a network of public and private academic and research institutes to become a ‘data and knowledge bank’ in the country providing in-country and international experience, and sharing best practices.

The project fits well into Kerala's ongoing decentralization process and people's planning campaign. Kerala had taken a policy decision to transfer rural water supply schemes from KWA to GPs, and considers that the project will provide an immediate opportunity to operationalize its policy decision. Kerala's ownership of the project is further evidenced through: (a) providing a legal framework to empower the BGs to make investment decisions, independently manage project funds, plan and construct schemes, and manage scheme operations; (b) up-front consensus on the reform agenda; (c) setting up of a gender-balanced, multidisciplinary, and highly professional project preparation and implementation team;

and (d) proceeding with implementation of Batch 1 schemes ahead of project signing, including providing advance project funds. In fact, preplanning and planning phase of Batch 1 will be completed by October 2000, and over 150 schemes are ready to enter construction phase in November 2000 (estimated cost about $4.0 million). Thus, the project philosophy and design represent jointly owned and promoted reform strategy between the GOI and the IDA.

5. Value added of Bank support in this project:

GOI has requested the IDA to assist a few select states in operationalizing sector reforms. It believes that Bank support will provide a strong demonstration effect nationwide. The IDA can assist GOI in policy workshops, human resource development (HRD), developing and networking knowledge banks, developing and disseminating information, education, and communication (IEC) materials and sectoral guidelines, supporting research and experimental initiatives from interested states, and studying the best-practice examples from around the globe.

Financing water supply and sanitation investments in rural areas/small towns is currently a major thrust of the Bank-wide sectoral strategy. For Kerala, given the long-term nature of implementing statewide institutional reform and the sizable investments required to meet the needs of the states in this sector, IDA is uniquely positioned to support both the reform process and the associated investment program. IDA is also acting as honest broker to bring about a partnership between the state government and the private sector/NGO community which is considered necessary to accomplish this major paradigm shift. In addition, IDA can make available to Kerala its considerable international experience and best practices in the RWSS sector. It can also advise states on the international training institutes and research centers that can provide opportunities to develop the state's capacity in proven service delivery mechanisms.

E. Summary Project Analysis (Detailed assessments are in the project file, see Annex 8)

1. Economic (see Annex 4):

● Cost benefit NPV=US$44.5 million; ERR = 25.1 % (see Annex 4)
○ Cost effectiveness
○ Other (specify)

The economic analysis for the project is given in **Annex 4**. The analysis was carried out for eight likely types of schemes, distinguished by technology/water source and terrain, and for the entire project. The main benefits quantified are: value of time saved in collecting water, value of incremental water consumed, and costs that would be incurred without the project situation to maintain the existing water supply arrangements. Apart from these, health, environmental, and institutional strengthening benefits are also expected to accrue, but these have not been quantified. The main benefits are due to time savings. The project is expected to save on average 1.2 hours per household, per day for over 300,000 households that are expected to benefit directly from the project. Time savings are valued as an opportunity cost of labor appropriately adjusted to reflect the actual employment opportunities.

The estimated rate of return (ERR) is estimated to be 25% for the whole project. Sensitivity tests based on assessed risks indicate that the project is able to absorb substantial negative impacts and still generate positive ERR. For example, the project can sustain:

- significant decreases in benefits or increases in costs: A 90% increase in costs, or a 46% decrease in benefits reduces the project ERR to 12%. In general, benefits are more sensitive than costs.

- large reductions in time savings: If all villages were able to realize only 50% of the time savings envisaged, the project ERR would fall to 12%.
- delays in implementation that would delay benefits: if benefits are delayed by two years, representing a slow start-up, perhaps the most realistic risk scenario, the ERR falls to 17%.

2. Financial (see Annex 4 and Annex 5):

NPV=US$ million; FRR = % (see Annex 4)

There are no fixed financial revenues in the project. The recovery of O&M costs is the responsibility of households and local village organizations. For this reason, a financial cost-benefit analysis was not carried out.

The beneficiary capital contribution would vary based on the nature of the scheme such as water supply, groundwater recharge (GWR), latrine, drainage. The beneficiaries will have the choice to contribute in cash, or through labor contribution, though some minimum cash contributions have been stipulated. However, provision of public land for the scheme will not form part of the beneficiary contribution. BCs will be fully responsible for the schemes' O&M. To meet the O&M expenses, BCs will levy and collect water charges (for both individual connections and street taps). BGs will be required to raise in advance six-months of O&M costs as a condition for release of the third, and final installment of GOK's share of the construction funds.

Fiscal Impact:

The Bank's India CAS stresses the need for state governments to improve their finances and for project proposals to consider this objective. The National Institute of Public Finance and Policy completed a fiscal study for Kerala in February 1999. The study observed critical imbalances in the state's fiscal profile. The revenue deficit has been steadily rising and the fiscal deficit has remained above 4% of gross domestic product (GDP) in recent years. Both the fiscal deficit and the debt to GDP ratio are among the highest across India's states and it is evident that great importance needs to be given to introducing fiscal reforms. The proposed project will contribute to this process in a modest way by initiating sectoral reforms in the Kerala's RWSS sector by introducing the concept of partial capital cost recovery and 100% O&M expenses to be borne by BGs. The appraisal mission was informed that GOK is also addressing the issue of fiscal imbalance as a part of the Asian Development Bank's proposed assistance package to Kerala.

For the FY2000/2001, GOK has budgeted Rs. 288 Crores ($63 million) for WSS in the state. The corresponding figure for FY1999/2000 was Rs. 260 crores. The proposed project, at roughly Rs. 70 crores per annum, would mean an additional 25% to the FY 2000 to 2001 sectoral expenditures. Since the project would be implemented through BGs and KRWSA, GOK does not consider that absorbing this additional funding will be a problem. GOK and GP counterpart funding would amount to roughly Rs. 11 crores per annum. GOK has assured that it will provide the necessary counterpart funds for the project. Since the project design envisages BGs handling the O&M of the project's WSS schemes, there will be no post-project recurrent expenditures that GOK will have to budget for (except for a minor amount required for the continuation of KRWSA and DPMUs).

3. Technical:

There are no major technical issues to be addressed during preparation of schemes or implementation since India and Kerala have rich experience in both simple and complex technologies used in RWSS. The project will mainly involve construction of small-scale piped water systems, household latrines, a few simple

road side surface drains, and GWR schemes around open wells. Most water supply schemes will be designed by the SO engineers with capacity building support and monitoring by KRWSA. KRWSA has developed a detailed technical manual covering design criteria, guidelines on sound engineering practices, standard drawings and cost estimates, specifications for construction materials, goods, equipment, and civil works. A rate list for items to be procured has been developed for each project district based on market prices. These together with guidelines on community contracting will ensure cost effectiveness, quality of materials procured and their accounting, and internal checks and balances. Use of scientific methods such as geophysical surveys, remote sensing data, resource mapping and test wells, coupled with local knowledge, are expected to ensure appropriate selection of sites for proposed drinking water sources. A large number of experienced engineers are available in Kerala including those retired from KWA (early retirement is at 55-years of age). GPs and BGs commonly use these engineers on payment of consultancy fees to prepare and approve their plans prepared under decentralized planning.

Transfer of existing KWA schemes to GPs: The project involves the transfer of existing single panchayat piped water schemes (currently owned and managed by KWA) to GPs and BGs, per the new GOK policy, as well as the project requirement. This will be a challenge because of KWA's possible lack of cooperation, and the degree of complexity involved in developing sound engineering proposals for their rehabilitation, reorganization, and integration with other water supply schemes being formed within a GP. To implement this process, GOK has finalized a comprehensive strategy for phased transfer of such schemes (GOK order dated May 29, 2000). KRWSA will ensure that SOs recruit experienced rural water supply engineers for short periods (as needed) specifically to develop sound rehabilitation proposals. GOK, with assistance from the Government of The Netherlands, has developed a few models, from which the project will learn. In addition, lessonslearned from the earlier models (developed by GOK with assistance of the government of The Netherlands) will be applied.

Multipanchayat piped water schemes: KRWSA will recruit qualified consulting and construction firms from the private sector (with support from KWA) to construct about six multipanchayat water supply schemes. The work will involve the design and construction of technically complex schemes. However, for O&M of these schemes, the project will support the set up of multipanchayat user associations that will manage the scheme operations themselves, or through private sector service management contracts. Detailed guidelines for planning construction and management of scheme operations will be developed during the first two years of the project, initially through learning by doing for one such scheme.

Quality control of design and construction: KRWSA will recruit an independent agency to assist it in ensuring quality control in design and construction of water supply, GWR, drainage, and latrine schemes. The consultant agency will have two main responsibilities: (a) to monitor the quality of supervision by the SO engineers and the construction quality in the ongoing schemes; and (b) to simultaneously check the quality of engineering designs for the next batch of schemes. The SO engineers are responsible for preparing the detailed scheme reports and day-to-day supervision of all procurement and construction activities while the quality control agency will be responsible for concurrent monitoring of these activities through periodic reviews and inspections. KRWSA will recruit such an agency for Batch 1 prior to commencing the implementation phase.

4. Institutional:

4.1 Executing agencies:

The overall responsibility for implementation of the project will be that of the KRWSA. KRWSA was set up as an autonomous society in November 1999, and its MOA and bylaws are acceptable to IDA. KRWSA has a highly professional, multidisciplinary and gender balanced team with representation from

the public and private sectors. KRWSA will be assisted by four DPMUs, of which two have already been set up. The remaining DPMUs will be set up by March 2001. Since the project will support CDD, KRWSA will function more as a facilitator and will not be directly responsible for construction of schemes or service delivery. The execution responsibility will be shared by the main partners as follows: (a) BGs: decision making; (b) BC: planning, construction and managing schemes; (c) GP: coordination assistance to BGs and BCs; (d) KRWSA: facilitating; and (e) GOK: policy environment and policy support. GOI will implement the national sector development component.

4.2 Project management:

KRWSA will be responsible for the project's management. KRWSA has dedicated units to deal with technology, finance, HRD, operations, and M&E. Each unit has been staffed with experienced professional staff from the government and the private sector. They are equipped with state-of-the-art equipment and data management systems. KRWSA will recruit consultants (short-term and long-term, individuals and firms), to assist in day-to-day management functions, including operating the computerized M&E and financial management systems.

4.3 Procurement issues:

As the bulk of procurement is to be undertaken by the communities, KRWSA will guide the supporting agencies like SOs, GPs, BGs, and BCs in their procurement activities and ensure that it is carried out in accordance with the World Bank Procurement Guidelines. The main procurement methods to be used in the project will be community contracting for small schemes; national competitive bidding (NCB) for large water supply schemes; national shopping procedures for purchasing goods, equipment and materials; and consultancies (national and international) for hiring of SOs, specialists (management, engineering, monitoring, finance), training activities, sector policy and other studies. KRWSA has a designated procurement specialist who will participate in the relevant national and international training programs to develop specialist skills in following the Bank' Procurement Guidelines in project implementation. KRWSA has prepared a final procurement plan which has been reviewed by the Bank and found to be satisfactory.

4.4 Financial management issues:

The institutional arrangements at the KRWSA/DPMU level are fairly new and proper financial management systems, and are compatible with the Bank’s LACI requirement; these are being evolved with the help of consultants. KRWSA's and DPMU's accounting systems will be computerized. KRWSA has prepared a draft financial management manual which contains detailed description of the financial accounting, budgeting, funds flow, and reporting systems and procedures. KRWSA will be responsible for the preparation of quarterly project management reports (PMRs), and annual financial statements. GP's accounting systems will be strengthened to meet the project accounting requirements particularly scheme-wise project cost details. Simple manual accounting systems will be implemented at the BC level. Particular attention will be paid to devising accounting for labor contribution by the beneficiaries.

5. Environmental: Environmental Category: B (Partial Assessment)

5.1 Summarize the steps undertaken for environmental assessment and EMP preparation (including consultation and disclosure) and the significant issues and their treatment emerging from this analysis.

Studies Undertaken

KRWSA, with help from consultants, has carried out two studies: (a) "Water Quality Assessment of Open Wells in Selected GPs in Project Districts", and (b) an environmental analysis (EA), identifying key environmental issues for the project and preparing an environmental management plan (EMP).

Public consultations: As part of the EA study, six public consultations were held in the Batch 1 GPs in the project districts to identify environmental issues as perceived by the prospective primary stakeholders. These were: (a) sustainability of yield from the proposed drinking water sources with minimal interference to the existing sources and the need for design service standards to be in line with source yield; (b) need for regulatory measures for groundwater withdrawal to prevent water mining, hydraulic interference between wells and salt water intrusion along coastal areas; (c) ensuring at all times a bacteriologically safe, potable water supply is available to the community; (d) watershed management programs to be implemented concurrently with water supply schemes to ensure sustainability and perenniality of sources; (e) need to address the problem of safe/sanitary disposal of solid waste (including hospital, and slaughter house wastes) in certain panchayats; and (f) effective promotional campaigns and community awareness programs to elicit the participation of all sections of the community in the proposed project.

5.2 What are the main features of the EMP and are they adequate?

Identified Environmental Issues

A critical review of the baseline information, observations during site visits, and public consultations in the project districts clearly bring out the following key environmental issues: (a) water quantity, the availability of safe drinking water is a serious problem, especially in the summer months, when most of the traditional private dug wells run dry and the public supply from various sources is inadequate; (b) inadequate sanitation and environmental health, the present level of sanitation coverage in the state is 51.3%, with a large percentage of rural population still resorting to open field defecation with its associated risk to public health. Poor environmental sanitation and personal hygiene habits and lack of an adequate supply of safe water are factors responsible for high incidence of water related diseases; and (c) water quality, there is widespread bacteriological contamination of fecal origin in sources of public drinking water supplies, including traditional open dug wells, bore wells, and surface sources.

Mitigation Measures

Mitigation measures for each of the issues noted above have been identified during the appraisal mission, and these were duly integrated into the various project components. The main measures include:

(a) water quantity: using scientific methods to identify groundwater source locations, targeted GWR measures, designing scheme service levels (per capita supply) in line with water availability, roof water harvesting techniques, promoting integrated management of local water resources by the BGs and the GPs, and enacting and enforcing groundwater legislation; and

(b) water quality, sanitation, and environmental health: adopting safe sanitation technologies, promoting the conversion of existing unsanitary latrines into safe latrines, pilot projects on safe disposal of hazardous waste, and minimizing indoor air pollution (IAP), protecting drinking water wells by lining, disinfecting drinking water, and an effective and sustained program of creating awareness on linkages between improved sanitation, hygiene and health through multimedia (including the mass media), and supporting village-based water quality control programs.

In addition, the statewide sector development programs (Component C) will address issues related to long-term sector policy and environmental management and develop an action plan for phased implementation. Pilot studies will be conducted to improve sector performance, contributing to the statewide sector policy and legislation (details in **Annex 2, Attachment 9**).

These mitigatory measures will adequately take care of the identified environmental issues related to the proposed project.

5.3 For Category A and B projects, timeline and status of EA:
Date of receipt of final draft: 05/30/2000

5.4 How have stakeholders been consulted at the stage of (a) environmental screening and (b) draft EA report on the environmental impacts and proposed environment management plan? Describe mechanisms of consultation that were used and which groups were consulted?

As part of the environmental screening, and also to contribute to the EA study, six public consultations were held in Batch 1 GPs to identify environmental issues that need to be addressed in the project. The consultation groups consisted mainly of local villagers, panchayat president, ward members, and SOs (Annex 2). The summary, in regional language of the environmental issues, proposed mitigatory measures and the EMP, as reported in the draft EA report were placed at the GP offices to be disseminated to prospective BGs.

5.5 What mechanisms have been established to monitor and evaluate the impact of the project on the environment? Do the indicators reflect the objectives and results of the EMP?

Special environmental performance indicators have been designed as part of the overall project indicators, to monitor and evaluate the impact of the project on the environment; and BGs, GPs, and KRWSA will be responsible for monitoring these indicators. The overall issues identified in the EMP and the corresponding environmental indicators (reflecting the objectives and results of the EMP) are detailed in **Annex 2, Attachment 9**.

6. Social:

6.1 Summarize key social issues relevant to the project objectives, and specify the project's social development outcomes.

Social/community development issues and concerns have been identified based on the beneficiary assessment, stakeholder analyses, and social impact assessments. A discussion on the issues and concerns forms a basis for building the elements of a CDD approach. The CDD elements are: (a) inclusion and participation; (b) autonomy; (c) subsidiarity; (d) ownership, accountability and transparency; and (e) capacity building.

Inclusion and participation. The project recognizes that the benefiting community is not a homogenous entity, but is comprised of subgroups with differences in gender, ethnicity, and endowments. Accordingly, key stakeholders (including beneficiary subgroups) have been identified, consultations held, and design features formed to ensure that each subgroup has an equal opportunity to participate in the project. Major subgroups among the benefiting community (BC) are: the poor, women, coastal fishers, scheduled caste (SC) and scheduled tribes (ST). While poverty, and the proportion of households living below the poverty line would be the dominant criterion in selecting the GP. A separate tribal development plan (TDP) is proposed to address STs. The TDP strategy will be based on: (a) targeting, (b) creating an enabling environment to provide for informed decision making on whether to participate in the project; and (c) mobilizing tribals into an action group thereby giving them the capacity to plan, implement, conduct O&M for the project activities/facilities. A summary of the TDP is shown in **Annex 2, Attachment 11** and full details are included in the PIP.

Since women bear the greater responsibility for ensuring adequate water supplies for their families,

their role needs to be emphasized and supported. Issues related to gender in general, and to women in particular, will be given special emphasis to ensure the full opportunity to involve women at all levels, and in all activities in the project. Capacity building initiatives will underpin gender and development as one of the major themes. To ensure effective mobilization and participation by women, a women's development initiative (WDI) component has been prepared. The WDI's focus will be on: (a) social mobilization and participation; (b) upgrading skills; and (c) economic development activities. This would help to engage women in the development process and give them the necessary support to take effective steps towards greater control of their lives at home, and in society.

Scheduled caste habitations are different from those of other subgroups. They are situated rather close to each other, typical of a colony. While the SC's expectations and perceived impacts are the same as those of the other subgroups, SCs seem to be against the idea of capital cost sharing and self managing O&M, since they are accustomed to a subsidized culture; significant capacity building initiatives are planned to address this issue. Coastal fishers are characterized by very high population density across the project districts. The significant implications to the design of the project's intervention are: high population density (very closely placed houses), typical location, unique livelihood pattern, and the associated gender relations. The project has identified these as major issues to be addressed during implementation.

Autonomy**.** Towards ensuring autonomy, water supply benefiting communities will be mobilized into a BG comprising two members (one male and one female) from each benefiting household. The BG will be exclusively responsible for the planning, implementing, and the O&M of the water supply, sanitation, watershed, and all other associated activities of the project. The BG will be an autonomous legal entity, registered under the Registration of Societies Act of 1860 and Travancore-Cochin Literary, Scientific and Charitable Societies Registration Act 1955. All the members of the BG will constitute the general body, which in turn will elect an executive committee comprised of about 11 members representing women, the poor, SCs, and STs. Draft bylaws and an MOA have been developed detailing the functioning and governance of BGs.

Ownership, transparency, and accountability. Towards ensuring ownership (by all subgroups) and transparency, every BG will follow a participatory rapid appraisal method to prepare a community empowerment plan (CEP). This will form an attachment to a memorandum of understanding (MOU) signed by the three principal actors--BG, GP, and KRWSA. Once signed this will be the basis for implementation, and will enable future comparative assessments.

Subsidiarity. While the BG will be the primary management unit, the GP will be the nodal agency at the panchayat-level apex agency, and will be responsible for facilitating the selection of the schemes/BGs, monitoring the BGs activities, acting as a liaison with other departments/agencies, and in dovetailing with other development schemes. KRWSA will facilitate and provide a support system for the participating stakeholders in delivering the required services, which includes planning for the TA strategy. MOUs have been drafted clarifying the roles and responsibilities of the key actors responsible for enabling effective participation.

Capacity building. The project will enlist the services of nongovernment SOs to provide intermediation services (technical, financial, and institutional) to the build the capacity of BGs. The designated functions include: creating awareness, mobilizing communities, and helping the BGs with preparing and implementing CEPs, conducting and/or facilitating in capacity building, the liaison with GPs and other agencies. Initially SOs will be given the capacity to undertake the capacity building of the communities. The project recognizes that SO's relationships (especially with GPs) will have a strong

bearing on the project outcomes. Hence, SO selection is critical, and procedures have been drawn to ensure selection of appropriate SOs.

The strengthening of GPs. GOK has already issued a Government Order (GO) empowering GPs, which in turn resolves establishing and empowering BCs, including facilitating fund flows into BCs, and procuring materials through community contracting principles (as stipulated in the project), and the legitimacy to fix and demand tariffs. To perform the new role the project proposes strengthening the GP component, essentially aimed at: financial management, administrative and managerial competitiveness, work effectiveness and efficiency, and performance audit.

Social development outcomes. Major social development outcomes include: (a) establishing local level autonomous, inclusive, and accountable institutions; (b) empowering women as a result of reducing drudgery, and enhancing participation in project activities; (c) increasing social capital among the tribals; and (d) improving the effectiveness of the local self governments (GP).

Land requirement for the construction of water source and overhead tanks (OHTs). The land requirement arises for two purposes, one for the water source and the other for the construction of OHTs. Discounting the existing public sources of water and public lands for the new construction (that are easily accessible), it is estimated that the project may require 10,880 cents (at the most) of land (equivalent to 109 acres or about 44 hectares) from private sources. The prevailing practice in Kerala is either through voluntary donation or by outright purchase.

Rules of taking possession of land. It is agreed that the project will not resort to involuntary land acquisition--all donations and purchases will be voluntary. Mechanisms have been developed to ensure the voluntary nature of the donations, and to also ensure that there will be no significant adverse impact on incomes or physical displacement. All voluntary land transactions will meet the following criteria: (a) the land in question will be free of squatters, encroachers, or other claims of encumbrance; (b) lands will be chosen (by the community) after ensuring that water is available in the particular piece of land; (c) in each case, the voluntary nature of land donations will be verified; (d) land transfers will be completed--the land title will be vested in the community (BG), through a registered sale deed or MOU; and (e) a provision will be made for redressing grievances. KRWSA will arrange for an independent agency to examine all land purchases before approving the CEP in every batch.

6.2 Participatory Approach: How are key stakeholders participating in the project?

The participation of direct beneficiaries would be through empowerment, involving investments in building institutional as well as individual capacities, and the stakeholders' self management. SOs would evolve participatory approaches depending on the situation and need to ensure participation by all subgroups at all stages of the project. The project would invest in building the capacity of SOs and GPs who in turn would collaborate in empowering the stakeholders. KRWSA will be the facilitator and will provide a support system for GPs and SOs in delivering the required services, which includes providing TA. The participation mechanisms have been discussed earlier in this report.

6.3 How does the project involve consultations or collaboration with NGOs or other civil society organizations?

During the project's preparation, extensive consultations were held with a wide range of stakeholders including NGOs, GPs, community-based organizations (CBOs), public sector agencies, and local communities, to decide on the project's design. Consultations will continue during the project's implementation for continued opportunities for learning and sharing. Moreover, the project's design

provides for the direct participation of NGOs, and other civil society organizations, such as consultants, CBOs, citizens groups, and SOs.

6.4 What institutional arrangements have been provided to ensure the project achieves its social development outcomes?

See Section on Institutional and Implementation Arrangements.

6.5 How will the project monitor performance in terms of social development outcomes?

See Section on Institutional and Implementation Arrangements.

7. Safeguard Policies:

7.1 Do any of the following safeguard policies apply to the project?

Policy	Applicability
Environmental Assessment (OP 4.01, BP 4.01, GP 4.01)	● Yes ○ No
Natural habitats (OP 4.04, BP 4.04, GP 4.04)	○ Yes ● No
Forestry (OP 4.36, GP 4.36)	○ Yes ● No
Pest Management (OP 4.09)	○ Yes ● No
Cultural Property (OPN 11.03)	○ Yes ● No
Indigenous Peoples (OD 4.20)	● Yes ○ No
Involuntary Resettlement (OD 4.30)	○ Yes ● No
Safety of Dams (OP 4.37, BP 4.37)	○ Yes ● No
Projects in International Waters (OP 7.50, BP 7.50, GP 7.50)	○ Yes ● No
Projects in Disputed Areas (OP 7.60, BP 7.60, GP 7.60)	○ Yes ● No

7.2 Describe provisions made by the project to ensure compliance with applicable safeguard policies.

Environmental mitigation and TDPs are included in the project and are a part of the PIP.

F. Sustainability and Risks

1. Sustainability:

Sustainability implies that the system works throughout its life and beyond, and it is able to generate adequate cash flow for future expansion/renewal. Though full cost recovery is not possible in the Indian (and even global) RWSS context in the immediate future, the project makes a significant beginning by introducing partial capital cost financing and 100% of O&M financing by the users. The project has some design rules to ensure sustainability. If these do not appear to work, the annual review process will be used to recalibrate/change the design rules. The factors critical for sustainability of the project are summarized below.

Ownership and financial sustainability. Agreement on counterpart funding by the local government and capital cost sharing by the beneficiaries are the first indications of the demand for improved RWSS services. Since the end-users will have control over resources, and their allocation and decision making, there is a greater chance that they will also raise resources to manage scheme operations on a sustainable basis. The risk that populist policies by any future government may reverse this self-reliance by the users is low, but it happens, will be difficult to mitigate.

Including all sections of society (particularly the poor, women, and the more vulnerable groups) in decision making, implementation, and in receiving the project benefits, is essential for sustainability. The

project's rules and specific interventions targeting these groups should have a positive influence on sustainability. The project's targeted interventions through GP selection criteria, should minimize the risk of excluding women and TDPs.

Technical. The sustainability of yield from the selected drinking water sources will be enhanced by adopting scientific methods in locating and implementing associated measures for water conservation and GWR. The sustainability of physical works will be improved by adopting sound designs and engineering practices, and monitoring the quality of construction and construction materials. The operational sustainability will be strengthened by the training of operators, preventive maintenance, and maintaining the quality of water by regular disinfection.

Institutional. The project's institutional arrangements are in line with GOK's policy of moving away from the government's direct service delivery function to a facilitating function. Sustainability of the BGs is likely because: (a) the concept of neighborhood groups (NHGs) and user committees is deep-rooted in Kerala's People's Plan Campaign; and (b) GOK has bestowed legal empowerment to them. Empowerment of GP as an institution is largely assured because (a) its substantial empowerment is taking place under the ongoing decentralization process; (b) the government is determined to continue its strengthening; (c) Kerala's decentralization process now seems irreversible; and (d) national policies also support decentralization.

There is a risk that the new state-level facilitating agency can also become as bureaucratic as the previous centralized line ministries. The project is therefore developing, testing, and implementing the new institutional model and its success or failure will greatly determine the future directions of sectoral reforms in Kerala. The possibility of this risk coming to pass has been minimized by up-front agreement on KRWSA's autonomy and its mandate for implementing CDD. The pressure from Kerala's strong GPs and the project's extensive capacity building interventions for all actors, should minimize the risk of failure of the project's institutional model.

Sustainability monitoring. KRWSA will conduct systematic sustainability monitoring exercises for each batch during its operational phase. Because of the batchwise implementation of schemes, there will be ample opportunities to monitor scheme performance of the first three batches of schemes and to take corrective actions where necessary to ensure sustainability of scheme operations, the ultimate measure of project success.

2. Critical Risks (reflecting the failure of critical assumptions found in the fourth column of Annex 1):

Risk	Risk Rating	Risk Mitigation Measure
From Outputs to Objective		
State and main sector agency willing to shift role from implementor to facilitator	N	GOK has already implemented a policy decision to decentralize RWSS service delivery
The project is adequately promoted in all eligible communities in project districts so that community demand drives investment decisions	N	The project's elaborate self selection process, requirement of a priori dissemination of project rules, and adopting scheme cycle approach
Women participate in key decisions and in O&M management	M	Project rules ensure at least 50% women participate in decision making body and project includes special women development programs

BCs have sufficient capacity to manage and sustain the facilities	M	The project's capacity building programs focus on building capacity of the BGs and BCs; increase SO support where needed
Community members internalize hygiene education messages and improve behavior practices.	M	A systematic sanitation and hygiene promotion program is designed; M&E systems will track progress in behavior change
KRWSA is committed to RWSS service delivery, is willing to allocate resources, and provide long-term support to community initiatives	N	KRWSA's mandate is precisely to support CDD; project staff recruitment requires participatory mind-set and skills which would be upgraded through orientation programs and incentive structure.
GOK maintains its commitment to implementation of policy reforms.	N	The project's CDD approach fits well into GOK's own decentralization process, which is now irreversible. If necessary, conduct dialogue with the new government in 2001; GOI's Ninth plan policy rewards reforms.
GOI maintains its commitment to implementation of policy reforms.	M	GOI's Ninth Plan policy rewards reforms; support dissemination of international experiences on best practice examples and advocacy
From Components to Outputs		
KRWSA's autonomy is maintained	M	KRWSA's MOA and bylaws reflect these requirements; monitoring by Bank missions
KRWSA, GPs, BGs and SOs work collaboratively to achieve project development objectives	M	The project implementation model itself is a partnership between key actors; review Batch 1 experiences for successes/failures
Electoral politics will not affect project design and implementation	M	Advocacy of reforms, GOI pressure for sectoral reforms
Project personnel have continued ownership of project design	M	Specific interventions planned to influence mind sets team building and orientation to CDD approaches, demonstrate early successes
NGOs have the capacity to deliver services	M	A rigorous eligibility and selection criteria coupled with training programs for NGOs; review performance after Batch 1, create incentives for competitive private sector entry
GPs and BGs demand improved services and are willing to make financial contribution	N	Demand reevaluation in Batch 1 schemes is encouraging; review and revise project rules based on Batch 1 experience, if necessary.
GOK has continued interest and commitment to sector reforms and their implementation	M	Pressure from GPs who have tested benefits of decentralization and early successes should mitigate this risk
GOI has continued interest and commitment to implementation of sector reforms.	M	GOI itself demanded Bank support through the project; disseminate international successful experiences
Overall Risk Rating	M	

Risk Rating - H (High Risk), S (Substantial Risk), M (Modest Risk), N(Negligible or Low Risk)

3. Possible Controversial Aspects:

None

G. Main Loan Conditions

1. Effectiveness Condition

None

2. Other [classify according to covenant types used in the Legal Agreements.]

(a) KRWSA shall not later than December 31 of each year, starting in 2001, prepare annual action and procurement plans for the implementation of the activities under Parts A, B, and C of the project, and taking into account IDA's recommendations, finalize these plans no later than March 31 of each year.

(b) KRWSA shall: (i) select SOs participating in Part B of the project in accordance with eligibility criteria and procedures as agreed with IDA; and (ii) review the adequacy of such criteria prior to undertaking prequalification of support organizations for each batch, and only introduce changes that are acceptable to IDA.

(c) KRWSA shall select GPs, who in turn, shall select BGs participating in Parts A and B of the project, both in accordance with procedures and eligibility criteria as agreed with IDA, including cost sharing arrangements; and only introduce changes that are acceptable to IDA.

(d) KRWSA shall enter into an agreement with SOs, GPs, and BGs, satisfactory to IDA, participating in the implementation of the project, stipulating roles and responsibilities of each party in project implementation.

(e) KRWSA shall carry out an evaluation of implementation of Batch I schemes, and shall review with IDA the lessons learned, and thereafter will incorporate such lessons in the design and implementation of subsequent batches.

(f) GOK/KRWSA shall cause the GPs participating in the project to monitor and ensure that the BGs levy and collect water charges sufficient to recover full recurrent O&M cost of each scheme.

(g) KRWSA shall complete no later than March 31, 2001, the establishment and the staffing of the DPMUs, including accounts officers, with qualifications and experience satisfactory to IDA.

(h) GOK/KRWSA shall take all necessary measures, satisfactory to IDA, including introduction of incentive schemes to recruit and retain key project staff for a minimum of three years.

(i) To ensure that the tribal population in the project GPs benefit fully from the activities under the project, GOK and KRWSA shall implement, in a manner satisfactory to IDA, the tribal development plan.

(j) GOI/GOK/KRWSA, jointly with IDA, shall carry out a midterm review of the project no later

than December 31, 2003.

(k) GOK/KRWSA shall: (i) ensure that any private land needed for water supply and other construction under the project shall be provided by the owner of such land in a voluntary manner, and in accordance with an MOU, agreed with IDA, between the BG or GP and the owner of such land; and (ii) not commence such works in locations where such land is needed until such MOU has been concluded.

(l) KRWSA shall, under terms of reference agreed with IDA, recruit independent consultants for monitoring quality of construction activities for the first batch, and prior to the commencement of the construction activities for the subsequent batches;

(m) GOK/KRWSA shall under terms of reference agreed with IDA recruit, no later than December 31, 2001: (i) a consulting firm for carrying out the statewide sector policy study under Component C of the project; (ii) furnish to IDA for review the final sector policy study report and strategic plan not later than June 30, 2003; and (iii) thereafter commence implementation of the agreed strategic plan.

(n) GOK/KRWSA shall under terms of reference agreed with IDA commence, not later than December 31, 2001, the development of a sector information management system (SMIS) under Component C of the project and shall implement the system no later than June 30, 2003.

(o) GOI shall no later than May 31, 2001, designate an officer not below the rank of deputy secretary of GOI as the officer responsible for implementation of Component D of the project.

Covenants Related to the Financial Management Requirements:

(p) KRWSA shall establish and operate no later than March 31, 2001, and thereafter maintain throughout the project implementation period a satisfactory financial management system, in accordance with the financial management manual agreed with IDA.

(q) KRWSA shall no later than March 31, 2001, start preparing and submitting to IDA quarterly project management reports.

(r) KRWSA shall: (a) maintain throughout the project period a chartered accountant as a finance manager with experience and qualifications agreed with IDA; and (b) employ not later than March 31, 2001, and thereafter maintain throughout the project implementation period, an accountant for each of the DPMUs with experience and qualifications agreed with association.

(s) KRWSA shall maintain throughout the project period a firm of chartered accountants acceptable to IDA for auditing the records, accounts and financial statements of the project.

(t) GOK/KRWSA shall cause each of the GPs, BGs, and SOs participating in the project to: (i) open and maintain separate bank account for the project funds; and (ii) maintain separate records and books of the said funds.

(u) KRWSA shall employ for each batch firms of chartered accountants, with terms of reference and qualifications agreed with IDA, for: (i) providing training in maintaining adequate financial records and accounts to GPs, BGs, and SO participating in the project; and (ii)

auditing records, accounts and financial statements of the GPs, BGs, and SOs.

(v) KRWSA shall release project funds to the GPs, BGs, and SOs participating in the project in accordance with procedures and schedule specified in the financial management manual.

H. Readiness for Implementation

☐ 1. a) The engineering design documents for the first year's activities are complete and ready for the start of project implementation.
☐ 1. b) Not applicable.

☒ 2. The procurement documents for the first year's activities are complete and ready for the start of project implementation.
☒ 3. The Project Implementation Plan has been appraised and found to be realistic and of satisfactory quality.
☐ 4. The following items are lacking and are discussed under loan conditions (Section G):

The community development and preparation of engineering designs for the first year's actvities are at an advanced stage, and will be ready by November 2000.

I. Compliance with Bank Policies

☒ 1. This project complies with all applicable Bank policies.
☐ 2. The following exceptions to Bank policies are recommended for approval. The project complies with all other applicable Bank policies.

Ghanasham V. Abhyankar **Team Leader**	Ridwan Ali **Sector Manager**	Edwin Lim **Country Manager**
Meena Munshi Co-Task Leader		

Annex 1: Project Design Summary

INDIA: Kerala Rural Water Supply and Environmental Sanitation Project

Hierarchy of Objectives	Key Performance Indicators	Monitoring & Evaluation	Critical Assumptions
Sector-related CAS Goal: **Poverty reduction** through : (a) Support to policy and institutional reforms	**Sector Indicators:** **State-level indicator** Statewide application of demand based, participatory approach to rural water and sanitation service delivery; State subsidies for new RWS investments reduced from 100% to 75%; O&M of new RWS schemes fully funded by direct user charges.	**Sector/ country reports:** State sector reports Govt budget data Govt budget data	**(from Goal to Bank Mission)** State's and GOI's political commitment to policy reforms is sustained and adequate budgetary support provided.
(b) Improving access to rural infrastructure	percentage of rural population (particularly vulnerable groups) having access to sustainable water and sanitation services	State sector coverage data	
Project Development Objective: The overall project development objective is to assist GOK inimproving the quality of rural water supply and environmental sanitation service delivery to achieve sustaianbility of investments. Specific development objectives are to:	**Outcome / Impact Indicators:**	**Project reports:**	**(from Objective to Goal)**

(a) demonstrate the viability of cost recovery and institutional reforms by developing, testing and implementing the new decentralized service delivery model on a pilot basis	(i) By MTR cost recovery reforms and new decentralized service delivery model developed, tested and successfully implemented in first two Batches of GPs. (ii) By MTR, existing single panchayat water supply schemes currently owned by the state utility (KWA) and/or GPs are taken over and managed by beneficiary groups in first 2 batches of GPs. (iii) At the end of the project, O&M of water supply and sanitation schemes fully financed and managed by the BGs in the project GPs. (iv) At the end of the project, sanitation and hygiene behavior in the first 3 Batches of GPs is significantly improved.	Progress reports, mission's field visits and supervision reports, MTR. Progress reports, Mission's supervision reports, MTR. Independent client surveys, impact evaluation of sample schemes in operation for more than 12 months. Independent client surveys, impact evaluation of sample BGs.	(i) State has continued ownership of the policy and institutional reforms and provides continued support to operationalize the reforms throughout project implementation. (ii) Participating GPs/ BGS buy into the new service delivery system, demand improved services, and fulfill their part of management and financing responsibilities.
(b) build the state's capacity in improved sector management in order to scale up the new decentralized service delivery model, statewide.	(i) Before MTR, statewide sector information management system developed and operational. (ii) By MTR, long-term sector policy and strategic plan for implementation developed. (iii) At the end of the project, GOK has taken a policy decision to scale-up the new service delivery model to cover all GPs in the state and begun its implementation in the four project districts.	SPN missions SPN missions, ICR, Bank-State dialogue Relevant government decision reflected in government orders and capacity expansion of DPMUs	

Hierarchy of Objectives	Key Performance Indicators	Monitoring & Evaluation	Critical Assumptions
Output from each Component:	**Output Indicators:**	**Project reports:**	**(from Outputs to Objective)**
Part A: New decentralized service delivery model in place and effectively functioning; cost recovery reforms implemented in project districts.	About 2,500 BGs have planned and implemented RWSS schemes; % of capital costs contributed by communities; Capacity of SOs built for providing technical and management support to GPs and BGs; SO cost as % of total project cost	Progress reports, SPN missions, independent evaluation reports, monitoring and disbursement performance.	State and main sector agency willing to shift role from implementor to facilitator KRWSA is committed to RWSS service delivery, is willing to allocate resources, and provide long-term support to community initiatives.
Part B: BGs formed and trained in scheme planning, construction and service management, and in hygienic behavior.	BG personnel (about 10,000) trained; 2,500 gender-balanced BCs trained and functioning; % of BCs in which women participate in management decisions; 2,500 of scheme proposals found eligible and approved by DPMUs.	Progress reports, Supervision mission's reports.	Project is adequately promoted in all eligible communities in project districts so that community demand drives investment decisions. Women participate in key decisions and in O&M management.
Water and sanitation facilities constructed in project areas	Number of water supply and sanitation facilities constructed/improved; % BPL families benefited from the project; % tribal families benefited from the project	Progress reports, supervision mission's reports; Progress reports, field visits and supervision mission's reports.	BCs have sufficient capacity to manage and sustain the facilities. Community members internalize hygiene education messages and improve behavior practices.
Part C: Comprehensive sector policy reform agenda is available to facilitate State decision for Statewide implementation of policy and institutional reforms.	Workshops and discussion meetings for dissemination and stakeholder consultations; GOK announcements through mass media like newspaper, radio and TV. GOK requests to the Bank or other ESAs for further implementation of reforms and improved RWSS service; GOK decision to scale up KRWSA operations in the State.	Progress reports, consultant reports, participation by Bank staff in policy workshops, dialogue with Kerala and GOI.	GOK maintains its commitment to implementation of policy reforms.

Part D: National level sector development activities carried out	Workshops and discussion meetings for dissemination and stakeholder consultations. GOI announcements through mass media like newspaper, radio and TV. GOI funding to the states more closely linked to their performance in implementation of sector reforms.	Progress reports, participation by Bank staff in policy workshops, dialogue with GOI and RGNDWM.	GOI maintains its commitment to implementation of policy reforms.

Hierarchy of Objectives	Key Performance Indicators	Monitoring & Evaluation	Critical Assumptions
Project Components / Sub-components:	**Inputs: (budget for each component)**	**Project reports:**	**(from Components to Outputs)**
A. Institution Building	$11.1 m	Progress reports, Bank disbursement data, supervision mission's reports, independent audit reports	KRWSA's autonomy is maintained. KRWSA, GPs, BGs and SOs work collaboratively to achieve project development objectives.
B. Community Development and InfrastructureBuilding	$75.2 m	Progress reports, Bank disbursement data, supervision mission's reports, independent audit reports	Electoral politics will not affect project design and implementation. Project personnel have continued ownership of project design. NGOs have the capacity to deliver services. GPs and BGs demand improved services and are willing to make financial contribution.
C. Statewide Sector Development	$1.3 m	Progress reports, Bank disbursement data, supervision mission's reports, independent audit reports.	State and implementing agency are able to seek support from internationally recruited consultants, where needed. GOK has continued interest and commitment in sector reforms and their implementation.
D. National Sector Development	$2.2 m	Progress reports, Bank disbursement data, supervision mission's reports, independent audit reports.	GOI has continued interest and commitment to implementation of sector reforms.

Annex 2: Detailed Project Description

INDIA: Kerala Rural Water Supply and Environmental Sanitation Project

Project Size and Area

The project would be implemented in four districts: Kozhikode, Malapuram, Palakkad, and Thrissur. GOK has selected these districts for inclusion in the project on the basis of their having problems of water availability or water quality, a relatively large population of poor and socially disadvantaged people, high community demand for improved services, satisfactory levels of existing social capital and availability of NGOs having a good track record in implementing community based development programs. These four districts constitute a geographically contiguous unit. This would enable inclusion in the project of all three topographical regions in Kerala, viz. coastal, midlands, and highlands as well as to facilitate efficiency and cost effectiveness of project management.

About 80 GPs would be included in the project adopting transparent eligibility and self-selection criteria. It is expected that and average of about 50% of households in a GP would demand water supply schemes. These households have a severe water problem, particularly in the summer months. Further, many of these households are located at higher, isolated or distant locations and have to fetch water from long distances. Taking over the existing KWA single panchayat water supply schemes and their rehabilitation/up grading would also be supported under the project. In addition, nine of the GPs in the project districts which have significant proportion of the tribal population (more than 5%) will be included in the tribal development subcomponent of the project.

The project is expected to directly benefit about 1.5 million people (about 5% of the state population) and the poor and vulnerable groups will be specifically targeted through selection of BGs and implementation of a TDP.

Selection Criteria for Gram Panchayats, Support Organizations, and Beneficiary Groups

GPs will be included in the project by adopting a self-selection process, a pre-requisite of demand driven development. The four selection criteria are: (a) higher proportion of poor and vulnerable groups; (b) severity of water scarcity; (c) low level of latrine coverage; and (d) higher level of implementation capacity. About 25 BGs in each selected GP will be included in the project. If the number of BGs demanding project support is more than the project can support, GPs will select BGs by drawing lots in a public meeting. A rigorous SO prequalification process will be strictly followed to ensure that only qualified SOs participate in the project. The SO eligibility criteria will include: legal status, secular and nongovernment status, at least three years of proven track record, audited accounts, free from litigation and staffing capacity. The eligibility criteria and selection procedures for GPs, SOs and BGs have been agreed with KRWSA, and are detailed in **Attachment 7 and the PIP**.

Project Components

The project would include four main components: (a) institutional building; (b) community development, and infrastructure building; (c) statewide sector development; and (d) national sector development. The brief description of the project components is provided below:

By Component:

Project Component 1 - US$11.10 million

Component A: Institutional Building

A1: Set up and operation of Kerala Rural Water Supply and Sanitation Agency . The subcomponent consists of setting up and operation of KRWSA and four DPMUs. Special emphasis will be placed on building their capacities to adopt a demand-responsive approach and participatory processes. KRWSA and DPMUs would not be mandated for direct service delivery, but would act as facilitating and support units to GPs and BGs. GOK would ensure that KRWSA's "autonomous" status is not compromised and only those decisions are referred to GOK which do not fall in KRWSA's authority and mandate as per its MOA and bylaws agreed with IDA. KRWSA's composition, functions, and operational procedures have been agreed as indicated in the PIP. Four DPMUs will be set up to undertake project management at the district level, with support from the state level KRWSA. Two DPMUs have been set up, and are fully functional. KRWSA would complete the establishment and staffing of two more DPMUs including accounts and financial officers by March 31, 2001. The teams will be equipped with computers, office facilities, and modern communication facilities and would travel at least about 50% of the time every month in the project GPs and BGs. Most of the this staffing and other actions have been completed and reflect the above principles. Assistance to KRWSA and DPMUs will be in the form of incremental costs, technical assistance, audit, equipment and goods, construction supervision monitoring, and M&E.

A2: Sanitation and Hygiene Promotion (SHP). The subcomponent activities would be: (a) strategic and (b) implementation. KRWSA with assistance from the TSHM, has developed a sanitation and hygiene promotion strategy and framework. The long-term objective of this strategy is to promote a 'total health' perspective and achieve sustainable and equitable health and hygiene benefits across the community through improvements in water and environmental sanitation services. The short-term objectives are to: enhance awareness about the prevalence of water pollution, its consequences and possible solutions; foster the understanding of complementarity between water, sanitation, and health; increase awareness of the benefits of improved water supply and sanitation WSS facilities; and strengthen local capacities for a self-sustained and gender sensitive SHP. The project will support above short-term objectives in the project GPs.

The subcomponent would include developing and disseminating IEC materials. The materials will be of two types: (a) interpersonal (i.e., brochures, flip charts, manuals, stickers, etc.), or (b) mass media material. The latter will be in three categories: folk program campaign, wall paintings/posters, audio cassettes (primarily disseminated through radio), and audio/video spots/movies (primarily disseminated through television). Developing IEC material will form part of Component A, whereas dissemination of SHP will be an integral part of the community development activities in Component B. The activities in Component A are expected to be completed in the first year of the project. Activities in Component B will be implemented progressively as part of the 27-month scheme cycle for each batch.

KRWSA would seek the help of external professional agencies (including TSHM) in designing the materials. The subcomponent would be implemented by GPs and/or the participating SOs. KRWSA will recruit a media specialist to coordinate this component. The media specialist will be supported by the environmental specialist of KRWSA. In addition, SO staffing would include GP level SHP team in each GP. KRWSA will prepare the terms of reference and draft contract for enlisting the services of external agency/agencies for designing the IEC materials and share these with IDA for comments.

A3: Capacity Building. Capacity building initiatives would include giving the stakeholders capacity through knowledge, skills, and management practices in the spheres of technical, institutional, financial, and management aspects. Specific programs have been developed based on a needs analysis and learning requirement of different categories of stakeholders. The proposed strategy will be to: (a) train the apex/strategic/program/project level stakeholders (state-level administrators, policy makers and KRWSA) including SOs and GPs; and (b) give the capacity to the BGs and BCs through these trained SOs and other agencies. The responsibility for implementing '(a)' will be that of a specialized agencies (e.g., Kerala Institute of Local Administration (KILA), TSHM, Attappady Hills Area Development Society (AHADS), private sector management consultants like Shivkheda, etc.). Some programs (i.e., training the community technicians) will also be conducted directly by these agencies. They will be encouraged to identify, nurture, and promote local institutions (SOs) to undertake some of the capacity building programs. Investment would include TA, orientation training of state-level policy makers, motivational and management training for KRWSA and DPMUs; technical, social, and management training for SOs and GPs.

A4: GP Strengthening. This would include financing two contract staff for two years, their capacity building, installation and operation of computers and other office equipment, and a small flexible fund for development works GPs may wish to take up. A provision has been made of $22,500 per GP for this component.

Project Component 2 - US$75.20 million

Component B: Community Development and Infrastructure Building

B1: Community Development

B1.1: Community development support. The subcomponent will provide support to BGs and BCs in social, technical, and management aspects in planning, implementation and operations management. Community development issues and concerns have been identified based on beneficiary assessments, stakeholder analyses, and social impact assessments. A discussion on the issues and concerns would form the basis for building the elements of a CDD approach. The major issues identified to be addressed include: autonomy, subsidiarity, participation and inclusion, accountability and transparency, and capacity building. Based on the social assessment and tribal development studies, lessons learned from the Batch 1 planning experimentation, and stakeholder workshops, the project's design features have evolved towards addressing the above issues, including deciding on the institutional arrangements, defining roles/responsibilities, affixing legal identity, fund flows, and procurement procedures. The subcomponent would finance SO staff and other costs towards their community support services. Their designated functions include: awareness creation, mobilizing communities and facilitating the BGs in the preparation and implementation of community empowerment plans, conducting and/or facilitating in capacity building, and acting in liaison with GP and other agencies. Initially, SOs will be given the capacity to enable them to then build the capacity of the communities.

B1.2: Women's development program To ensure effective mobilization and participation by women, a separate WDI subcomponent is planned. The focus will be on the institutional and economic fronts. Institutional issues relate to mobilizing women in facilitating their collective engagement in the development process and providing opportunities for participation in project activities including greater control over the community facilities created under the project. Towards this, besides representation in BGs, efforts will be made to establish self-help groups, at least one in each BG. Women's capacity would be enhanced across a broad front including: decision making in WSS activities; mobilizing community resources; managing O&M; change agents for hygienic behavior; thrift and credit and microenterprises. The economic issues relate to: (a) upgrading skills; and (b) microenterprises. For this, skill gaps/requirements will be identified

in two distinct areas: WSS and others; and plans made to impart the necessary capacity building. Similarly, individual as well as group microenterprise initiatives would be encouraged. This may include establishing sanitary marts, service centers, and other WSS related activities. All activities will be self-selected. Support to microenterprises will be subject to cost sharing by the beneficiaries, 20% in the case of WSS related, and 30% for other activities.

B2: Infrastructure Building

B2.1 Design and engineering support. The subcomponent would include staff and other costs related to preparing engineering designs, procurement, construction, and consultancy support (mainly SO engineering staff cost) to BGs, BCs, and GPs. Since the concept of community managed water supply systems is new, detailed guidelines have been developed for planning and implementing such schemes by the community (refer **Attachments 12 and 13** on infrastructure building). The training of SO engineers in design and engineering will be financed under subcomponent A3.

B2.2 Construction of schemes. The subcomponent would include:

(a) *Water supply schemes*. The project will finance some 2,500 drinking water schemes. Except for a few rain water harvesting schemes, all the schemes will be piped water schemes. There is a huge demand for private connections and some 70% households in each scheme are expected to opt for private water connections. The households who do not demand or cannot afford the private water connection will be supplied through public standposts. Within the piped water schemes, the technology options will primarily vary in respect of the type of water source. Over 90% of the schemes will be small covering about 100 households each and are expected to opt for local ground water sources like open wells, deep borewells, and springs. Only a few schemes are likely to select surface water sources like rivers, where the water will have to conveyed from long distances. These schemes will involve construction of infiltration wells/galleries or traditional water treatment plants. Most schemes will involve pumping, construction of storage tanks and piped distribution networks. All schemes will use a mechanism of disinfection that is based on the size and source of the schemes; small schemes will use bleaching powder. In addition, the subcomponent would support the rehabilitation of existing KWA water supply systems (where required) by augmenting the source, protection of the sources from pollution, construction of new facilities and repairs and replacement of the existing structures, machinery, equipment, and pipelines to conform to the technical standards (see the PIP's technical manual).

(b) *Drainage.* Because of hilly terrain in the mid- and high-land areas of the project district, disposal of sullage and storm water is not a major issue. However, in coastal areas, this is likely to be a problem. A provision has been made in the project for construction on an average of 1.5 kms of storm water drains per GP in mid- and high-land region and 3 kms per GP in the coastal region. The coverage of drainage schemes (including safe disposal) will be GP-specific based on GP's demand.

(c) *Latrines.* The project will promote and support construction of new household sanitary latrines in the participating beneficiary groups. About 45,000 latrines are expected to be financed under the project. The large number of latrines constructed using unsafe sanitation technologies is a major issue in Kerala. Through the project's SHP activities, a beginning will be made in converting these latrines into safe sanitary latrines. This would mainly involve replacing deep pits with shallow pits, provision of sand envelops around the pits, and other similar techniques. The project would support conversion of about 100 such latrines per GP. In coastal areas, apart from high water

table, the nonavailability of space for constructing individual sanitary latrines will be a problem. In these areas, the project would support, on a pilot basis, the construction of 'pay-and-use' type of group/community latrines.

(d) *Environmental management.* To support the GP's initiative in improving the environment within the GP area, the project would support small-scale environmental management initiatives in the project GPs. These would include composting and garbage pits, desilting and rehabilitation of existing ponds, pilots on solid waste management and on IAP, and other related initiatives.

(e) *Groundwater recharge.* Despite heavy rainfall in Kerala the drying of wells in summer months (February to May) is a very common problem. Therefore, to improve the perenniality of proposed drinking water source-wells, the project will promote and implement associated GWR schemes. This will involve treatments such as: contour bunding/trenching, rain pits, water harvesting structures and percolation tanks, strengthening of bunds and trenches through vegetative measures, strengthening of terraces, raising of bunds or any other additional activities, subsurface dykes (where needed), agronomic measures (technical advise and link with existing system), drainage line treatments, check dams and gully plugging, mechanical and biological measures and diversion weirs, retaining walls, and gabian structures. There is also great potential to introduce roof-water harvesting in many parts of Kerala, since even poor families own their house with a small plot of land. In determining the prospective scope of this component, the aspect of innovation and learning as well as the limited existing implementation capacity of SOs, KRWSA, and of the expert agencies [like the Centre for Water Resources Development and Management (CRWDM), and the Kerala Agricultural University (KAU) will also need to be considered. KRWSA therefore will make a small beginning by implementing some 25 GWR schemes in Batch 1 GPs and gain experience. While gaining experience in Batch 1, subsequent batches of GPs would prepare and implement a larger number of schemes. At the end of the project, roughly about 550 GWR schemes are expected to be implemented in 80 GPs. Though the necessary budget provision has been made in the project on the above lines, KRWSA will review the efficacy and benefit-cost ratio of these schemes for every batch and progressively adjust its implementation strategy and coverage for subsequent batches.

B3: Tribal Development Program

The project would finance a tribal development plan covering components same as B1 to B4 above in the targeted nine tribal GPs. Kerala has a tribal population of 0.34 million, accounting for 1.1% of the total population. There are about 55,000 tribals in the four project districts (17% of the state's tribal population). Of the 358 GPs in the project districts, 33 GPs have tribal population. Nine of these 33 GPs have tribal population of more than 5%. The project recognizes that the tribals are relatively less endowed, compared to their nontribal counterparts, in terms of technical, financial and institutional capability. To address this differential, the project has proposed a separate TDP covering 37,500 tribal population in the above 9 GPs. These GPs will be selected as a special case and will not be subjected to self-selection process that will be mandatory for other GPs to participate in the project. To ensure targeting, the TDP assistance will be provided only to the tribal BGs in those 9 GPs, and not to the nontribal population. In addition, if any of the GPS participating in the project has tribal clusters, those will also be provided additional assistance like the tribal clusters in the nine GPs.

The strategy comprises: (a) specific targeting of nine GPs with substantial tribal population; (b) subtargeting of tribal settlements with water scarcity problems; (c) creating an 'enabling' environment for such settlements to enable informed decision making; and (d) mobilizing the willing communities into

groups and building their capacity to plan, implement, operate and maintain the project activities/facilities. The scheme cycle and the associated rules and regulations have been accordingly evolved in discussions with tribals and other relevant stakeholders. Special technical assistance through professional SOs will be ensured. SO staffing will predominantly comprise tribal volunteers, similar to that of the social activists currently deployed in the ITDPs. Unlike the main project, funds will flow directly from KRWSA to the tribal BGs. The SO and BGs will jointly handle the project funds and procurement.

Project Component 3 - US$ 1.30 million

Component C: Statewide Sector Development

The project would provide technical assistance to GOK for statewide planning, development and management of the water sector in a comprehensive and integrated manner. The component would include three main subcomponents:

C1: Formulation of long-term sector policy and strategic plan. The subcomponent would include technical assistance for undertaking a comprehensive statewide sector study to review sector status and performance. The review would cover RWSS sector performance including effectiveness of institutional service delivery mechanisms, technology issues, water resource availability, service levels, coverage, operational and financial performance of sector institutions, sector financing and results of policy initiatives in the decentralization efforts undertaken by GOK. The findings of the review would be disseminated to key stakeholders to evolve a common long-term vision for the sector. Based on this, a long-term strategic plan would be developed for the sector covering policy and regulatory framework, institutional reform, financing strategies, technology options and health and hygiene education initiatives. GOK has recently seriously considered advancing restructuring of KWA as a part of the planned sectoral reforms. The Water and Sanitation Program of South Asia plans to provide technical assistance to GOK to identify a restructuring plan for KWA. The success of such a step is dependent on GOK's continued political commitment, especially when the new government will assume power in early 2001. However, if GOK wishes, the project will consider supporting such an initiative through TA, and a limited reallocation of project funds to commence implementation of KWA restructuring.

C2: Sector information management system (SIMS). The objective of this subcomponent is to develop and operationalize a comprehensive SIMS that will support and enhance the strategic planning and monitoring of the water supply and sanitation sector in the state. The SIMS will collect and update information on sector status, maintain data relating to performance assessment, and comparative analysis of service delivery options in the context of decentralization policy of GOK, and carry out the benchmarking of sector performance with national and international experience. Activities that would be financed under the subcomponent would include: TA, and KRWSA operating costs. The subcomponent would be implemented through the Secretary of IWSD; and KRWSA would be responsible for procuring and managing consultancy services, etc.

C3: Other special studies. The subcomponent would include other studies, such a water resource management study; pilot studies on technology options for conversion of unsanitary latrines into sanitary latrines; water harvesting technology options; coastal water supply technologies, health impacts of water, and environmental sanitation, etc.

Project Component 4 - US$2.20 million

Component D: National Sector Development

The objective of the component is to provide technical assistance to GOI (represented by RGNDWM) in furthering its sector reform agenda, countrywide. For this purpose, the project will support

building capacity of the RGNDWM in reform implementation. Agreement has been reached that this component will include policy workshops, HRD, developing knowledge banks and their networking, developing and disseminating IEC materials and sectoral guidelines, supporting research and experimental initiatives from interested states, and studying and disseminating national and international examples of best-practices. The mission would furnish the first action plan not later than May 31, 2001, and thereafter furnish regular quarterly progress reports to IDA in a mutually agreed format.

During negotiations assurances were obtained that the RGNDWM will designate an officer (not below the rank of a deputy secretary) to GOI as an officer responsible for implementing the component.

Decentralization in Kerala

Following the 73rd and 74th Constitutional Amendments, decentralization efforts in the country have received increasing emphasis in several states. However, the GOK's bold moves to decentralize all relevant functions to local institutions with an adequate financial backing and transfer of staff from the line departments clearly marks a new era in decentralization in the country. The Kerala experiment initiated under the 'People's Campaign for Decentralized Planning' makes a new beginning by devolving a large proportion of the state plan funds to local authorities as 'untied grants' for developmental works.

Background: GPs in Kerala present an unique opportunity due to their larger size with an average estimated population of over 30,000 and a relatively more urban habitation. Except for a few GPs in the hills, most others have this urban character. The settlement pattern is characterized by dispersed homesteads, with a large proportion of the households possessing individual plots. In most cases, unlike villages in most other parts of the country, these settlements are not organized along caste lines and generally do not have class based spatial segregation. This would have important implications for the project, as communities will tend to be more heterogeneous.

Another unique feature of the gram panchayats in Kerala is the very high level of neighborhood based community mobilization. Many of the GOI programs based on the community mobilization paradigm have been very successful here. Locally, these units are known as 'ayalkootams' and represent informal community organizations, who participate in the local level planning process. Some of the GOI programs have also used these concepts to build up the NHGs the poor households. NHGs have women members from 20 to 25 households, voluntary workers and a president. NHGs are federated at an area and settlement level as area development societies (ADS) and community development societies (CDS). These concepts have been developed in urban areas, though plans to achieve full coverage of the NHGs, ADSs, and CDSs by 2000, in rural areas are also underway. In the Mallapuram district full coverage has been also achieved in rural areas. Innovative approaches combining noneconomic criteria for selection of BPL families that were initiated in Kerala have now been mainstreamed through GOI programs throughout the country.

This strength of neighborhood level community mobilization has been captured in the use of *gram sabhas* at the ward level. A ward is the smallest political unit with an average population of 2,000 people. It elects a representative as a member of the gram panchayat. The number of wards in a GP generally ranges from 8 to 15. These ward members elect a president and members of different committees.

Main highlights of decentralization. The decentralization process was initiated in Kerala during 1997 to 1998. Its main features comprise transfer of functions to different local authorities, financial allocation through statutory and formula based transfer, and a participatory and rational planning process to ensure appropriate and equitable utilization of funds. It aims to be flexible while ensuring accountability and transparency in the process.

Transfer of functions: Given their relatively larger size, GPs in Kerala represent an ideal threshold for many services and functions, such as a primary health center, veterinary institution and krishi bhavan as well as several schools and *anganwadis.* Thus, decentralization has been effected across all sectors as relevant. Most of the field staff of the line departments has already been transferred to the GPs or other Panchayati Raj Institutions at the block or district levels. Though their salaries are being met by the state government, they report directly to the GP, as the disciplinary and leave granting authority. GP also allocates work to these functionaries. In February 1999, GOK took a major policy decision to transfer the small rural water supply schemes from the KWA to the GPs. Along with this, appropriate amendments have been made in the Kerala Panchayat Raj Act, 1994 to enable the GPs to collect charges from consumers for the water schemes financed, implemented and operated by them. Although over the last two years, GPs have been allocating funds for WSS from their share of the plan funds, most panchayats are reluctant to take over the existing schemes without having adequate information on their condition and the costs involved in rehabilitation and running these later.

Financial allocations and fund flows: In probably the boldest move in this process, GOK has decided to transfer about 35% of its plan funds directly to local authorities as developmental grants. Table 1 gives the actual allocations made under this to gram panchayats. Intra allocation across panchayats has also been made formula based using indicators related to population, geographical area, area under paddy, own income of gram panchayats and a composite employment index. The state budget has a separate annex to give details of both plan and nonplan allocations to each local body.

Table 1: Plan Allocations to Local Authorities
(million Rs.)

	1997-98	**1999-2000**
Total Plan Size for Kerala	28550	32500
Funds allocated to all local authorities	10250 (36%)	11540 (35%)
Grant-in-aid	7490	10200
State schemes	2760	880
Other	0	470
Allocations to Gram Panchayats	4210	5950
General grants	3070	4640
Special Component Plan (SCP) for SCs	1060	1110
Tribal Component Plan (TCP)	80	200

Source: For 1997-98: Isaac (1999), Peoples' Planning: Towards a Handbook, State Planning Board, GoK. For 1999-2000: Appendix IV to the GoK Budget for 1999-2000.

Broad guidelines for the use of these funds have also been given. For example, during 1999 to 2000, for GPs these include allocating:

- not less than 40% in productive sectors such as agriculture, irrigation, animal husbandry, fisheries, etc.
- in infrastructure sectors (roads, buildings, streetlights etc.) not to exceed 30%;
- of at least 10% for women development and projects run by women;
- use of a maximum of Rs. 0.1 million for expenditure on the plan process; and
- of at least 10% for repair and maintenance of assets.

There are three types of funds which are transferred to the local authorities--the first are the untied grants in aid given directly to the local authorities. These are: plan grants to be spent on schemes prepared and approved by the local bodies conforming to the instructions issued from time-to-time by the Government. Second are the other plan funds that are tied to specific purposes and provided to the local bodies through the concerned departments for transferred schemes and institutions. This includes the centrally sponsored schemes. The third category are essentially nonplan funds which will be distributed on the basis of recommendations of the State Finance Commission (SFC) as accepted by GOK. As per the recommendations of the first SFC transfers are from the basic tax, vehicle tax compensation, stamp duty, village road maintenance, and other general and special grants. GOK has recently appointed its second SFC, which will now be able to review this framework in light of the significant decentralization initiatives already taken. SFC's role is important as it will help to bring the much needed predictability and rationality in transfer of nonplan funds. This will help the GPs and municipalities to assess their own share from internal surplus in total plan outlay more rationally. SFC is also expected to make recommendations regarding local sources and improved financial management at the local level.

Local participation has helped to leverage the funds allocated through the state plan. At an aggregate level for all local bodies, an allocation of Rs. 7.5 billion has generated a total outlay of Rs. 17.4 billion as reported in the annual plans of all local authorities. For GPs also, this has been true at an aggregate level, with important contributions mobilized from beneficiaries, internal surplus and borrowing from financial institutions (refer to Table 2). It has helped to more than double the total funds available for development activities at the GP level. It is worth highlighting that, compared to all other local authorities, the largest beneficiary share has been mobilized by the GPs. Possible use of microcredit to support this process further would be helpful. For example, under the programs for BPL families, successful linkages between ADS/CDS and commercial banks, the National Bank for Agriculture and Rural Development and HUDCO have been developed.

Detailed procedures to be followed for the flow of funds to local authorities under this arrangement have been developed by the GOK and issued in the form a GO. An attempt has been made to evolve a systematic procedure linked to the local level plan process (as described below) and to ensure accountability in the use of public funds. However, as this entire process has just been initiated two years ago, a review needs to be made to assess its effectiveness.

Table 2: Sources for Total Plan Outlay for GPs, 1997-98
(million Rs.)

Sources of Funds	**Annual Plan Allocation**	**Percent share to total**
State Grant-in-aid	4210	42.7
Internal surplus of gram panchayats	630	6.4
State and central sector schemes	550	5.6
Loans from cooperatives and financial institutions	1070	10.9
Voluntary contributions	430	4.4
Beneficiary contributions	2700	27.4
Other	270	2.7
Total	9860	100.0

Source: : Isaac (1999), Peoples' Planning: Towards a Handbook, State Planning Board, GoK.

Participatory rational planning process: The use of funds at the local level is guided by a local level planning process, which combines both assessment of local needs as well as an objective assessment of availability of resources. Table 3 illustrates the plan process envisaged under the decentralization framework and highlights the role of different actors and stakeholders at different stages in the plan process. The process may be broadly divided into three phases of preplanning, planning and implementation. Preplanning includes needs assessment through gram sabhas and resource mapping at the GP level which are combined into a development report for the GP. Planning phase involves preparation of a shelf of projects by task forces for each sector at the GP level. Task forces are formed for each important sector comprising a ward member as its chair person, local sector official as its member secretary/convenor and other (two to five) local sector experts. These initial project ideas are then discussed with the gram sabhas and finalized following a development seminar as the annual plan of the GP. Different projects are then aggregated into the annual plan of the GP. The plan combines all resources available at the local level. This plan has to be approved on technical criteria by the block level expert committee (BLEC) and by the district planning committee (DPC). Neither the BLEC or DPC has the authority to suggest changes in priorities decided by the GPs. Selection of the beneficiaries is generally done at the gram sabha level. Implementation is generally done through BCs. GP may also engage services of authorized agencies for his purpose. GOK has also accredited a few reputed NGOs who can be directly given implementation responsibilities by the GPs without competitive bidding. In order to expedite and decentralize the implementation process, powers have been given to independent certified technical persons such as local engineers to supervise the work process. Fees up to 2.5% may also be paid for this purpose. GOK plans to develop special rules for implementing public works through communities and NGOs to encourage BCs to take on such activities.

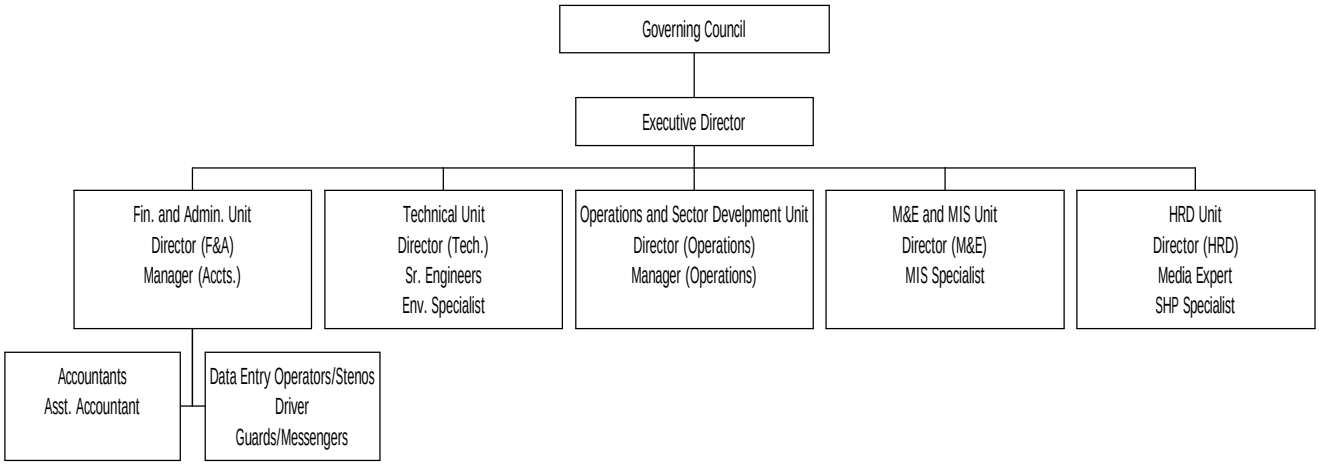
Table 3: Decentralized Planning Process and Role of Stakeholders

Stage	Task	Output	Responsibility
Pre-planning	Felt needs assessment by consulting ayalkootams and gram sabhas	Problem Identification	Gram Panchayat
	Resource assessment at village level	Village Development Report	Gram Panchayat
Planning	Project identification	Shelf of projects in each sector	Sectoral Task Force headed by a Ward Member
	Consultations with beneficiaries and gram sabhas	Critical feedback on projects	Gram Panchayat
	Incorporate feedback from people and identify GoK budget allocation and other resources	Present Annual Plan at a Development Seminar	Task Force
	Seek technical approval	Approval from BLEC / DPC	Gram Panchayat
Implementation	Mobilize funds	Submit applications to GoK or District Panchayats as appropriate	Gram Panchayat
	Implement the project	Construction contracts	Beneficiary Committees

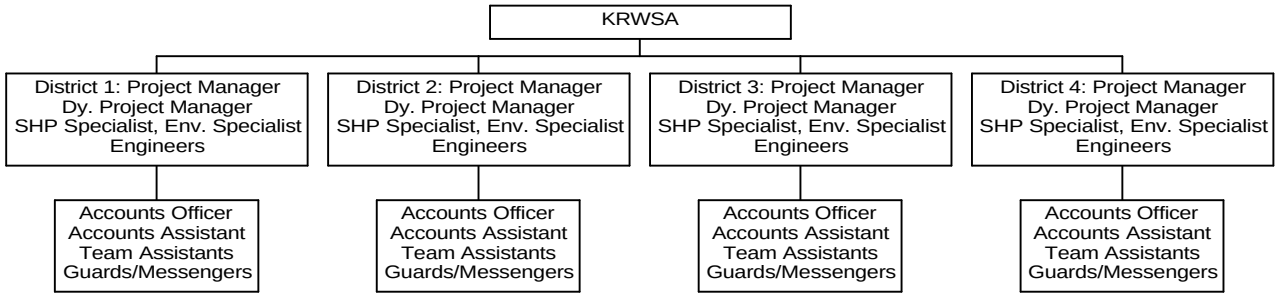
The State Planning Board has supported this process through intensive and statewide training activities as well as adapting the process through monitoring. At the state-level an empowered committee under the chairmanship of the minister and with all the important secretaries as members. This committee meets every week and is authorized by the cabinet to take on procedural matters. Most such decisions have been taken within two to three days, and appropriate GOs have been issued. Policy decisions require cabinet approval, however, these have also received priority attention. A systematic review process has also been initiated by the planning board through the district and block level coordinators. Further, all GPs are also encouraged to directly approach the Secretary of the Land and Agriculture Department with appropriate resolution by the GP councils. This process needs to be supported so that the learning and adapting that is based on the ground experience continues. It is also necessary to assess the actual experience with this planning process at the local level over the last two years. Limited field visits in panchayats revealed mixed experiences, especially with respect to the capacity of the task force and the quality of detailed projects actually being prepared. Pilot projects will be able to test the efficacy of the planning process and suggest the nature of further capacity building support required.

Annex 2
Attachment 2

Organization Chart: Kerala Rural Water Supply and Santitation Agency



Organization Chart - District Project Management Unit



Annex 2
Attachment 3

Responsibility Matrix
(Component B: Community Development and Infrastructure Building)

Sl. No	Roles and Responsibilities	KRWSA	GP	SO	BC
1	**Pre-Planning Phase**				
	1. Selection of GP	☛			
	2. Shortlisting of SOs	☛			
	3. Selection of SO		☛		
	4. Signing of PPTA	☛	☛	☛	
2	**Planning Phase**				
	1. SO Orientation	☛			
	2. KWA Scheme (single GP) taking over		☛	☛	
	3. Transition management of KWA Schemes		☛		
	4. SO Capacity Building	☛			
	5. GP Capacity Building			☛	
	6. Participatory Resource Mapping			☛	
	7. Awareness Creation and BG formation			☛	
	8. BG Registration			☛	
	9. BC Constitution and bank a/c opened			☛	
	10. BG/BC Capacity Building			☛	
	11. Technology Choice (BG level)			☛	
	12. Agree-To-Do Report – GP level	☛	☛	☛	
	13. Seek DPC approval to ATD	☛	☛		
	14. Community Action Planning			☛	
	15. Preparing Detailed Scheme Report (DSR)			☛	
	16. Mobilizing BG cash contribution				☛
	17. Depositing GP cash contribution		☛		
	18. Community Action Plans finalized			☛	
	19. DSRs finalized			☛	
	20. CAPs and DSRs approved	☛			
	21. Technical Sanction to DSRs	☛			
	22. Signing Implementation phase Quadrilateral Agreement (IPQA)	☛	☛	☛	☛
3	**Implementation Phase**				
	1. Mobilization of remaining cash contribution		☛		☛
	2. Sanitation & Hygiene Promotion implemented			☛	☛
	3. Construction Training	☛		☛	
	4. Community Contracting for procurement				☛
	5. Construction of water supply schemes				☛
	6. Rehabilitation of water supply schemes		☛		☛
	7. Construction of other components		☛		☛
	8. Women Development Initiatives			☛	☛
	9. Construction Monitoring	☛	☛	☛	☛
	10. Collection of 50% annual O&M costs				☛
	11. Signing Implementation Completion Report	☛	☛	☛	☛
4	**Post Implementation Phase**				
	1. Refresher training of BCs on O&M			☛	
	2. Sustainability monitoring	☛	☛	☛	☛
	3. Project Impact evaluation	☛	☛	☛	☛

KRWSA – Kerala Rural Water Supply and Sanitation Agency
BC – Beneficiary Committee
SO – Support Organization
GP – *Gram Panchayat*

Annex 2
Attachment 4

Project Implementation Schedule

Annex 2
Attachment 5

Project Scheme Cycle

Project Scheme Cycle

Project Scheme Cycle

Project Scheme Cycle

Annex 2
Attachment 6

Capital Cost	BG		GP		GOK			
	PP	IP	PP	IP1	PP	IP		
						IP1	IP2	IP3
Community Schemes								
Water Supply								
• Cash [1/] pvt. Land	7.5	--	5	5	0	30	30	15
• Labour	0	7.5*	0	0	0	0	0	0
Watershed Works								
• Cash	0		5	5	0	30	30	15
• Labour	0	15*	0	0	0	0	0	0
Drainage Storm Water [2/]								
• Cash	0	0	15	15	0	28	28	14
• Labour	0	0	0	0	0	0	0	0
Individual Schemes Latrines [3/]					Rs 2000 fixed subsidy for BPL households Rs 500 fixed subsidy for converting latrines for other households			
Annual O&M [4/] (100% to be paid by BG)	0	50	0	0	0	0	0	0

Note: BG-Beneficiary Group; GP-Gram Panchayat; PP-Planning Phase; IP-Implementation Phase

1/ Minimum of 50% of BG share
2/ GP share in cash
3/ The community contribution for latrines will be made by individual households
4/ 50% of the first year's O&M costs will be collected by the community before the end of Implementation Phase
*/ As per cons truction schedule, BGs can pay in cash in lieu of labor if they so wish

Annex 2
Attachment 7A

Support Organization Selection Criteria

1. The project proposes to enlist the services of SOs towards providing community development, technical and financial support services to the benefiting communities and GPs. SOs would be one of four key actors (the other three being KRWSA, GP, benefiting community) as they will have to work throughout the scheme cycle. The designated functions of SOs include: creating awareness among, and mobilizing benefiting communities for group action, enabling beneficiary groups in the preparation and implementation of community empowerment plans CEP comprises nine modules that involve: community mobilization; detailed scheme-wise technical reports; community contribution mobilization plan; O&M plan; women's development initiatives; SHP; coastal fishers' plan (where appropriate); take-over, rehabilitating and O&M of existing KWA schemes; capacity building plans; implementation schedule; community monitoring; mutual obligations and responsibilities, conducting and/or facilitating in building capacity, and the liaison activities between the GP and other agencies.

Eligibility Criteria

2. The eligibility criteria for SOs to participate in the project are:

(a) **A legal entity**: registered body under applicable state law; registration must have been made at least three years prior to the date of enlistment for each batch. Should have an organizational mandate to participate in water supply and sanitation project.

(b) **A secular organization** with no affiliation to political parties.

(c) **An independent governing body** with no political/government representation. An organization becomes eligible so long as it has no representation from project administering department (IWD).

(d) **Nongovernment entity**. Sources of income should be either owned funds or fees related to specific activity or services and devoid of government grants. No organization that receives (or has received in the past three years) government grants for meeting nonproject tied recurring expenses will be eligible for inclusion. Similarly, staff should have been hired exclusively from the non-government sector. No organization which has employees seconded by the government will be eligible for inclusion.

(e) **Functioning** for a period of minimum of three years, at least in the state, if not in the project districts, as evident by on-going activities.

(f) **A successful/proven record of intermediation** services--mobilizing rural communities for group action; working with women, the landless, SCs, tribals, or other less endowed groups; and engaging in RWSS is desirable.

(g) **Staff composition** should be either already endowed or be in a position to deploy appropriate staff (at least a third of should be women). Staff must know the local language.

(h) **A good record of bookkeeping** as evident by audited statement of accounts at least for the last three years.

(i) **Free from litigation**

3. Review and short-listing procedures

(a) KRWSA will place an advertisement in the local daily newspapers (at least five months prior to the start each batch), advertising the project, and seeking an expression of interest from the willing SOs. Simultaneously, efforts will be made to widely publicize this through direct communications with research/consulting agencies, government organizations, GPs, block panchayats, etc.

(b) KRWSA will verify the credibility of SOs, responding to the advertisement in two stages. First, feedback will be sought from: (i) the local district/ block administration; and (ii) blacklisted, if any, from government agencies, and national and international donor agencies. Based on the feedback, a screening will be done and a first stage list will be prepared.

(c) The first-stage list SOs will be asked to submit: (i) detailed information related to the eligibility criteria on a prescribed format; and (ii) an assessment note on two successful projects that the organization has completed within the last three years. Subsequently, the KRWSA will visit the field and verify the track record. During the field visit, the KRWSA will conduct a review which would include a manpower assessment, the type and availability of existing staff to work on the project and assessment of other resources which the organization could bring into the project. The review will also include aspects related to finance viz., annual budget, sources of financing, extent of establishment costs etc. Specifically, technical works, if any, carried out by the organization, will also be assessed. The extent of commitment will have to be assessed in order to determine the impact and scale of operation the organization would be capable of undertaking.

(d) Based on the field-level feedback, the suitability organizations to participate in the project will be assessed adopting a qualitative scale assigning points on the following basis:

Parameter	**Points**
1. Capability to reach out and work with communities, in the spheres of: · Water supply and sanitation · Community Civil Engineering works · Community Development · in working with Women/SHGs · in working with SCs and poor · in working with STs · in working with Gram Panchayats	**45** 10 10 5 5 5 5 5
2. Experience of working with government (state, center), bilateral and multilateral and international agencies	**10**
3. General Management/ Skills · Female/Male staff ratio · Engineering staff · Permanent/Temporary staff ratio · FCRA permission · Geographical orientation · PRA/SARAR	**35** 10 5 5 5 5 5
4. Financial Management · Overheads as % of total expenditure	**10** 10 *

(*The lower the ratio, the higher the score)

(e) Organizations with a minimum of 50 points will be empanelled. This will be reviewed and finalized by a committee headed by the executive director, directors of operations, HRD, and Finance. This empanelled list, and the details pertaining to each organization will be made available to the GPs for the final selection.

4. The empanelled list will be updated before the start of every batch. Newspaper advertisements will be placed seeking expressions of interest. KRWSA may also invite applications from organizations other than those that have responded to the advertisement.

Selection of SOs

5. Each GP will constitute a committee with its president as the chairperson and comprising vice president, standing committee chairperson and an external expert as members. This committee will choose a SO from the empanelled list. Once the GP selects a SO, it will be contracted out by KRWSA. No SO will work for more than two GPs in any batch. Participation of a SO in any batch will be subject to satisfactory performance (as assessed by KRWSA) during the previous batches.

Annex 2
Attachment 7B

Selection Criterian for Gram Panchayatb and Beneficiary Groups

Selection Procedure

1. The GP is the nodal agency for the BGs and hence a key partner. GPs are expected to perform the following functions:

- decide on approval of individual water supply and watershed schemes;
- decide on planning and implementing environmental management schemes;
- contribute towards capital cost;
- monitor all project related activities;
- aid in conflict resolution, if any, among benefiting groups of different water supply schemes;
- enable speedy power connection and other clearances; and
- take-over KWA schemes and arrange for hand-over to BGs.

2. There are 358 GPs in the four project districts. Of these, some 80 GPs are expected to be financed under the project. But there exists substantial differentials among the GPs in terms of socioeconomic characteristics, financial status, managerial capability as well as water supply and household latrine coverage. Given the project's self-selection criteria (subject to demand driven and cost sharing stipulations), concerns have been expressed that only good and strong GP's participation could outbeat the weaker GPs. Towards addressing this, and ensuring 'inclusion', the project proposes ranking of the GPs. At the same time, efforts will be made to ensure that the efficiency in implementing the developmental programs do receive due recognition.

Ranking and Selection Procedures

3. KRWSA will place an advertisement in the local daily newspapers prior to the commencement of each batch, informing of the project and seeking an expression of interest from the willing GPs. Simultaneously, KRWSA will write a letter to each GPs and include a copy of the advertisement.

4. Applications will be obtained from GPs in a standard form prescribed by KRWSA which will include assurances regarding GP’s commitment to adopting the project's cost recovery and other administrative rules (see paras 8 and 9). Subsequently, each GP will be ranked based on the following criteria.

Criteria	Indicator	Weight/ Score
Poverty	Proportion of BPL households	20
Water supply coverage	Noncoverage denoted by percentage of BPL households traveling a distance of 250 meters or more to fetch water	30
Latrine spread	Noncoverage denoted by percentage of BPL households with no individual sanitary latrine	10
Efficiency in implementing developmental projects	Average use of plan funds for the preceding three years	40

5. Once the rankings are done, GPs will be arranged in a descending order and the top GPs will qualify for self-selection on a priority basis.

Beneficiary Groups - Selection

6. To ensure that the available project financing support is equitably distributed amongst 80 GPs, an investment ceiling per GP will be applied towards the cost of infrastructure building/upgrading. Such an investment ceiling will be based on population and such other criteria that will be determined in consultation with IDA. Only BGs that agree to implement the cost sharing arrangements (paras 8 and 9) will be eligible to participate in the project. If the number of BGs demanding project support is more than what the project can finance in a given GP, then BGs will be selected by a lot system.

7. The process of ranking of GPs will be carried out at the commencement of each batch.

Cost Sharing Arrangements:

8. As an expression of their commitment to participation and ownership in the scheme, beneficiaries and GPs will contribute to the capital cost of the scheme, with a portion to be paid up-front in cash. The following rules for cost sharing by beneficiaries and GPs have been agreed:

Component	Beneficiary of GP Contribution* (percentage of construction costs estimated at market prices as contained in the Detailed Scheme Reports)
Drinking water schemes (up to 70 lpcd) with associated GWR measures	15% plus cost of private connection (additional 10% by GP)
Drainage and pilot environmental management schemes	0% (but 30% by GP)
O&M of water supply and drainage schemes (recurrent costs, maintenance & repairs, pump replacement, and water source insurance)	100% (0% by GPs)

* Detailed rules for implementation of cost recovery (when, how) and their linkage to positive triggers have been agreed (see the PIP). For TDP, lower levels of beneficiary contribution will apply, as included in the PIP.

9. For the new household latrines, the project will provide a fixed subsidy of Rs. 2,000 per unit only to BPL families in the participating BGs. All costs above the subsidy amount will be borne by the beneficiary. The project will also promote conversion of existing unsanitary latrines into sanitary ones. The project will provide a fixed subsidy of Rs. 500 per unit to the members of the participating BGs for such conversions, subject to a ceiling of about 100 latrines per GP. Depending on the response in Batch 1, KRWSA will consider providing this subsidy to a larger number of existing latrines per GP, but within the GP's overall budget allocation.

10. The cost sharing arrangements will be reviewed at the end of each batch and changes will be introduced only with prior concurrence of IDA.

Monitoring and Evaluation

Framework for M&E

Compared to the traditional system of supply of water followed in Kerala, this project is experimenting with some ground breaking shifts in ideologies and policies. The major shifts are:

- Demand-driven delivery system instead of a top-down, vertical delivery model;
- self-selection procedures for the primary stakeholders, like the GP and user committees;
- The actual users being the decision makers right from identification of the scheme, planning, implementation to even operation and maintenance;
- The role of the government reformed to that of overall planning, policy formulation, M&E and financial support; and
- Adopting a cost sharing approach instead of a free delivery mechanism.

The development objective of the project is to develop, test, and implement a new institutional service delivery model for sustainable delivery of rural water and sanitation services. Therefore, the M&E activities would have to be designed not just for project progress tracking, but also focus on learning initiatives.

The M&E systems will be designed to ensure that adequate information is provided to all the relevant stakeholders and managers--BGs, GPs, NGOs, PMU, Government, and the Bank, on both project implementation performance and outcomes, to enable each to exercise their respective management and supervisory functions. The project will conduct a baseline survey to enable subsequent assessment of project outcomes and the measurement of impacts.

A scheme cycle has been developed for the project comprising 4 phases viz., preplanning, planning, implementation and post-implementation. M&E plan will follow this cycle and will have three types of components. These are: (a) progress monitoring (physical, financial, and project milestones); (b) process monitoring, and (c) monitoring the outcomes and sustainability.

A matrix outlining the preliminary list of broad indicators for the three components across scheme cycle phases is shown under Annex 1. Progress monitoring will correspond to milestones in the scheme cycle. The process monitoring will be carried out using quantitative and qualitative indicators. The qualitative process indicators would be assessed through self-evaluation by stakeholders and through sample process audit studies. The outcomes and sustainability will be assessed through structured routine reporting on all user groups, self-assessment by user groups and through sample evaluation studies on achievement of the project's development objectives and impacts one and two years after their completion. BGs and GPs would be encouraged to carry out transparent social audit and a ranking system developed for BGs, SOs, and GPs based on quantitative and qualitative aspects of progress.

The M&E system would emphasize transparency, self-monitoring by BGs and achievement of social development outcomes: (a) establishing local level autonomous, inclusive and accountable institutions; (b) women's empowerment as a result of reducing drudgery and enhancing their participation in project activities; (c) increasing social capital among vulnerable groups (the poor, tribals, and coastal

fishers); and (d) improving the effectiveness of the local self governments (GP). The M&E system will be developed internally and some of the key project staff would visit other Bank projects (particularly the Swajal project) to learn from their experience. Short-term support for software development would be obtained through consultancy arrangements. Physical progress monitoring will be linked with the software developed under the finance module for LACI. An M&E manual would be prepared and all operational staff trained on the M&E system. The M&E system would be reviewed annually and modified to suit project requirements.

Staffing, Roles and Resource Requirements

In a project like this, where all implementation work is undertaken by user groups assisted by SOs, the main job of all field level functionaries is essentially to monitor project progress and make corrective interventions where necessary. Hence it is not considered wise to separately earmark and label staff for M&E. However, it is important that the staff placed in the field have adequate expertise in M&E and a person is assigned with clear responsibility for management information systems. In the main office, it is useful to have an M&E section. The M&E section at the main office will comprise a director (M&E) and MIS specialist. The role of the M&E section in the main office would be as follows:

- Developing the M&E system consisting of:
  - parameters to be monitored,
  - processes to be adopted,
  - responsibilities for monitoring,
  - reporting and systems to capture data,
  - information flow,
  - databases to be maintained (GP, DPMU, RWSA),
  - assessment of studies to be conducted with external support,
  - developing essential software for consolidation,
  - data analysis,
  - preparing reports for various levels (BG, GP, DPMU, RWSA, World Bank) and electronic flow of information;
- Preparing an M&E manual;
- Training and orientation of all staff, GPs and SOs on the M&E system;
- Preparing TORs for studies, procurement and monitoring of consultancy services and disseminating the findings and lessons learned;
- Annual review of M&E system and modifications to suit emerging information needs;
- Preparing quarterly progress reports on key indicators for reporting to senior management of RWSA and the World Bank; and
- Bringing out annual report on experiences gained and salient lessons learned.

Environment Analysis

KRWSA, with the help of consultants, carried out studies to analyze the environmental issues and enhance the sustainable environmental benefits of the project. Two main studies were carried out: (a) study on "Water Quality Assessment of Open Wells in Selected Panchayats in Project Districts", and (b) an EA. The methodology encompassed collecting and collating secondary data on water resources availability and its use, surface and groundwater quality, demographic and socioeconomic aspects, WSS coverage and service levels and problems in O&M of existing water supply systems, as relevant in the context of the proposed Kerala RWSS project. A review and analysis of the secondary sources of information provided the basis for identification and assessment of the potential environmental issues related to the proposed project and preparation of an EMP for enhancing the beneficial impacts and mitigating adverse impacts. The agencies for the secondary sources of data included the KWA, Kerala State Pollution Control Board, Department of Science, Technology and Environment, CWRDM, state/central Groundwater Departments, State Irrigation Department, Agriculture Department, industries, Social Welfare Departments, and SOs.

Environmental Baseline Conditions

General: Kerala is one of India's smallest states with an area of 38,863 sq km. The Western Ghats constituting the eastern parts of the state rise from very low altitudes of a few hundred metres up to 2,000 m on an average. Most of the reserve forests of the state are in this highland region. Based on physical features, the state is divided into three natural regions: (a) the sandy coastal region (< 7.5m above MSL), (b) the midland region (7.5m – 75m above MSL), and (c) the highland region (> 75m above MSL). Of the four project districts, Palakkad has no coastal area. Geologically, the state mainly comprises of crystalline rocks such as charnockites, khondalites, gneisses and Dharwar schists of the precambrian age. Laterites cover wide areas in the state, and alluvium overlying laterite extends all along the coast.

Water resources and water quality: The average annual rainfall in the state is about 3000mm and its spatial distribution varies significantly (lowland 900mm – 3500mm; midland 1400mm to 4000mm and highland 2500mm . 6000mm). About 60% of the annual rainfall occurs during the south-west monsoon (June to August). There are 44 rivers with length more than 15km in Kerala, all of which originate in the Western Ghats. Forty-one of these are west flowing and join the Lakshadweep Sea while the rest are east flowing and discharge into the Bay of Bengal. Due to the undulating topography with steep gradients, the rivers flow into the sea within hours after precipitation. The estimated ground water resource of the phreatic aquifer in the state is 7,900 MCM. There is considerable variation in the available/useable groundwater resources between the districts and between the blocks within a district, due to natural variations in topography, the hydrogeology, the pattern of rainfall and the groundwater draft. The available per capita water resources (surface water 4985 lpcd and ground water 780 lpcd) are less than that of many other dry states of India. The main features are:

(a) Surface waters in rivers, especially in the lower reaches, are polluted by municipal and industrial discharges, agricultural runoff and by salinity intrusion from the sea. Extensive sand mining in almost all the rivers has also seriously affected the quantity and quality of river waters in the state.

(b) The level of groundwater use in the state and in the project districts is in the ‘white’ category (<45% of the usable resources) except in some isolated pockets, thus leaving still a significant scope for use of groundwater for rural water supplies. Excessive groundwater withdrawal in

certain parts of Palakkad and Thrissur districts has resulted in the decrease of the groundwater level. By and large, the groundwater quality in the state and the project districts is potable, except in certain areas that have a high concentration of F, Fe and Cl.

(c) There is widespread fecal contamination of open dug well waters and some borewell waters due to the existence of a large number of nonpoint sources of contamination such as deep leach pit latrines, septic tanks, barn yards and storm and agricultural runoff.

Water Supply and Sanitation

(a) The coverage of rural population with safe drinking water supply in the state as on 1-4-99 is only 51% while the coverage for urban population is 77.66%. As per a survey by the RGNDWM, there are still 7,091 'partially covered' (water supply less than 40 lpcd) habitations, 990 'not covered' habitations and 13 inaccessible and hence 'not covered' habitations in the state. The total number of fully covered habitations (water supply more than 40 lpcd) are only 1,682. The existing piped water supply schemes in the state account for 1008 mld, of which losses due to leakages in distribution is about 30%.

(b) A large proportion of Kerala's the rural population continues to depend on open dug wells for their daily water needs, the density of which is one of the highest in the country. The existing schemes implemented by various agencies have proved inadequate to meet the growing needs of the population, and the gap between the demand and supply of drinking water has been widening year after year. The availability of adequate quantity of safe drinking water remains acute, especially in the coastal areas with limited fresh water resources. Lack of funds and inadequate infrastructure have remained as the major constraints in the coverage and timely implementation of water supply projects.

(c) In general the sanitation coverage in the project districts is high but much lower in the densely populated lower income settlements, especially in the coastal areas. The sanitation coverage in the state is 51.3%, with 44% rural household coverage, and only 32% of BPL households have latrines (1991 census).

(d) In many households with individual plots, the traditional drinking water well, latrine, cattleshed, and the manure pits are all located in close proximity, with the potential risk of contamination of the drinking water sources, especially during the rainy season.

(e) Acute diarrheal diseases mainly related to water quality problems, and worm infestations due to poor personal hygiene and environmental sanitation, especially among the lower income groups, are the most common public health problems in the project districts.

Public Consultations

Public consultations formed an important activity, and were held at least in one Batch 1 GP, in each of the four project districts so as to assess the knowledge attitude and practices of the communities on water, health and sanitation issues including awareness of personal and environmental hygiene, expectations from the proposed project, their views/suggestions to enhance project performance and benefits as also any other issues that need to be addressed in the project. The participants in these consultations comprised the BGs, SOs, KWA, KRWSA, and NGOs. Details of the public consultations are given below:

Public Consultation – 1 : Date - Feb 28, 2000
Location: Nediyeruppu Panchayat, Kondotty Block, Malappuram District
No. of participants in the public consultation = 32
Public Consultation – 2 : Date - Feb 28, 2000
Location: Pookkottur Panchayat, Malappuram District.
No. of participants in the public consultation = 15
Public Consultation – 3 : Date - Feb 29, 2000
Location: Kunnummal Panchayat, Kozhikode District
Number of participants in the public consultation = 24
Public consultation – 4 : Date - March 2, 2000
Location: Mundathikode Panchayat, Thrissur District
No. of participants in the public consultation = 42
Public Consultation – 5 : Date - March 3, 2000
Location: Erimayoor Panchayat, Palakkad District
Number of participants in the public consultation = 12
Public consultation- 6 : Date - March 3, 2000
Location: Chullimada, Erumayoor panchayat, Palakkad District
Number of participants in the public consultation = 10

The salient points arising from the consultations were incorporated in the preparation of the EMP. The summary (in the regional language) of the environmental issues, proposed mitigatory measures and the EMP, as reported in the draft EA report were placed at the Panchayat Offices of the First Batch GPs of the project, for consultation by the beneficiary groups.

Key Environmental Issues

A critical review of the baseline data, observations during site visits and public consultations in the project districts clearly bring out the following key environmental issues:

(a) Water quantity: The availability of safe drinking water is a serious problem. In the summer months, most of the traditional private dug wells run dry and the public supply from various sources is inadequate. The problem is acute for the coastal areas where traditional dug well sources are saline and the service level from the existing water supply scheme is meager.The declining water table is observed to be an emerging phenomenon in some parts of the state. The Central Ground Water Board (1993) reports decline in water tables in the range of 1 to 3 m. for the period 1981 to 1990 in the northern districts of Kannur, Kasaragod, Wayanad, and in the eastern parts of Palakkkad district due to a spurt in groundwater development. A recent study b the Central Groundwater Board (Workshop on Groundwater Regime Monitoring in Kerala, CGWB, Kerala Region, January 1998) has also confirmed the decline in water level in certain parts of Palakkad district. The study concluded that an increase in groundwater draft is the major cause for this phenomenon. It is generally observed in the project districts, that competing demands for agricultural and domestic purposes are leading to an increasing use of 'pumps' for lifting water from traditional sources, in addition to bore wells. Generally, 60% to 80% of water is being lifted for irrigation purposes, 10% to 15% for industrial and the balance for domestic uses.

(b) Inadequate sanitation and environmental health: The present level of sanitation coverage in the state is only 51.3 %, the rural household coverage is 44% and 32% of BPL households have latrines. This implies that still a large percentage of rural population resorts to open field

defecation with its associated risk to public health. Open field defecation also constitutes a major nonpoint source of pollution of surface and groundwaters in addition to soil contamination. This problem is more acute in densely populated settlements, especially in coastal areas. Poor environmental sanitation and personal hygiene habits and lack of adequate supply of safe water are factors responsible for high incidence of water borne/water related diseases/deaths among the rural population. This situation could be remedied to a large extent by increasing the community coverage with sanitation facilities to achieve 100% coverage in as short a time frame as possible.

(c) Water quality: There is widespread bacteriological contamination of fecal origin in sources of public drinking water supplies, viz., traditional open dug wells, bore wells and surface sources, as confirmed by the findings of a study commissioned under this project and the public concerns expressed during site visits. These concerns for ground and surface water contamination relate to (i) close proximity of increasing number of leach pit latrines under varying soil conditions, laterite (midland) and sandy soil (coastal area); (ii) nonpoint sources of pollution in the catchment area including possible agricultural and surface run off, especially during the rainy season; (iii) washing, bathing and other domestic activities around the open dug well sources, especially among the low income communities; (iv) inadequate and irregular disinfection of drinking water supplies, including chlorination under KWA schemes; and (v) inadequate testing and irregular monitoring of drinking water quality.

The EA consultant interacted with fellow consultants engaged in studies on other components of the project viz., water quality survey, watershed management and social assessment including health, sanitation and hygiene component for exchanging information and findings of common interest. Their findings and recommendations were incorporated in the preparation of environmental mitigation and monitoring plans for the project.

Analysis of Alternatives

The project is aimed at improving the quality of rural water supply and environmental sanitation service delivery to achieve sustainability of investment and to generate health and income benefits. The need for the project has its genesis in the following key issues, arising from a "no project scenario":

(a) Despite the high rainfall (3000mm/annum) in the state, the rivers tend to go dry after the north east monsoons and the drought is becoming increasingly severe year after year. Any significant deviations in the normal rainfall pattern lead to dry spells and acute drought conditions. In some cases depleted sources during the summer season is also a problem.

(b) The high density of population, higher per capita consumption in comparison with the national average and the increasing aspirations of the people are leading to enhanced demand in the drinking water sector.

(c) The existing schemes implemented by the KWA, Groundwater Department, and the local bodies under the various support agencies and programs, including International Water Supply and Sanitation Decade (1981 to 1991), RGNDWM, etc., have proved inadequate. The percentage of rural population covered until April 1999 is only 51%, which is much lower than the coverage in most other Indian states. The gap between demand and supply of drinking water is widening year after year and the water demand for the population is estimated to double every 21 years. The sanitation coverage in the state is 51.3%. Lack of funds and inadequate infrastructure are the major constraints in the coverage and timely implementation of water supply and sanitation project

in the state.

(d) A high incidence of water borne diseases continues to occur among the rural communities in the project districts. Lack of an adequate safe water supply, sanitation, and poor personal and community hygiene habits, are the major causes for this situation. According to the statistics of the Department of Health Services of Kerala, there have been 78,008 casualties during the year 1993/94 due to water borne diseases in the district of Thrissur alone. The corresponding figures for Palakkad District were 65,774 and 45,131 for the years 1992/93, 93/94 respectively. It is clear that if the present scenario continues in future, inevitably there will be a serious deterioration in this sector with a corresponding impact on the social and economic development of the state as a whole. Thus the proposed project is timely not only to halt the present trend but also to enhance the existing levels of services to meet the demands of the people on a sustainable basis.

Environmental Management Plan

To address the key issues identified and the associated environmental impacts, the recommended mitigatory measures are summarized in Table 1.

Table 1: Summary of Identified Environmental Issues and Mitigatory Measures

Identified Environmental Issues	**Mitigatory measure(s)**
Water scarcity during summer and decline in ground water table due to over abstraction	• Instituting an organized survey with recourse to modern tools and techniques such as geophysical methods and remote sensing to locate potentially high yielding ground water sources • Scientific integrated watershed management at micro level • Providing a flexible per capita water supply (minimum 40 lpcd during summer) to match the source yield • Encouraging BGs to adopt 'self-regulation' practices for integrated water resource management • Roof catchment of rain water in drought - prone and water scarcity areas to augment drinking water supply.
Hydraulic interference between existing and new dug/bore well sources	• Adopting scientific tools and methods for siting of the new sources to eliminate/minimize interference.
Risk of contamination of groundwater sources of rural water supply due to large scale installation of leach pit type sanitation systems	• Selecting appropriate safe sanitation system to suit the local soil characteristics and hydrogeology • Revamping/rehabilitating, wherever economically feasible, of existing deep (3m and above) single leach pit latrines that penetrate the free groundwater table • Sanitary disposal of garbage from domestic and market sources and cattle wastes through composting (on a pilot basis) • Sanitary protection of existing and new dug wells by lining • Effective disinfection of water supply from traditional sources to leave a minimum residual Cl2 of 0.5 mg/l • Encouraging GPs to enforce existing rules for local bodies so as to ensure that only 'safe' sanitation technologies are adopted for latrines • An effective and sustained program of community awareness and education aimed at promoting personal and environmental hygiene

Performance Indicators

To address the identified environmental impacts/issues in the project design and implementation, following is a list of environmental performance indicators which have been integrated with the overall project indicators for monitoring and evaluation of the project performance.

I. Water Quantity: Scarcity of drinking water supply during summer months and decline in groundwater table due to overabstraction
Availability of at least 40 lpcd of drinking water during summer
No. of wells drying up in summer
Trend in falling ground water table arrested/reversed

II. Water Quality: Bacterial/chemical contamination in drinking water supplies; high incidence of waterborne diseases and worm infestation
Residual chlorine test at the service reservoir and public taps

No. of independent water quality surveillance
No. of wells made sanitary by lining and covering
No. of toilets using 'safe' sanitation technologies
Decline in the number of cases of parasites
No. of awareness programs organized, attendees and simple pre and post evaluation to assess the efficiency of training

III. Lack of sanitation and environmental health:
Percentage / Number of house holds with access to safe sanitation and environmental hygiene facilities
Cases of diarrhea in children under five years of age

IV. Solid waste management:

No. of BGs who have installed vermi- composting plants

Studies to be Undertaken by the Project

The statewide sector development programs (Component C) will be financed under the project, for developing long term sector policy including environmental management issues and action plan for phased implementation. Specifically some of the studies included under this component are:

(a) The SIMS study will help to develop and operationalize a comprehensive sector management system. It will include an assessment of current information availability status, sector institutions, identification of information needs of different stakeholders, capacity needed for networking, data collection, analysis, and in disseminating information.

(b) Forming a long-term sector policy and strategic plan will review sector status and performance for evolving a common long-term vision and strategic plan, integrating water supply, sanitation, and environmental sanitation issues. The long-term strategic plan for the sector will cover policy and regulatory framework, institutional reform, financial strategies, 'safe' technology options and health and hygiene education initiatives.

(c) The IAP study will assess the IAP-- health linkage for Kerala, including current practices, alternative interventions, policy analysis and recommendations.

(d) The water quality, sanitation, and health linkage study will assess the health benefits related to the Kerala RWSS, contributing to a better understanding of project costs and their related health benefits. The study will specifically help in incorporating health benefits in the project rate of return analysis.

(e) Impact of the project on groundwater depletion study will assess the impact of the project on groundwater depletion in the project's areas.

Social Assessment

Introduction

The Kerala Rural Water Supply and Sanitation Project chiefly aims to test the CDD approach, as an alternative to the existing supply driven, top-down and highly subsidized service mechanism, to deliver sustainable health and hygiene benefits to selected rural population through improvements in water supply and environmental sanitation services. The project also aims to assist the GOK in identifying and implementing an appropriate policy framework and strategic plan to replicate the CDD approach throughout the state. This paper reflects the proposed project's social assessment based efforts towards building the elements of CDD.

Initially, social development issues and concerns (related to CDD) are identified based on the beneficiary assessment, stakeholder analyses and social impact assessments. A discussion on the issues and concerns form a basis for building the elements of a CDD approach. This is followed by the proposed project's design features for planning and implementing the CDD. The findings are based on: (a) a comprehensive social assessment study by an external consulting agency. (Comprehensive Social Assessment conducted by Social and Economic Unit Foundation, a Dutch initiated NGO, Trivandrum; Indigenous Peoples Action Study, by Loyala Extension Services, Trivandrum; and the Coastal Fishers study by Darshan, Trivandrum). The full text of the results are available as a part of the project documents; (b) an independent indigenous peoples action plan study; (c) a separate study on coastal fishers; (d) results of the pilot action project in five GPs; and (e) field visits and several stakeholder workshops at state and district levels by the Bank missions. The results are presented in **four** sections: Section I serves as an Introduction; Section II on the beneficiary assessment, presents the characteristics of the prospective project BGs and subgroups; Section III covers the identification of the stakeholders, their key perceptions/expectations about/from the project, potential benefits/ risks/ impacts and conflicts of interests (if any) in respect of each of the subgroups. Design features of the proposed project to address the issues and concerns and operationalizing CDD approach are presented in Section IV. Section V deals with rules governing taking over of lands for water supply construction.

Beneficiary Assessment

Socioeconomic Profile of Kerala

Kerala covers an area of 38,363 Sq km, amounting to 1.2% of the total surface area of India, divided broadly into three physiographical regions: (a) highlands (48% of the total area), (b) midlands (42%), and (c) coastal regions (10%). The state has a population of about 29 million, a population density of 747 per sq km, almost three times that of the country (247). Key human development characteristics (Table-1) indicate that Kerala leads India (or for that matter all low income countries of the world) (Low income refers to 54 economies with per capita GNP of $785 or less (Frankie, R W. and Barbara H Chasin. 1994. Kerala: radical reform as development in an Indian state. Oakland CA: Food First, Second Edition.) on just about every human development indicator: wages and working conditions, nutritional status, overcoming caste discrimination, helping workers in the informal sector, increasing gender equality. Kerala has been most successful in enacting land reforms, in enforcing worker protection acts, the most effective school lunch program for the poorest children and in addressing issues related to decentralization and governance. All these have been achieved at a lower cost, and a low-level of economic development, thus leading to what is popularly known as Kerala model of development. The prominent results from the model

are: (a) a set of high material quality of life indicators coinciding with low per capita income; and (b) high levels of political participation and activism among ordinary people.

Table -1: **Human Development Indicators**

Indicator	**Kerala**	**India**
Per capita GNP (US$)	324	390
At purchasing power parity (PPP)	1371	1650
Adult literacy as % of total adults		
Males	94	65
Females	87	38
Scheduled Caste Females	74	24
Scheduled Tribe Females	51	18
Life Expectancy in years		
Males	67	62
Females	72	63
Infant Mortality per 1000		
Rural	15	82
Urban	7	45
Birth rate per 1000	18	29

Despite the proclaimed progress shown in the model, there are several issues requiring attention. The state's agricultural and industrial growth are probably the lowest in the country. Agricultural growth has in fact declined. The area under food grains has diminished from 960,000 Ha in 1970 to 1971 to 560,000 Ha in 1990 to 1991. The share of the cultivators in the total workforce, correspondingly, has reduced. The substantial rise in food consumption is completely unrelated to the state's own agricultural production. Agriculture is neither a subsistence nor a viable economic enterprise in Kerala. A large number of agricultural families have substantial nonagricultural sources of income, mainly remittances from abroad. This also reflects on the unemployment situation, probably the highest in India. It is as high as 30% for women and 60% for men. It is also quite evident that several groups, mainly landless laborers, tribals, and coastal fishers have been left out of the model. Environmental degradation as reflected in declining fishing resources, salinization, water logging, water pollution, soil erosion and forest degradation have become significant in the recent times, all of which affect the livelihood patterns, particularly of the poor and vulnerable (POV) sections.

Kerala is thus characterized by high social development but very low (in fact declining) economic development. Critics point out that the current pattern of social development is unsustainable in the long run as it is supported either by external remittances or by state's fiscal support (Tharamangalam, Joseph, 1998. The perils of social development with economic growth: The development debacle of Kerala, India. In: Bulletin of Concerned Asian Scholars, MI, USA). Development of an adequate productive resource base is argued to be critical for even maintaining the existing levels of social development. Concerns are also expressed on certain sections being excluded

from 'development'. The major issue is how a society with such high a social capital (social and human resources) should plan for mobilizing and harnessing the 'capital' to reach a level of economic development commensurate with its social development.

Governance and decentralization. Kerala has been a pioneer in effecting decentralization through the Panchayat Raj Institutions. This system comprises gram sabha as the lowest legitimate layer. Several GSs constitute a ward, and the wards in turn, to GP. At the GS level, a provision exists, depending upon need, for the formation of activity specific NHGs. Above the GP are block and district panchayats. A GP in Kerala is different from those in the rest of India: (a) a large population, of about 20,000 to 25,000; (b) possess literate labor force; (c) has fairly well developed infrastructure; (d) enjoys a reasonable degree of executive and financial power; and (e) has a high degree of awareness, both political and developmental. While the GS forms a primary legitimate unit of the GP, several informal neighborhood groups comprising 30 to 50 households are formed within a GS.

People's Campaign for decentralized planning, only one of its kind in the country, is distinctly visible in many GPs. This statewide institutional and resource mobilization has been launched in phases:

Phase 1 (August to October 1996). GSs undertook: (a) an identification and listing of the felt needs, priorities and development perceptions of the people in every locality; (b) creation of awareness; and (c) finalizing the basic organizational structure of the campaign.

Phase 2 (October to December 1996). GPs undertook a series of participatory studies: (a) collection of secondary data; (b) study of local geography and natural resources; (c) review of ongoing schemes; (d) survey of local history; and (e) consolidation of GS reports. This lead to listing the potential solutions for the development problems and formation of sector-specific task force.

Phase 3 (December 1996 to March 1997). Sector-wise task forces constituted undertook projecting the recommendations and suggestions emanated from the Phase 2. Special attention was paid towards scheduled castes (special component plan) and scheduled tribes (tribal subplan).

Phase 4 (March to May 1997). Annual plans finalized with distinct guidelines were issued to the local bodies on sectoral allocations.

Phase 5 (April to September 1997). Annual plans for tiers higher than GP, block and district panchayats finalized.

Phase 6 (May to September 1997). Technical and financial appraisal of the proposed project plans undertaken. The concept of voluntary technical corps, enlisting retired technical experts and professionals and encouraged to enrolling themselves as volunteers to appraise projects, was mooted.

Phase 7 (August 1997 to March 1998). Plan implementation initiated, subdevelopment committees formed under a GP development committee; GP identified individual beneficiaries leading to the formation of NHGs and NHG-wise development committees. Performance audit institutionalized.

As the campaign progresses, a provision has been made for continuous learning and midcourse

corrections. For example, it became apparent in the initial phases that the women's component did not received adequate attention, a special conference were held and were attended by 3,000 women, comprising elected women representatives and key women campaign activists, and the proceedings were disseminated to the GPs. A special gender analysis handbook has also been prepared. It should be noted that, while strong and better GPs have been able to plan and effect the campaign as planned, a good number of GPs (with lower social capital) have not been able to do so.

Socioeconomic Profile, Project Beneficiaries

Kerala has 14 districts. The project is proposed to be taken up in four districts: Kozhikode, Mallapuram, Trissur, and Palkkad. The project area is spread over 56 Block Panchayats comprising 358 GPs and has a total population of about 10 million. There are substantial inter and intradistrict differentials in terms of socioeconomic and demographic characteristics as well as ethnic backgrounds (Table 2). The differentials extend to GPs as well.

Water supply. The primary data from the sample surveys conducted as a part of the social assessment (SA) study reveal that majority of the households meet their drinking water needs largely by private shallow open dug wells. Owing to the dispersed pattern of rural habitation peculiar to Kerala (rather than in clusters as in conventional concept of 'village') a majority of households own independent wells. The majority of these wells go dry during specific months in an year, resulting in water scarcity. About 55% of the households distinctly express scarcity of water, particularly during the summer months of February through the end of May. Of them, about 84% of the households face a scarcity of water for three to six months; 8% for six to nine months; and the remaining 8% as a chronic problem. In areas of water scarcity, the household rely mostly on their neighbor's well or a distant private well. Agriculture borewells and Panchayat wells are the other sources of water during scarcity. However, over time the problems associated with scarcity have been accentuated. The changing rural lifestyles and increasing material prosperity have led to reclamation of paddy fields, ponds and streams for constructing houses and cash crop plantations and replacement of open dug wells with bore wells. Heavy pumping has led to significant lowering of groundwater tables. The collapse of joint family and physical division of the houses has also triggered off the need for more water sources. This exploitation has led to large scale water shortages.

Distances to be traversed to fetch water during scarcity period is increasing over years. As brought out by the SA study: 28% traverse up to 100 meters; 38% cover 100 to 300 meters; 13% cover 300 to 500 meters and the remaining 21%, over 500 meters. The problems are more serious nature in the case of the POV as they normally live on marginal lands with not many water sources in the nearby vicinity and hence compelled to traverse more. Access to safe drinking water in rural areas, in general, and for the POVs in particular, is a matter of serious concern. The 1991 census data show that safe water supply coverage in Kerala is about 38% in the urban and 12% in rural areas. Further analysis reveals that in Kerala only 7% of the total rural population has been provided with 40 lpcd (the minimum stipulation) as against a national average of about 48%.

Table - 2: **Project Districts at a glance**

Particulars		**Thrissur**	**Palakkad**	**Malappuram**	**Kozhikode**
No of Block Panchayats		**17**	13	14	12
Gram Panchayats		98	90	94	76
Population/Total		2,737,311	2,382,235	3,096,330	2,619,941
Area (sq km)			4,480	3,632	
Male	Rural	964,593	972,765	1,369,418	796,383
	Urban	348,090	183,057	135,862	496,383
Female	Rural Sex ratio; F/M	1,052,502 109	1,034,893 106	1,444,458 105	819,061 103
	Urban	372,126	191,520	143,592	508,115
SCs	Rural	270,712 (10%)	333,881 (14%)	237,233 (8%)	131,859 (5%)
	Urban	63,812	44,667	18,498	52,761
STs	Rural	3,891 (2.3%)	34,899 (1.5%)	10,514 (0.34%)	4,942 (0.20%)
	Urban	160	566	41	465
Fishers		684,482 (25%)	Nil	612,213 (20%)	1,203,794 (46%)
Per capita income (per annum)		Rs.18,734	Rs.15,595	Rs.12,889	Rs.17,663
Families below poverty line (%)		32	32	28	31
Literacy (%)		90.13	81.27	87.94	91.10
Female literacy (%)		86	75	84	86

Environmental Sanitation. Many people suffer from respiratory diseases (which is a recent occurrence) followed by diarrhea, ameobiasis. Sizable expenses are made on medical treatments, and each household loses substantial daily wages. Water quality tests and the sample surveys reveal that not only most water sources are contaminated, but that probable reason lie in nonhygienic household sanitation. As per the consultancy assignment initiated as a part of the project preparation. Though the sanitation coverage is relatively quite high (compared to the national average), there is a general lack of awareness on the potential health risks from a unhygienic latrine (which is estimated to account for over 80% of the total household latrines), when located close to unprotected open dug well drinking water sources and on the time of removal and disposal of sludge from the filled-up pits. Over half the households report open defecation by children.

Kerala is characterized by a low mortality-high morbidity syndrome. Thus, from a health perspective, substantially lower access to safe water coupled with poor sanitation are a serious concern in Kerala's context.

Stakeholder Analysis: Key Expectations, Impacts, Issues, and Concerns

Identification of stakeholders. The project identifies stakeholders at various levels: GP, district, state, and country. The nature of the stakeholders varies, on one hand, from being direct beneficiaries to threatened groups. In terms of impact, it could be 'high' to 'low'. Accordingly, stakeholders could be mapped into four categories: direct beneficiaries with high impact, direct beneficiaries with low impact, threatened groups with high impact, and threatened groups with low impact. From a functional point of view, discussions are made under four categories: direct beneficiaries; indirect beneficiaries; threatened groups; and pressure groups.

GP level. The direct beneficiaries include the benefiting households in a NHG and the subgroups thereof--landless laborers and marginal farmers; women, in general, and women headed households, scheduled castes, scheduled tribes; and coastal fisher folk. Indirect beneficiaries include: nonparticipating households but benefiting from the project activities such as watershed, sanitation etc.; existing social and religious groups; NGOs including research, consulting and training agencies (referred to broadly as SOs); skilled workers, unemployed youth and staff of the line departments such as agriculture, health, education and forests. Prominent among the threatened groups are: the lower level staff of the KWA; local contractors; users of the existing water supply schemes; existing owners of the water sources (both drinking and irrigation); and money lenders. The pressure group include traders and suppliers, trade unions, village offices, and existing political power centers.

The district level key stakeholders are the line departments (including registration), revenue, public works; district planning committee, district/block expert committee; KWA; panchayats; and research, training and consulting experts/agencies. At the state-level, prominent stakeholders include the departments of the Local Self Government, IWSD, SC/ST, Rural Development, Fisheries, Science and Technology, Agriculture, Health and Forests; State Planning Board, State Pollution Control Board; research, training and consulting individuals/agencies; and the currently nonruling political parties. Most of these could be categorized under indirect beneficiaries.

Key Expectations, Impacts and Issues, and Concerns.

Benefiting households. The key expectations from the project, the likely impacts and the issues/concerns, as expressed by the benefiting households are improvements in quantity, quality and reliability of water supplies. Regular supplies on or nearer to the homesteads are the key expectations. Perceived impacts are: time savings, reducing drudgery; reducing diseases and related medical expenses; and health improvements. The issues/concerns are in the areas of:

- **autonomy:** communities are apprehensive about the project's promise to ensure technical, financial and institutional autonomy;
- **relationship with GP:** communities perceive GP's role as pivotal as it is expected to: decide on a particular BGs participation in the project; contribute to the capital cost. Each activity has a specific cost sharing formula, decided in consultation with various stakeholders. For example, for water supply schemes, total contribution is 25%--the benefiting communities contribute 15% and

GP is expected to contribute the remaining 10% of the total cost; for watershed and sullage drain component, only GPs will contribute, 30%; and ensure effective liaison with other departments such as that of power (to secure power connections in time); forests (to secure permission to take up activities in forest lands), registration (to legalize land sale/purchases), etc.;

- **mobilizing and sustaining group action:** especially for mobilizing capital cost contributions--communities are expected to contribute towards capital cost, to the extent of 15% of the total scheme cost;
- **technical know-how and quality control** during construction: how to ensure access to the required technical support and maintain quality, especially in material procurements and supervising construction;
- **availability of water sources** in the near vicinity;
- **O&M:** once the schemes are constructed, community are expected to operate and maintain the assets and service delivery fully on their own; and
- **project size:** it is generally believed that the size of the proposed project is too small to benefit a large section of the population. Out of 358 GPs in the four districts, the project is expected to cover a mere 80 (22%). Even, within a GP, a maximum of 25 schemes benefiting some 3,000 households (about 50%) are expected to be covered. Major questions are: who is to be benefited and on what basis this would be arrived at; and how can the project ensure that POV subgroups get an opportunity to participate in the project.

Benefiting Households--Subgroups

Women. In respect of water supply, it is reported that fetching water rests mostly with women and children. In the summer months, when the wells in the neighborhood dry up, women and children have to make 25 to 30 trips per day covering each time a distance of 300 to 500 meters. Women consider this to be serious drudgery, particularly those women who depend on wage labor for their livelihood are severely affected as their work load and stress increases substantially. Female headed households (*defactor* and *dejure)*, are quite common in Kerala owing to the high rate of migration among males. Children are also compelled to fetching water either before or after school. The stakeholder workshops have revealed the following women's expectations from the project:

- a desire to have private household connection;
- that water supply scheduling be such as to coincide with their daily activity schedule. The catch words are: 'where' and 'when' they need water. With the time savings, they expect more rest for themselves and more time to look after the children; and
- the need for a distinct and separate women development activity.

SC/STs. SCs habitations are distinctly different from that of the others. While the normal habitation is characterized by houses quite dispersed from each other, the SC houses are rather close to each other, typical of a 'colony'. Many of these colonies have sprung on lands allotted by the state which are normally high lands and devoid of many sources of water. While their expectations and perceived impacts are same as that of the others, they seem to be against the idea of capital cost sharing and self managing O&M as they are used to subsidized culture. To counter this, substantial efforts towards building their capacity will need to be made. Details relating to STs are presented in a separate note.

Coastal fishers. Coastal habitations are those which have a direct sea-facing or those influenced by tidal activities and are characterized by very high population density. Of the four project districts, three of them have coastal areas: 57 GPs spread over 1,130 sq km with a 0.23 million households harboring a

population of 2.5 million and the population density in coastal GPs varying between 1,807 and 2,721. Poverty, high population density (very close houses), typical location, unique livelihood pattern, and the associated gender relations have serious implications on designing the project's intervention. The issues/concerns are:

- as men work during night, they sleep during day, hence their participation in project activities is doubtful; this would mean the project's efforts will necessarily be more women-centered;
- women may find it difficult to participate due to time constraints stemming from their preoccupation in managing household activities;
- men's attitude, stemming from social, cultural and religious practices, would be critical in influencing women's participation;
- appropriate technological options--challenge lies in identifying and experimenting with different technological alternatives for both water supply and household sanitation. As the groundwater sources are saline or polluted, water is either supplied through pipe or fetched from a distance. Sanitation is extremely poor. On defecation, while most men go to the sea, women encounter serious problems. Either they have to attend to it during night times only, or do it within the house (mostly thatched houses) and dispose it afterwards.

Gram Panchayat--Roles, Expectations, Issues and Concerns

The proposed project envisages the following to be performed by GPs:

- decide on approval of individual water supply and watershed schemes;
- decide on planning and implementing sullage drainage schemes;
- contribute towards capital cost;
- monitor all activities;
- aid in conflict resolution, if any, among benefiting groups of different water supply schemes;
- enable speedy power connection and other clearances; and
- take-over and hand-over to local communities to operate and maintain the existing KWA schemes.

GPs can be visualized as two distinct entities, the elected representatives and the other, the staff. The former's expectations include, apart from greater water supply and sanitation coverage, a distinct electoral/political gain. Areas of concern relate to:

- *countering KWA, local contractors, trade unions (believed to be have great influence on transport and supplies i.e., procurement of materials) and other social/political groups.* It is feared by GP that these groups might engage in a campaign of misinformation (against the project).
- *complexities associated with the take-over and O&M of the existing KWA schemes.* It is feared that they may have to inherit rather an imperfect system and bear very high O&M expenses. Most GPs are reluctant to take over the existing KWA staff (along with the schemes), as they are a very high cost proposition. Moreover, unlike the proposed new schemes, users of the existing schemes are not used to pay and demanding water tariff would be difficult.
- *issues related to increased work load.* GP staff fear increased burden of work with the project as the financial outlays are expected to increase from about Rs 7 million to Rs 25 million per annum.
- *the role, relevance and utility of SOs.* The project proposes enlisting the services of SOs to enable technical, institutional and financial facilitation support to the beneficiary groups, in particular, and GPs, in general. Some GPs, which are strong in social and managerial capital, do not see any need for SOs. Instead, they expect that a provision be made for them to serve as a SO. Differences

in opinion on the technological choices and delivery mechanisms, between the two, as already noticed in a couple of pilot GPs, would be a serious threat to the project's success. On the other hand, a collusion between the two could also be equally detrimental. The process of selection of SOs, thus, would be critical.

Threatened Groups

KWA. The project's intervention coincides with the GOK's decision to dispense KWA with the rural water supply responsibility and bring all its subdistrict staff under the administrative purview of the GP. This has threatened the KWA staff, though, it can not be associated directly with the proposed project. Employment and career prospects will undoubtedly be in a jeopardy. While the higher level staff have accepted the change as inevitable, the lower level staff are confused and agitated. The permanent lower level staff not only lose their traditional monopoly over awarding contracts, they will be compelled to work under the GPs which they do not like. For many of them, relocation (from a safe position--being nearer to one's home town or in a place of one's liking) may be inevitable. The lower level temporary staff, amounting to about 40% of the total, are not unionized and do face loss of employment. The remaining 60% (permanent staff), though assured of the job, will be in a 'vanishing' category. A small section of KWA look at the change in scenario as an opportunity, to become more efficient and commercial in nonrural sectors as well as to act as a technical back-up (consulting assignments) for the GPs. A main complaint of the employees is that KWA was created as a result of an earlier intervention by a World Bank project, and its down-sizing coincides with the proposed project.

Building the Elements of Community Driven Development

A discussion on social/CDD issues and concerns forms a basis for building the elements of a CDD approach. The CDD elements are: (a) inclusion and participation; (b) autonomy; (c) subsidiarity; (d) ownership, accountability and transparency; and (e) capacity building.

Inclusion and participation. The project recognizes that the benefiting community is not a homogenous entity, but is comprised of subgroups differentiated based on gender, ethnicity, and endowments. Accordingly, key stakeholders including beneficiary subgroups have been identified; consultations held; and design features formulated such as to ensure that all of them have an equal opportunity to participate in the project. Major subgroups among the benefiting community are: the poor, women, coastal fishers, scheduled caste, and scheduled tribes. Whereas, poverty would be reflected in the selection of GPs and BCs; a separate TDP is proposed to address scheduled tribes. Inclusion of women, coastal fishers, and SCs would be addressed while mobilizing a BC for group action. Participation, mobilizing communities for group action, will be broadly coterminus with the arrangements under the People's Decentralized Planning Campaign.

GPs/BPs. The project would ensure that all GPs have an equal opportunity to participate in the project. Towards this, the GPs desiring participation in the project will be ranked based on: (a) poverty, proportion of households below poverty line; (b) water supply coverage, noncoverage denoted by proportion of BPL household traversing a distance of 250 meters or more to fetch water; (c) latrine spread, noncoverage denoted by proportion of BPL households with no individual sanitary latrine; and (d) efficiency in implementing developmental projects, average utilization of plan funds for the

preceding three years. The rankings will be used for drawing priority list. Similarly, benefiting communities within a GP will be prioritized adopting the same criteria used in selecting GPs.

Women. As women bear greater responsibility for water supplies, their role need to be emphasized and supported. Given that the women have the first hand knowledge and experience, they are the primary major stakeholders, and hence have the potential to enhance capabilities across a broad front including: decision making in water supply and sanitation activities; mobilizing community resources; operation and maintenance, change agents for hygiene behavior; thrift and credit and microenterprises. The WDI component, hence, will focus on: (a) social mobilization and participation; (b) upgrading skills; and (c) economic development activities. Capacity building initiatives will underpin gender and development as one of the major themes.

Besides representation in BGs and BCs (dealt with in later sections), efforts will be made to establish at least one self help groups in each BG. Care will be taken to ensure affinity as base towards formation of groups to ensure not only homogeneity but also that there as many SHGs as the subgroups are in a village. This would help in to facilitate engage women in the development process and gain the support necessary to take effective steps towards greater control of their private and social lives. Skill gaps/requirements will be identified in two distinct categories: water supply and sanitation and others; and plans made to impart the necessary capacity building. Similarly, towards economic development, individual as well as group initiatives would be encouraged. This may include establishing sanitary markets, service centers and other WSS related activities. In any case, all activities will be self-chosen and will be subject to cost sharing, 20% in the case of WSS and 30% for other activities.

Scheduled castes/coastal fishers. Special programs will be formulated to train the SOs to create awareness and educate the SCs on CDD principles. Essentially, this will comprise communicating effectively the advantages of self management. In the case of coastal fishers, appropriate communication methods and community mobilization mechanisms will be evolved. This would include making available a basket of technological options for the community/households.

Autonomy. To ensure autonomy, the following institutional arrangements are proposed:

(a) *Beneficiary groups,* are an association of all the households likely to be benefited by a water supply and sanitation scheme and consisting of two representatives, one male and another female, from each household, will be the primary management unit. The BG will be exclusively responsible for the planning, implementing and O&M of the water supply, sanitation, watershed and all other associated activities of the project. The BG will be an autonomous legal entity, registered under the Societies Act of 1860. In order to ensure official recognition and instill an organic link between the BG and GPs, the latter will pass resolutions to that effect.

(b) *Beneficiary committee.* All members of the BG will constitute the general body, which, in turn will elect an executive committee, comprised of about 11 members (depending upon the size of the group and geographical spread of the area of operation). The BC will from among them a president, vice president, a secretary, two joint secretaries, and a treasurer. The joint secretaries and treasurer will perform the roles of the voluntary task manager, one each for social capital, engineering and finance respectively. One of the two, president and secretary, will invariably be a woman; it is also preferred that the treasurer be a woman. POV sections comprising SC, ST, and fishers will receive adequate representation. Overall, it would be ensured that the at least one-half of the BC will comprise women and one-fifth of POVs. The BC shall be constituted initially for two years and thereafter every year three members in the committee will retire. The president and secretary will not retire together. The BC will function as an executive arm of the BG and be responsible for implementing the decisions of the general body.

(c) *Multi-BG/GP scheme.* In certain areas, specially coastal areas, potable water may not be available in the nearby vicinity and may have to be fetched from a distance. This may mean planning water supply scheme for more than one BG/GP. Institutional arrangements in such a case will broadly be a two- or three-tier setup: (i) all in-BG activities will be in the hands of the individual BG; (ii) an intermediary tier comprising representatives of individual BGs within a GP; and (iii) an apex body comprising representatives of all the GPs.

Towards ensuring ownership, transparency, and accountability, every BG will be enabled to prepare a participatory rapid appraisal-based CEP. This will form an attachment to a MOU signed by the BG, GP, and KRWSA. Once signed this will be the basis for implementation, and will enable comparative assessments in future. The elements of such a plan will include:

Community Mobilization, comprising (a) Social Mobilization, with details relating to BG and BC formation as well as registration and opening of the bank account; and (b) Socioeconomic survey for a social mapping; (c) water sources mapping; and (d) superimposing social map on water resources map, on a top sheet, to depict the existing situation and identify gaps (if any).
Community Contribution Mobilization plan detailing household-wise cash and labor shares.
Detailed technical project report (DPR) with details about choices considered and the discussions thereof as well as the cost particulars.
Operation and Management (O&M) Plan including the likely tariff, income and expenses.
Sanitation and Hygiene Promotion plan detailing objectives, inputs, scheduling and the likely outputs. Results of the baseline healthy home surveys will also be an integral part of the module.
Women Development Initiatives (WDI) will spell out how women have been mobilized, the process of their deciding on the choice of activities; financing mechanism; expected outputs and the SO support.
Tribal Development Action Plan and Coastal Fishers Development Plan (if need be). Details will include how the strategies and delivery mechanisms would be different from that of the normal GPs.
Environmental Management Plan, outlining measures (if need be) to address environmental issues.
GP taking over of the existing KWA schemes, will describe the existing situation, rehabilitation measures required/ proposed, implementation plan including that of financing mechanism and O&M arrangements.
Capacity Building Initiatives will include the programs planned (class room/ lecture mode as well as field based), likely participants, scheduling, SO support implementation arrangements, the post implementation follow-up.
Implementation schedule, including schedule for delivery of inputs and services, schedule for monitoring of the progress, success indicators and capacity enhancements.
Community Monitoring. Besides implementation, benefits likely to accrue to different subgroups as well as to the community as a whole will be monitored by the community. Simple indicators, as identified and articulated by the community themselves, will be deployed for the purpose.
Mutual obligations and responsibilities on the part of all the three signatories -- BG, GP and KRWSA will be detailed out in respect of each of the activity in the scheme cycle.

The CEP approved by the BG will be submitted to the GP for further processing.

- *GP*. GOK has issued a GO empowering GPs, enabling in establishing and empowering BCs, including facilitating fund flows into BCs and procuring materials through community contracting principles as stipulated under the project and legitimacy to fix and demand tariff. Institutionally, GP will have two committees. One, an internal management committee (IMC), comprising a project director, and three members--one each for finance, management and procurement/audit, all honorary positions. The IMC will be responsible for all scheme approval, fund flows, monitoring (physical and financial), audit and external liaison and coordination with other agencies. Two, a GP-level steering committee, comprising all the members of the IMC and one representative from each of the individual scheme specific BGs, will be established, which would meet on a monthly basis for the initial six months, and later on a quarterly basis, and review the progress and address individual BG specific as well as inter-BG issues (if any). To meeting the additional work load and other project-specific requirements, project proposes a GP strengthening component. This will be aimed at: financial management, administrative and managerial competitiveness, work effectiveness and efficiency and performance audit.

- *Support organizations*. To provide intermediation services (technical, financial, and institutional), to the BGs, to build their capacity, the project would enlist the services of nongovernment SO. The designated functions include creating awareness, mobilizing communities, facilitating the BGs in preparing and implementing CEPs, conducting and/or facilitating in capacity building, and the liaison activities between GP and other agencies.

- *GP and SO*. SO selection is rather critical because of it's role and its relationship with other agencies will have a strong bearing on the project outcomes. As a part of the social assessment study, a preliminary effort at NGO capacity assessments has been made, details are presented in the PIP. This has enabled a first-cut list of the SOs for KRWSA. This will be finalized after verifying field level track records, a panel prepared and made available to the GPs for selection. A GP will have the choice of selecting any one of the empanelled and will contract their services. A small number of GPs, which are found to possess high degree of social and managerial capital, as revealed by the bench-marking study, would be provided a choice of hiring a SO either as an organization or as individuals (nongovernment individuals). In such a case, a GP would act as an SO.

Land Contributions

Land requirement arises for two purposes: one, for water source and the other, for the construction of OHT. Water supply will be either from the existing sources (wells, ponds, streams, rain water, etc.) or from establishing sources anew, through digging open wells or drilling borewells. The ownership of the existing sources are public and private. While it is easier to access public sources, arrangements will have to be made to take over privately owned sources. In the case of establishing new sources, lands will have to be acquired and the choices are of three types: public/pPanchayat; temple/church; and private lands. While public and temple/church lands will be readily available, private lands will have to be made available. The prevailing practice is either through voluntary donation or by outright purchase. The discussions with the communities and experts as well as the preliminary experiences from the pilot program reveal that, out of the 2,500 planned schemes across 80 GPs, 20% could draw water from the existing sources (10% public and 10% private). Of the remaining, in 12% cases, source could be public owned. For the remaining 68%, lands will have to be made available from private sources. Thus, in all, lands will be required in 78% (68% new and 10% existing) or 1,950 schemes. OHTs are normally constructed at a

higher elevation, and these areas are rocky and barren, and in most cases, publicly owned. Yet, we may provide for the case of 'to be made available'. Both the source and OHT require a maximum 8 cents (100 cents = one acre), the land requirement will be a maximum of 10,880 cents or in other words, 109 acres or about 44 Ha for the project as a whole. This requirement has been estimated on the higher side.

Rules of taking possession of land. The project will not resort to involuntary land acquisition--all donations and purchases will be voluntary. Mechanisms will be developed to ensure voluntarism of the transaction. All voluntary land transactions will meet the following criteria: (a) the land in question will be free of squatters, encroachers or other claims of encumbrances; (b) lands will be chosen (by the community) after ensuring that water indeed will be available in that particular piece of land; (c) verification of the voluntary nature of land donations in each case; (d) land transfers will be completed through registration, land title will be vested in the community (BG); and (e) a provision will be made for redressal of grievances.

KRWSA will arrange for an examination of all cases of land purchases by an independent agency before approving the CEP in every batch. As the schemes will be planned, implemented and operated and maintained by the benefiting communities, the lands, to a large extent, will be from them. All land transactions will be subject to registration (as per market transactions) and will be done only after ensuring that water will indeed be available in that particular piece of land. The project will develop the TOR and identify a suitable agency for ascertaining voluntariness of all land transfers before the signing of implementation phase contracts for pilot batch. A grievance committee will be set up in each district under the chairmanship of the project manager of the DPMU consisting of respective GP presidents and SO team leader as its members. This committee will address any issue as brought out by an aggrieved person and/or as brought out by the external agency's examination reports.

Annex 2
Attachment 11

Tribal Development Plan

[This attachment reflects a summary of the TDP. Full text of the TDP is included in the PIP, and has also been attached to the Minutes of Negotiations. A brief overview is provided herein.]

Background

Kerala has a tribal population of 0.32 million, accounting for 1.1% of the total population in the state. Total number of tribal settlements in the state are about 4,000. Of this, 671 are forest settlements. They are spread, rather unevenly, across 14 districts. It is the highest in Wynad (about 0.12 million) amounting to 36% of the total tribal population in the state and 17% of the district population. In comparison, there are as many as 11 districts with a tribal population accounting for less than 1% of the district population. There are 35 scheduled tribal groups in the state, four of whom, Cholanaickans, Kattunaickans, Kurumbas, Kadars and Koragas (constituting about 4.8% of the tribal population) are categorized as primitive groups (PTG categorized based on: pre-agricultural stage of development, stagnant population and literacy). Tribals are distinctly different from the others as characterized by isolated habitation, high incidence of poverty, illiteracy, low health status. As against a literacy rate of 89% for the non-tribal population, it is 49% among the tribals. Sex ratio is reported to be declining reflecting poorer nutrition and lack of health care among the women. Seventy three percent of the tribals eke out their living from agriculture. While cultivators are only 17%, the remaining 56% are laborers. Tribals living inside the forests are engaged in gathering non-timber forest products and forest protection works. Half the number of tribals are reported to be below the poverty line. By GOK's own admission (Government of Kerala, Economic Review-1999, State Planning Board, Thiruvanantapuram), "*even after five decades of development efforts, STs continue to be constitute relatively the most backward and vulnerable sections of the population in the state with extremely weak economic base"*.

Tribals in the project districts. There are about 55,000 tribals spread across the project districts accounting for 17% of the total tribal population. It is maximum in Palakkad (11%) and the minimum in Trissur (1.26%). The spread across the GPs is highly skewed. Out of a total of 358 GPs in the four project districts, only 33 GPs have tribal inhabitation.

Tribal Development under KRWSES. In accordance with the Bank's policy on Indigenous Peoples, outlined in Operational Directive 4.20, KRWSA (KRWSA had enlisted the services of an external consulting agency (Loyala Extension Services, Loyala Academy, Trivnadrum) to conduct a comprehensive study and suggest recommendations for the formulation of a tribal development plan. Two stakeholder workshops were conducted for discussing the findings of the study and the preparation of a draft plan. Keeping the plan as a base, three stakeholder workshops (in the project districts of Mallapuram and Palakkad) were conducted during the appraisal mission, to share and obtain feedback. This has been finalized in discussions with GOK departments such as SC/ST, Rural Development, Local Self Government, Irrigation and Water Supply and Forests) has prepared a TDP, in order to ensure that the tribals participate, based on an informed decision making, and derive fuller benefit from the project. It may be noted that there will be no adverse effects, direct or indirect, on the tribals as a result of the project's activities.

Tribal driven development strategy. The tribal development strategy will also be premised on the CDD principles in the section, "Towards Building the Elements of Community Driven Development": (a) autonomy; (b) subsidiarity; (c) demand driven; (d) participation and inclusion; (e) ownership, transparency and accountability; and (f) cost sharing. The difference, however, will lie in its operationalization. To ensure inclusion, in contrast to the main project principle of self selection, TDP will resort to targeting. For the target groups, initially, efforts will be made at creating an 'enabling' environment so as to provide for informed decision making, to participate or otherwise, in the project. Subsequently, tribals, mobilized into groups, will be given the capacity to plan, implement, and operate and maintain the project activities/facilities. The scheme cycle and the associated rules and regulations have, accordingly, been evolved in discussions with tribals and other relevant stakeholders. Special technical assistance through professional agencies will be ensured.

Scheme cycle. Under the TDP, scheme cycle will be modified to make a provision for creating an enabling environment. As against a 22-months scheme cycle proposed for the non-tribal GPs, the scheme cycle under TDP will be of 30-months:

Exploratory phase	3 months	mapping of the settlements for water scarcity and firming up the settlements for TDP
Pre-preparatory phase	3 months	unlearning and learning as well as credibility development. Savings and credit self help groups, functional literacy, hygiene and sanitation promotion and tribal laws education will be introduced
Preparatory phase	3 months	mobilizing tribal communities, awareness creation, needs assessment and exposure visits. At the end of the sixth month, the communities will decide on participating, or otherwise, in the project. Subject to deciding on participation in the project, further phases will be launched.
Planning phase	9 months	tribal communities will carry out a situation analysis, identify alternatives and development of proposals, all of which, will result in a comprehensive Community Empowerment Plan (CEP). The financing components will include: water supply, household latrines, hygiene and sanitation promotion, functional literacy, women development and capacity building.
Implementation phase	9 months	the tribal communities will implement the CEP
Post implementation O&M phase	3 months	self-managing by tribals, consolidation and ensuring sustainability of the delivery/facilities

Technical alternatives. Isolated habitations (with no or highly irregular power supplies) and undulating as well as rather inaccessible areas creates compels the project to make available tribal-friendly technologies. TDP will aim only at small-scale water supply schemes for each participating settlement. A basket of alternative technological options, which are cost effective and tribal culture-friendly, will be developed/compiled and made available to the communities. Full information on the merits and demerits of each technology will be made known for the tribals to enable an informed and appropriate decision making.

Targeting and implementation schedule. TDP will be tried in all those GPs in which the tribals constitute more than 5% of the total population. This way, nine GPs (28% of the tribal GPs; and 11% of the total project coverage) will be covered under the TDP (It is also agreed that in case, a tribal cluster, other than nine gets self-selected into the project, they will be subject to the same strategy as outlined in this note.):

Sl. No.	District	GP	Population			No. of settlements
			Total	**STs**	**%**	
1.	Mallapuram	Chaliyar	16,476	1,468	8.90	115
		Chungatara	44,659	2,220	5.00	39
2.	Thrissur	Vettilassery	9,216	752	8.18	14
3.	Palakkad	Pudur	12,354	7,130	57.70	64
		Sholayur	16,941	7,591	44.80	41
		Agali	32,738	9,507	29.00	66
		Neliampathy	9,785	938	9.59	1
		Muthalmada	33,935	2,399	7.06	29
		Perumatty	27,693	1,750	6.32	19
	Total		**1,66,888**	**3,220**	**25.00**	**388**

The tribal population in these nine GPs accounts for 25% of the total population spread across 388 settlements. All the tribal settlements, experiencing water scarcity in these nine GPs, expected to be around 150, will be targeted under the TDP. The size of a settlement, on an average being 50 households or 250 persons, the intervention would benefit directly 37,500 tribal people.

The first batch implementation will start from January 2001. Initially three GPs will be covered. After 18 months, drawing on the lessons learnt, second batch will be initiated in July 2002. The third batch, based on the cumulative experiences of the first and second batches, will begin in July 2004. This way, scope is provided for learning and incorporating the lessons as the project progresses.

Institutional Arrangements

Beneficiary group and beneficiary committees. Two members (one male and one female) from every benefiting household in a settlement will constitute a BG. All BGs will be a registered body under the state's applicable law. Each BG will constitute a BC, to serve as an executive committee comprised of president, vice president, secretary, and treasurer. Bylaws and MOAs stipulating rules and regulations as well as functions and responsibilities have been already developed during the project preparation. BCs will be the primary management unit and responsible for planning, implementing and operating and maintaining facilities/deliveries exclusively on their own. Each BC will formulate a community empowerment plan similar to that of the nontribal GPs and implement the same.

GPs will be the nodal agency at the panchayat level apex agency and will be responsible for facilitating in the selection of the schemes/BGs, monitoring of the BGs activities and in liaison with other departments/agencies and in dovetailing with other development schemes.

SOs. External professional agencies will be enlisted to provide community development, technical, and financial support to the tribal communities in planning and implementing the project activities. SO staffing will be distinctly different from that of those working in the non-tribal areas. Tribal volunteers, similar to social activists, will form the bulk of the outreach professionals in a SO. That is, any SO will be required to choose educated youth, from among the tribals only, arrange for building their capacity to provide the required support to the communities. This way, the project would leave behind well a tribal cadre with good capacity to ensuring post-project support to the tribal communities.

KRWSA will function as a project management unit either directly or through its district project management units.

Scheme approval. A committee of the directors (operations, human resource development, and technical), DPM, KRWSA, SO team leader(s), and two external experts will be responsible for according approvals. The director of operations will be the chairperson and DPM, KRWSA convenor. The committee will take due note of the discussions of the GP and block panchayat level committees.

GP, block and state-level committees. To ensure effective implementation, institutional mechanisms will be grounded at GP, block, and state-levels. The GP committee will review the progress on a quarterly basis, provide implementation support and enable dovetailing with other development schemes. The block advisory committee will meet semi-annually, review the progress, provide block level support (as required) and address inter-GP issues (if any). The state-level committee will steer the program and provide policy support/guidance as well as address interdepartmental coordination related issues (if any).

Cost sharing, financing and fund flows. Both GP and BG will contribute each 10% of the total capital cost. BG's contribution will be distinctly in two categories: cash (2%) and kind (8%). Total number of settlements/schemes likely to be covered under the project being 150, total costs would be of the order of Rs. 100 million. Of this, hardware/ construction costs would be Rs. 60 million (60%) and the software costs, including SO and capacity building, Rs. 40 million. Total per capita investment costs work out to Rs. 2,700. The project funds (per the CEP approval) will flow from KRWSA to the BGs as per a prior agreed set of conditions related to opening of bank accounts, timing of releases, pattern of withdrawal and book-keeping. All project specific funds will flow into a special bank account and will be operated jointly by the SO and BG representative. Similarly, all procurement will be done jointly by the SO and BG, but, under the guidance of, and concurrence from KRWSA. The fund flows as well as roles and responsibilities will be captured in an MOU to be signed by the KRWSA, SO, and BG.

Monitoring and Evaluation

The project has planned for a four-fold M&E system:

- Community monitoring: Each BG will have the capacity to assess the implementation performance themselves. Simple formats involving indicators (chiefly, quantitative and some qualitative) as perceived and articulated by the communities will be developed for the purpose. A similar effort has been made under the World Bank financed Sodic Lands Reclamation Project in UP. Results of individual BGs will be aggregated by the SO and maintained at the state-level through a computerized management information system.

- Process monitoring: This will aim at assessing the participatory processes (expected to result in empowering the tribals). It will be done batch-wise, by an external agency. This will also include an assessment of the functioning and performance of the institutional coordination committees (GP/BP/state) set up under the project.
- Sustainability monitoring: Assess the likelihood of sustainability of the service delivery, in a sample settlements, in each batch and enable draw action plans for post-implementation support employing a village immersion program based approach.
- Impact evaluation: A comprehensive evaluation of the impacts as a result of the TDP intervention, at the end of the program, conducted by an external agency.

The expected outcomes are: (a) established local level autonomous, inclusive, and accountable tribal institutions; (b) enhanced awareness among the tribals about their rights and measures to safeguard interests; (c) increased social capital among the tribals, in general, and women, in particular; and (d) building local capacity among government and NGOs in addressing tribal issues.

Quality Control, Water Supply Schemes Design and Engineering

Most water supply schemes will be designed by the SO engineers with capacity building support and monitoring by KRWSA. KRWSA has developed a detailed technical manual covering design criteria, guidelines on sound engineering practices, standard drawings and cost estimates, specifications for construction materials, goods, equipment, and civil works. A rate list for items of procurement has been developed for each project district based on market prices. These together with guidelines on community contracting will ensure cost effectiveness, quality of materials procured and their accounting, and internal checks and balances. Use of scientific methods such as geophysical surveys, remote sensing data, resource mapping and test wells coupled with local knowledge will ensure appropriate selection of sites for proposed drinking water sources.

Technical Manual

The technical manual, prepared by KRWSA, contains guidelines for construction and management of scheme operations for water supply and other facilities. The manual covers various aspects of planning, design and implementation of Kerala's small community managed rural water supply systems. Specifically it covers: (a) requirements, procedures and guidelines for selection of sources for water supply and for carrying out field surveys and investigations; (b) design criteria for all types of rural water supply schemes and technologies; (c) requirements, contents and formats for preparation of detailed scheme reports; (d) standard designs, drawings, cost estimates and specifications for typical works and installations proposed under the project; (e) standard schedule of rates for the goods and works for all the components of the project (based on market prices) along with basis for preparation of cost estimates; (f) procurement methods, market inquiry and obtaining quotations for ensuring transparency and economy and quality of goods and works; (g) check lists for use by the engineers and BCs to ensure that the goods and works are in conformity with the specifications; (h) a list of approved laboratories (nearest to each project district) where facilities for such tests for assessing the quality of materials and works to be used for the project are available; (i) guidelines for preparation of rehabilitation proposals for existing KWA schemes in the project GPs; and (j) guidelines for preparation of completion plans and reports with formats for completion reports.

Cost Estimate Basis

During the January 2000 mission, a cost matrix was prepared for 53 representative schemes covering all the four project districts, with various ranges of households, service levels, various technology options like dug wells, borewells, springs, surface water with treatment and infiltration gallery using uniform technical criteria and with standard rates/costs for various sizes of works/installments as per the standard schedule of rates applicable for KWA works. The unit cost for each type of scheme has been arrived at based on above sample schemes and used as basis for projecting the overall cost estimate for the project. The investment cost for piped water schemes vary between Rs. 5,000 to Rs. 15,000 per household. The project will apply Rs. 15,000 per household as an investment ceiling from the project funds. However, the BGs will be free to contribute costs in excess of the ceiling amount or to scale down the service standard to remain within the above ceiling. Only a few such cases are anticipated.

Detailed Scheme Reports

KRWSA is in the process of completing detailed engineering designs for over 150 schemes in Batch 1 GPs. These designs were reviewed during appraisal mission. Inconsistency in adoption of design criteria, oversizing of units and inadequate preparation of rehabilitation of existing KWA schemes were observed in some schemes. KRWSA is now reviewing these schemes with the assistance of a short term experienced engineering consultant and these are expected to be finalized and technically approved by KRWSA by November 2000. Thus, these schemes will be ready for implementation at the time of project signing (expected December 2000).

Quality Control of Design and Construction

KRWSA will recruit an independent agency to assist it in ensuring quality control in design and construction of water supply, groundwater recharge, drainage and latrines schemes. The consultant agency will have two main responsibilities: (a) to monitor the quality of supervision by the SO engineers and of the construction quality in the ongoing schemes; and (b) simultaneously checking the quality of DSRs for the following batch of schemes. The idea is that the SO engineers are responsible for preparation of all detailed scheme reports (DSRs) and day-to-day supervision of all procurement and construction activities while the quality control agency will be responsible for concurrent monitoring of these activities through periodic reviews and inspections. KRWSA will submit to the Bank for review, the TOR and consultant recruitment schedule prior to commencing Batch 1 implementation phase.

Water Quality Control

The appraisal mission reviewed the water quality report prepared by KWA and held discussions with KRWSA and KWA about the proposed set up for ensuring water quality of the project sources. KRWSA will have the following arrangements in the project for ensuring the drinking water quality of the project sources.

(a) During planning phase: SO engineers will carry out full scale water quality testing to ensure that it meets the GOI water quality standards for drinking water and provide for appropriate treatment/disinfection arrangements in the DSRs.
(b) During scheme's operational phase , for all small schemes project design envisages use of bleaching powder for disinfecting the water. The BCs will ensure that bleaching powder is added promptly and daily. To facilitate water quality control:

    (i) each BC will be given a chloroscope to check the residual chlorine.

    (ii) each GP coming into the project will be provided with water testing kits to test the water quality of important parameters like turbidity pH alkalinity, chlorides, total dissolved solids, etc., at the GP level; and

    (iii) BCs/GP will approach recognized water testing laboratories available in the districts for carrying out bacteriological analysis of water samples from project sources wherever found necessary.

Overall statewide water quality monitoring and surveillance function will be performed by the state level sector institution; the details of such a scheme are being developed by GOK for which GOI assistance is also available

Rehabilitation/Reorganization of Existing Single Panchayat KWA Schemes

GOK has taken a policy decision to transfer existing KWA schemes to GPs with powers to levy and collect charges for these services. Appropriate amendments have been made in the Panchayats Act for this purpose. Following this, a GO was issued by the GOK, in March 1998, through which powers for development and construction of new schemes have been devolved to the GPs.

The project will support such transfer of RWS schemes to the project GPs and will provide funds for rehabilitation, capacity building of GPs and BGs, and management support. To implement this process, GOK has now finalized a comprehensive strategy for phased transfer of single *panchayat* RWS schemes from KWA to GPs (GOK order dated May 29, 2000). This will involve: assessing conditions of existing assets and need for rehabilitation; design and implementation of rehabilitation; cost recovery rules for beneficiary groups and GPs; identification of activities and their scheduling; measures and capacity building for user-based management of schemes after transfer; assessing financial implications for KWA and GPs; transfer of operational staff to the GPs as appropriate; legal issues related to transfer of staff and assets; and appropriate redeployment of other KWA staff. The transfer will be done at least for all the participating GPs in the project area, as this will be a condition for their participation in the project.

The SO engineers are not likely to have the capacity to formulate such proposals. KRWSA will therefore ask SOs to recruit one well-experienced rural water supply engineer for a period of about one month per GP to prepare these proposals. The reorganization of KWA schemes may also involve splitting these into more number of schemes and developing additional water sources for some. Integration of these proposals with other water supply schemes being formulated by SOs will be the responsibility of SOs. KRWSA will ensure (through their design quality control consultant) that both reorganization/rehabilitation of KWA schemes and their integration with other schemes in the GP meet the required high technical standard.

MultiPanchayat Piped Water Schemes

Construction of a few multipanchayat water supply schemes will involve designing and construction of technically complex schemes and KRWSA will seek assistance of private sector reputed consultant firms with guidance from KWA to perform these functions. Construction supervision will be done through private sector firm to be recruited by KRWSA. However, for O&M these schemes, the project will support setting up of multipanchayat user association who will manage the scheme operations itself or through private sector service management contracts. Detailed guidelines for planning construction and management of scheme operations will be developed during the first year of the project, initially for one scheme, through learning by doing.

Community Contracting Guidelines

The project design provides for the community to procure the goods and services required for implementation of the project; to acheive this, they will practice community contracting. The community represented by the BC is involved in various activities related with the construction of water supply schemes, drainage, latrines and other environmental works. The activities involved in community contracting are summarized below:

Main Features of Community Contracting

- operation of funds by the community.
- procurement of goods by the community.
- procurement of works by the community.
- procurement of services by the community.
- management of stores by the community.
- O&M by the community.

All the funds for construction work are transferred to the account of BC by GP. The BC authorizes the chairperson or the treasurer to be the signatory for the joint account. The community is trained to maintain the following documents at BG level:

- day-book for receipt of funds from GP and beneficiary contribution and payments made by GP.
- store ledger for construction material.
- member-register for ascertaining demands and collections of share of capital cost from beneficiary.
- member-register for ascertaining demands and actual labor contributed towards their share of voluntary labor for capital cost from beneficiary.
- member-register for ascertaining demands and collections from beneficiary the O&M cost
- day-book for receipt and payments towards O&M.
- bank Pass-book of O&M.
- receipt-book for cash receipts.
- minutes book for recording resolutions passed by BCs

The authorized representative of the community signs the check issue register, while signing a check. Before signing the check, a resolution is to be passed by the BC approving the related item of expenditure. In case the sum is large, the whole community is taken into confidence.

Procurement of Goods

The community is responsible for procuring the goods with the help of SOs. A joint purchase committee is constituted for the purpose. The purchase committee, which has one or more representatives from the community and an engineer from SO, does the market survey and obtain the proforma invoices for all the nonlocal materials required for the construction work. The material is procured in not less than two lots. For establishing the reasonability of the rates, the material is procured at the lowest market rates, which do not normally exceed the rates given in the detailed scheme report. The rates in the DSR are based

on the rates obtained by DPMUs through market survey to up to date district-wise "standard schedule of rates" The quality of the material is ensured by procuring preferably ISI marked material from the authorized dealer or manufacturer. A few salient features of community contracting of goods could be as under:

Material	**Type of Supplier (all private)**
GI Pipes and Fittings	Manufacturer
Cement	Distributor
Steel	Distributor
Latrine Pans and Fittings	Local Market

However, to improve the quality of procurement of goods, the guidelines issued for national shopping procedures (World Bank procurement Form E-5) will be used by the community. The format for invitation of quotation will be standardized and circulated by KRWSA to the BCs and SOs for their guidance.

Procurement of Works

The community with technical assistance of SOs and DPMU is competent and authorized to enter into contract with the private contractors and government corporations for construction of big structures like the over head tank, blasting of rocks for dug-wells and tubewell borings. The community can select a contractor on the basis of market survey or local bidding. The details of community contracting of works could be as under:

Details of Contract	**Type of Contractor**	**Selection process**
Construction of OHT	Private	Bidding
Supply and installation of pumpsets	Private	Market survey by BC/SO
Blasting of rocks (Dug well)	Private	Market survey by BC/SO
Borewell drilling	Private	Market survey by BC/SO

To standardize the procurement of civil works, the guidelines issued by the World Bank will be used by the BCs and SOs (Form W-5 & W-6) for inviting quotations for the construction of works and the format for the contract.

The DPMUs will prepare schedule of rates for various construction materials and for various services every year on the basis of market rates prevailing in the respective district. Initial market rates for all project districts are appended in Annex 9 of the technical manual in the PIP. DSRs will be prepared by the SO engineers based on this schedule of rates. The rates of branded goods such as pipes, pump sets and other electrical goods will be obtained from the manufacturer or their authorized stock list/dealer. During implementation, the BC represented by its purchase committee/finance committee will make inquiries from the local market and dealers/stock lists of branded goods where the goods of the desired quality are available. The committee will negotiate for reduced prices and assured quality and procure the required goods. Where the works involve services of locally available masons, electricians, plumbers etc. BCs will

hire them at the prevailing market rates. BCs will ensure transparency in all its procurement decisions. BCs will maintain accounts of the materials purchased, consumed and balance available and will also maintain the account of amounts paid for the services in connection with the project works.

Certain items of works such as design and construction of overhead water tanks, infiltration wells etc., which require technical expertise and special equipment will be entrusted to specialized agencies with financial standing and past experience through national bidding following the World Bank's procurement guidelines.

Procurement of Services

Besides the management of unskilled labor for trench digging and refilling, digging of dug-wells etc., the community is procuring the services of skilled masons, fitters, and plumbers etc. These procurements are normally based on local basis and knowledge of community members regarding their availability. A few examples of community contracting of services could be as under:

Item	Service Source	Implementation Phase	O&M Phase	Method of selection
Community Technician	Local	✓		Community consensus
Scheme Maintenance Worker	Local	✓	✓	Community consensus
Masons	Local/ Neighborhood	✓	✓	Survey by BC
Fitters/ Plumbers	Local/ Neighborhood	✓	✓	Survey by BC
Cartage of goods	Local/ Neighborhood	✓	✓	Survey by BC

Stores Management

Once the material arrives at the site, the community, with the help of SO ensures that the brand names of the materials are those indicated in the proforma invoices and the quantity is as per the supply order. The BC is responsible to identify the space for storage of the material in the BC/village either on complimentary or hired basis. The BCs assign the task of store-keeping to a responsible person of the community. The material is in the custody of the storekeeper who ensures the proper storage of the material so that the material is not stolen and protects it against damage and deterioration. The storekeeper also maintains store-ledger in which the receipts of material and issue as per indent of SO engineers are recorded.

Operation and Maintenance

During the planning and implementation phases, the capacity of the community is built so as to make it capable of undertaking the responsibility of O&M of the scheme. During the O&M phase, the community will have to procure spare parts, hire mechanics, plumber, mason for minor repairs or hire specialized agencies for major repairs.

Construction Quality Monitoring

Simple checklists are provided in the manual for use by the SO engineer, KRWSA/DPMU staff, community, GP, and third-party construction quality engineers to ensure the quality of construction of project works and the quality of construction materials used in the project works.

Recognized Laboratories for Testing Construction Materials

The construction materials such as cement, steel, GI and PVC pipes, and concrete test cubes will be tested in the recognized laboratories. KRWSA has presently identified the following laboratories:

Thrissur and Palakkad Districts	Government College of Engineering, Thrissur
Calicut and Mallapuram Districts	Regional Engineering College, Calicut

Certification of Works

Construction quality monitoring engineers appointed by KRWSA./DPMU will inspect and certify that the works are implemented as specified in DSR. These engineers will also inspect the works at random and ensure that the project works, goods and services procured by the BCs conform with the required quality.

Completion Reports

The SO engineers will prepare a completion report of the works that will contain the ' as-completed' plans of all scheme works and also contain the actual cost of the scheme works as compared to the DSR cost duly showing the account of all materials purchased, consumed and balance and the labor charges incurred. The report will also contain the community contribution received by way of voluntary labor.

Annex 3: Estimated Project Costs

INDIA: Kerala Rural Water Supply and Environmental Sanitation Project

Project Cost By Component	Local US $million	Foreign US $million	Total US $million
Component A: Institutional Strengthening	8.60	1.50	10.10
Component B: Community Development and Infrastructure Building	62.70	0.00	62.70
Component C: Statewide Sector Development	0.80	0.40	1.20
Component D: National Sector Development	1.80	0.20	2.00
			0.00
Total Baseline Cost	73.90	2.10	76.00
Physical Contingencies	5.40	0.00	5.40
Price Contingencies	8.30	0.10	8.40
Total Project Costs	87.60	2.20	89.80
Total Financing Required	87.60	2.20	89.80

Project Cost By Category	Local US $million	Foreign US $million	Total US $million
Goods	1.60	0.40	2.00
Works	66.60	0.00	66.60
Services	13.40	1.30	14.70
Training	1.40	0.40	1.80
Other	4.60	0.10	4.70
Total Project Costs	87.60	2.20	89.80
Total Financing Required	87.60	2.20	89.80

India: Kerala Rural Water Supply and Environmental Sanitation Project

Components Project Cost Summary

($ million)

Components by Financiers	IDA/IBRD	GP	Comm.	Gov't	Total	Total %
Institutional Strengthening						
Set up and Operation of Project Management Unit	5.4	-	-	2.2	7.6	8.5
Sanitation and Hygiene Promotion	0.3	-	-	-	0.3	0.3
Capacity Building	1.0	-	-	0.0	1.0	1.1
GP Strengthening	2.1	-	-	0.1	2.2	2.4
Subtotal Institutional Strengthening	*8.7*	*-*	*-*	*2.4*	*11.1*	*12.3*
Community Dev. and Infrastructure Building				-	4.0	4.5
Community Development Support	4.0	-	-	-	4.0	4.5
Women's Development Initiatives	1.7	-	0.2	0.1	2.0	2.2
Design and Engineering Support	3.2	-	-	-	3.2	3.5
Construction of Physical Schemes						
-Water Supply Schemes	38.3	5.5	8.2	2.8	54.8	61.0
-Drainage	1.5	0.9	-	0.6	3.0	3.4
-Latrines	1.6	-	2.0	0.4	4.0	4.5
-Environmental Management	0.2	0.1	-	0.1	0.4	0.5
-Ground Water Recharge	1.1	0.2	0.2	0.1	1.5	1.7
Subtotal Construction of Physical Schemes	*42.8*	*6.7*	*10.4*	*4.0*	*63.8*	*71.0*
Tribal Development Program	1.6	0.2	0.2	0.3	2.3	2.6
Subtotal Community Dev. and Infrastructure Building	*53.4*	*6.8*	*10.8*	*4.4*	*75.3*	*83.9*
Statewide Sector Development						
Sector Policy Development and Strategic Plan	0.5	-	-	0.0	0.5	0.5
Developing Sector Management Information System	0.3	-	-	0.0	0.3	0.3
Other Studies	0.5	-	-	-	0.5	0.6
Subtotal Statewide Sector Development	*1.3*	*-*	*-*	*0.0*	*1.3*	*1.4*
National Sector Development						
Building Capacity of RGNDWM	2.1	-	-	0.0	2.2	2.4
Total Disbursement	**65.5**	**6.8**	**10.8**	**6.8**	**89.8**	**100.0**

India: Kerala Rural Water Supply and Environmental Sanitation Project

Components Project Cost Summary

(Local Crore)

	Local	Frgn.	Total	% Frgn. Exchg.	% Total Base Costs	US Dollar Local	US Dollar Frgn.	US Dollar Total
Institutional Strengthening								
Set up and Operation of Project Management Unit	27.2	4.6	31.8	15	9	5.9	1.0	6.9
Sanitation and Hygiene Promotion	1.1	-	1.1	-	-	0.2	-	0.2
Capacity Building	3.4	0.8	4.2	19	1	0.7	0.2	0.9
GP Strengthening	7.7	1.2	9.0	14	3	1.7	0.3	2.0
Subtotal Institutional Strengthening	*39.5*	*6.7*	*46.2*	*15*	*13*	*8.6*	*1.5*	*10.1*
Community Dev. and Infrastructure Building								
Community Development Support	16.6	-	16.6	-	5	3.6	-	3.6
Women's Development Initiatives	8.0	-	8.0	-	2	1.7	-	1.7
Design and Engineering Support	13.0	-	13.0	-	4	2.8	-	2.8
Construction of Physical Schemes								
-Water Supply Schemes	205.6	-	205.6	-	59	44.8	-	44.8
-Drainage	11.6	-	11.6	-	3	2.5	-	2.5
-Latrines	16.4	-	16.4	-	5	3.6	-	3.6
-Environmental Management	1.6	-	1.6	-	-	0.3	-	0.3
-Ground Water Recharge	5.7	-	5.7	-	2	1.2	-	1.2
Subtotal Construction of Physical Schemes	*240.9*	-	240.9	-	69	52.5	-	52.5
Tribal Development Program	9.1	-	*9.1*	-	*3*	*2.0*	-	*2.0*
Subtotal Community Dev. and Infrastructure Bldg.	287.6	-	287.6	-	83	62.7	-	62.7
Statewide Sector Development								
Sector Policy Development and Strategic Plan	0.8	1.2	2.0	61	1	0.2	0.3	0.4
Developing Sector Management Information System	0.6	0.5	1.1	41	-	0.1	0.1	0.2
Other Studies	2.2	-	2.2	-	1	0.5	-	0.5
Subtotal Statewide Sector Development	*3.6*	1.7	5.3	32	2	0.8	0.4	1.2
National Sector Development								
Building Capacity of RGNDWM	8.1	1.1	9.2	12	3	1.8	0.2	2.0
Subtotal National Sector Development	*8.1*	1.1	9.2	12	3	1.8	0.2	2.0
Baseline Costs	338.8	9.4	348.2	3	100	73.9	2.1	75.9
Physical Contingencies	25.0	0.1	25.1	-	7	5.4	0.0	5.5
Price Contingencies	76.9	1.3	78.1	2	22	8.3	0.1	8.4
Project Costs	440.6	10.8	451.4	2	130	87.6	2.2	89.8

Annex 4: Cost Benefit Analysis Summary
INDIA: Kerala Rural Water Supply and Environmental Sanitation Project

Summary of Benefits and Costs:

Introduction

The project economic analysis is based on a sample of 23 proposed schemes and a survey of about 280 households therein. The schemes were selected across the four project districts, type of terrain (highland, midland, coastal), and source/technology type (well, borewell, surface water, spring). The 23 schemes were grouped into eight types of schemes based on terrain and source/technology type; they are: midland wells, highland wells, coastal wells, midland borewells, highland borewells, coastal borewells, midland surface water and midland spring. Of these (excepting for midland surface water), all are small single village schemes with an average beneficiary size of 128 households each. The midland surface water is a large multivillage scheme with nearly 2,000 beneficiary households. Of the roughly 2,000 schemes envisaged in the project, all except six are expected to be small schemes. The project economic analysis was carried out (a) separately for each of the eight scheme types; and (b) for the project as a whole using the likely scheme mix and phasing proposed in the project.

Project Benefits

The proposed project would be justified on the basis of the direct benefits to about 1.4 million rural inhabitants (rising to about 1.8 million as populations rise to design levels). The population is assumed to grow at 1.2% per annum. The typical project benefits envisaged are: time savings in collecting water, increased availability of safe water, health benefits from access to cleaner water, improved health knowledge and better sanitation practices, environmental benefits, and strengthened community, panchayat and state institutions. In addition, by developing processes for public funding of demand-driven community-based water and sanitation facilities, the project would enable a more sustainable approach than has been possible through top-down public programs. Many of these benefits are difficult or impossible to measure at the present. The only benefits that have been quantified are: value of time saved in collecting water, value of incremental water consumed, and costs that would be incurred in a without project situation to maintain the existing water supply arrangements.

Time savings. Results from a household survey conducted across 280 households were used to quantify the current time spent collecting water and to identify the potential time savings that may result from the project. Data were collected separately for dry (February to May) and wet (June to January) seasons, and by gender. A careful scrutiny of raw data followed by independent field verification allowed a reasonable estimate of time spent collecting water. On average, about 1.3 hours are spent on water collection for household needs and about two-thirds of the burden of this task falls on women (Table 1). Compared to other states, for instance Uttar Pradesh, where a similar Bank supported project is being implemented, the time spent on collecting water is relatively low--the time spent collecting water before the project varied from 3.5 to 5 hours per household per day (Uttar Pradesh Rural water Supply and Environmental Sanitation Project, Staff Appraisal Report, May 1996).

Table 1: Time Spent and Estimated Time Savings Collecting Water

Scheme Type	*Average Time Spent Before Project (hrs/day/hh)*			*Average Time Savings (hrs/day/hh)*		
	Male	*Female*	*Total*	*Male*	*Female*	*Total*
Midland Wells	0.36	0.76	1.12	0.31	0.65	0.96
Highland Wells	0.67	1.33	1.99	0.57	1.14	1.70
Coastal Wells	0.49	1.1	1.59	0.42	0.94	1.36
Midland Borewells	0.51	0.9	1.41	0.44	0.77	1.21
Highland Borewells	0.43	0.97	1.41	0.37	0.83	1.21
Coastal Borewells	0.16	0.38	0.55	0.14	0.32	0.47
Midland Surface Water	0.76	1.06	1.82	0.65	0.91	1.56
Midland Spring	0.19	0.35	0.54	0.16	0.30	0.46
Weighted average	0.45	0.88	1.33	0.38	0.75	1.14

Note: To derive time savings it is assumed that 70% of households opt for private connections and save 90% of current time; 30% of households opt for public standposts and save 75% of current time. Weighted average time saved will therefore is (0.7 x 0.9) + (0.3 x 0.75) = 0.855 (of time spent before project).

Source: Household Survey

Two types of water connections are proposed in the project--household connections and public standposts. The project design is based on 70% of households opting for household connections, and 30% opting for standposts. Based on field conditions and experiences with similar projects elsewhere it is assumed that households opting for private connections will save 90% of time currently spent on collecting water and those opting for standposts will save 75% of time. These figures are used in the economic analysis. Sensitivity analysis is carried out to test different proportions of household and public standpost connections.

Based on the above assumptions and sample survey data an average beneficiary household is expected to save 1.14 hours per day after the project.

Value of time saved. The value of time saved is estimated by the opportunity cost of labor, that is, what income is lost in foregoing other income generating activities. The shadow wage rate for unskilled labor is used as the basis for the monetary value of this opportunity cost. Wage rates in Kerala are relatively high compared to other states. The lowest daily wage reported by the Department of Economics and Statistics, GOK for unskilled labor is for paddy labor which in 1999/2000 was Rs. 112.5 for men and Rs. 71.4 for women. Using weights of 34% for men and 66% for women to conform to the water collection effort, this gives a weighted average daily wage of Rs. 85.4. This wage is further adjusted to account for the fact that work may not be available all year round. Based on field observations and discussions with knowledgeable observers including senior GOK officials, it is assumed that work is available for at least eight months during the year at this wage (this may be an underestimate but we have opted to be on the conservative side). Therefore a conversion factor of 0.67 is applied to Rs. 85.4 to arrive at a daily wage rate of Rs. 57 which is taken as the economic value of time saved. This wage is less than the range of minimum wages fixed by GOK for unskilled labor working in different sectors. In the economic analysis the standard conversion factor of 0.9 is further applied to this wage to arrive at an economic value of time savings in border prices. To explore the sensitivity of using 0.67 as a conversion factor, in the sensitivity analysis (Table 5) the conversion factor is further reduced to 0.5, i.e., implicitly assumes work is available

for only six months a year to see the effect it has on the economic rate of return.

Incremental water consumption. Reduced time in collecting water and improved availability will increase consumption. Incremental water consumption is estimated as the water available after the scheme is operational (all schemes are designed to supply 70 lpcd to the design population) minus the present water consumption which averages about 64 lpcd in the sampled villages. This incremental consumption is valued at the average demand price, which is approximated by the average of the present and future cost of water. Due to decreasing marginal value of water (downward sloping demand curve) the incremental water availability would have lower value per unit than the nonincremental water supply (replacement of existing supply). Ideally, the incremental water consumed should be valued at willingness to pay estimated through a demand curve. However, in the absence of a proper demand curve, the incremental water is valued at the average of current costs (equal to time costs and other costs incurred to maintain present water supply) and future costs (capital costs amortized at 5% plus O&M costs) of water supply (see, for instance, Asian Development Bank, Handbook on the Economic Analysis of Water Supply Projects, 1999).

Other savings. Even without the project, resources would be required to maintain present water supply arrangements. These include maintenance of current water sources, equipment and storage costs, and treatment (mainly boiling) costs. These recurring costs were considered as benefits that would accrue from the project. However, only 50% of these recurring costs were assumed to be saved in a with project situation and were included in the benefits stream. Only 50% and not 100% of the costs were assumed as savings since even after the project some people may continue to maintain their domestic wells, boil water (boiling drinking water is fairly widespread in Kerala) and also incur some costs for storage. Overall, these costs are relatively small and were included for completeness of the analysis.

Salvage value. Scheme life is taken as 20-years from the date of completion of the scheme. At the end of 20 years a salvage value of 5% is assumed.

Project Costs

All costs used were estimated by the project and are expressed in constant 2000 prices, net of taxes. The main costs are:

(a) WSS. Includes the capital costs of water supply and sanitation as provided by the project authorities plus Rs. 1,500 each per domestic connection for 70% of the households plus Rs. 4,000 each per latrine for 20% of the households. Based on initial demand expressed by communities, it is assumed that 70% of the households will opt for domestic connections and 20% of households will opt for latrines.

(b) Watershed development. Based on project cost estimates, watershed costs are taken as 10% of the WSS costs.

(c) Software. Includes costs of community development and TA to communities. Based on project cost estimates this is taken as Rs. 1,070 per household.

(d) Institutional strengthening. Includes costs of capacity building, SHP, project management (including studies etc.). Based on project cost estimates this is taken as Rs. 2,080 per household.

(e) O&M. Annual costs of O&M estimated by the project.

Table 2 shows the summary cost data used for the economic analysis of the eight types of schemes. The average investment cost (i.e., all costs excluding O&M costs) for the eight types is about Rs. 10,800 per household of which 64% is due to WSS, 6% to watershed development, 10% to software and 19% to institutional development. The average investment cost for the seven small types of schemes is somewhat higher at around Rs. 12,900 per household. O&M costs vary from Rs. 120/annum/household for the large surface water scheme to Rs. 460/annum/household for highland wells. On average, given that over 90% of the schemes in the project are expected to be wells or borewells, most households can expect to contribute roughly between Rs. 25 to 35 per month for O&M.

Table 2: Summary of Costs Per Household Across Scheme Types (Rs. '000)

Scheme Type	*Average no. of hh per scheme*	*WSS Costs per hh*	*Watershed Costs per hh*	*Software Costs per hh*	*Institutional Costs per hh*	*Total Investment Costs per hh*	*Annual O&M Costs Per hh*
Midland Wells	97	10.70	1.07	1.07	2.08	14.92	0.35
Highland Wells	47	14.50	1.45	1.07	2.08	19.10	0.46
Coastal Wells	315	7.39	0.74	1.07	2.08	11.28	0.30
Midland Borewells	99	9.98	1.00	1.07	2.08	14.13	0.34
Highland Borewells	190	7.59	0.76	1.07	2.08	11.50	0.27
Coastal Borewells	74	10.51	1.05	1.07	2.08	14.71	0.43
Midland Surface Water	1919	6.02	0.60	1.07	2.08	9.77	0.12
Midland Spring	75	9.48	0.95	1.07	2.08	13.58	0.14
Weighted average all types	352	6.93	0.69	1.07	2.08	10.77	0.18
Weighted average 'small' types	128	8.88	0.89	1.07	2.08	12.92	0.31

Notes: Excepting for midland surface which is a 'large' scheme, all others are 'small' schemes. Investment cost is sum of water supply & sanitation, watershed, software and institutional development costs.
Source: KRWSA; Household Survey

Benefit and cost analysis and ERR. Benefits and costs are expressed in border prices and have been forecast over a 22-year horizon from the first year of the project. Border prices have been estimated by applying the standard conversion factor (SCF) of 0.9 to all domestic expenditures and benefits. Switching values have been calculated using the 12% opportunity cost of capital in India.

The economic rate of return is estimated to be 25% for the whole project. It is about 30% if institutional strengthening costs are excluded and is 33% if software costs are also excluded (i.e., in the last scenario only the 'hardware' costs of water supply and watershed are included). ERRs, BC ratios and switching values have been calculated for each type of scheme. The rates of return in all cases understate the true ERR since there is no quantification of benefits of improved health, environment, community

development and institutional strengthening activities. For comparative purposes each scheme is assumed to commence in year-one and is expected to be complete in two years. In the first year, 10% of water supply and watershed costs and 70% of the software and institutional strengthening costs are incurred. The remaining 90% of the water supply and watershed costs and 30% of the software and institutional costs are incurred in the second year. The detailed estimates of ERRs for each of the eight types of schemes is shown in PIP.

Table 3: Likely Mix of Schemes and Phasing for the Project

Scheme Type	*Number of Schemes Expected Year 1*	*Number of Schemes Expected Year 2*	*Number of Schemes Expected Year 3*	*Number of Schemes Expected Year 4*	*Number of Schemes Expected Year 5*	*Total Schemes by Type*
Midland Wells	55	88	220	274	241	878
Highland Wells	15	23	58	73	64	233
Coastal Wells	8	13	32	40	35	129
Midland Borewells	13	21	54	67	59	214
Highland Borewells	27	43	107	133	117	426
Coastal Borewells	0	0	0	0	0	0
Midland Surface Water	0	0	2	2	2	6
Midland Spring	2	3	9	11	9	34
Total	120	191	480	600	528	1920

Note: At present no coastal borewell schemes are expected in the project.

The ERR is then calculated for all schemes together according to the expected mix of scheme types (Table 3). Of the nearly 2,000 expected schemes, over 99% are anticipated to be small schemes (excepting midland surface water all are small schemes). For these small schemes a representative household size of 128 is used which is the average household size across the seven types of small schemes in the sample. For the large scheme, of which there was only one in the sample, the household size of 1919 was used. Table 4 summarizes the results by scheme type and for the entire project. The detailed estimation of ERR for the entire project is shown in PIP.

Table 4: Economic Rates of Return and Switching Values

Scheme Type	*ERR with all costs (%)*	*ERR hardware costs only (%)*	*NPV with all costs (Rs. 000)*	*B/C ratio with all costs*	*Switching Values*			
					Total Costs (%)	*Hardware Costs (%)*	*O&M Costs (%)*	*Total Benefits (%)*
Midland Wells	19.3	25.3	555	1.44	47	70	340	-31
Highland Wells	27.0	33.0	742	1.95	100	142	710	-49
Coastal Wells	36.4	52.5	5105	2.63	174	289	1150	-62
Midland Borewells	27.6	36.6	1212	2.00	108	164	785	-50
Highland Borewells	29.1	41.4	2122	2.12	116	190	840	-53
Coastal Borewells	12.3	16.7	16	1.02	2	3	12	-2
Midland Surface Water	46.5	72.5	40285	3.66	280	458	3675	-73
Midland Spring	11.9	16.7	-4	0.99	-1	-1	-10	1
Total Project	25.1	33.2	2012700	1.86	90	147	625	-46

Notes: The NPVs are at a 12% discount rate. Hardware Costs are costs of water supply and watersheds; they exclude software and institutional strengthening costs from total costs.

Main Assumptions:

Sensitivity analysis / Switching values of critical items:

Sensitivity Analysis. Sensitivity tests, based on assessed risks, indicate that the project is able to absorb substantial negative impacts yet still generate positive ERRs (Table 5). For example, the project can sustain:

- significant decreases in benefits or increases in costs. A 90% increase in costs, or a 46% decrease in benefits, or a combined 30% increase in costs and 30% decrease in benefits reduces the project ERR to 12%. In general, benefits are more sensitive than costs.
- implementation delays which would delay benefits. If benefits are delayed by two years the ERR falls to 17%.
- large reductions in time savings. If all villages were able to realize only 50% of the time savings envisaged, the project ERR would fall to 12%.
- a significant reduction in number of house connections. The project ERR is relatively insensitive to this variable. Only 30% households opting for house connections gives a project ERR of 24%.
- complete failure of all schemes in year 10 whereby the ERR falls to 22%.

Table 5: Sensitivity of ERRs

Criteria	*Total Project ERR (%)*
Base case	25.1
Changes in total costs and benefits	
20% increase in total costs	20.8
90% increase in total costs	12.0
20% decrease in benefits	19.7
46% decrease in benefits	12.0
Combined 20% increase in costs and 20% decrease in benefits	16.0
Combined 30% increase in costs and 30% decrease in benefits	12.0
Benefits delayed 2 years	17.4
Benefits delayed 5 years	11.7
Changes in time savings/value of time saved	
20% reduction in time savings	20.3
40% reduction in time savings	15.0
50% reduction in time savings	12.0
Time savings valued at daily wage rate of Rs. 57 (base case)	25.1
Time savings valued at daily wage rate of Rs. 42.5 a/	18.8
Changes in proportion of house connections	
70% house connections (base case)	25.1
50% house connections	24.8
30% house connections	24.4
Scheme failure at year 10	
25% schemes fail at year 10	24.6
50% schemes fail at year 10	23.9
75% schemes fail at year 10	23.2
100% schemes fail at year 10	22.4

a/ Corresponds to assuming employment for unskilled labor is available for only 6 months of the year instead of the 8 months assumed in the base case.

Annex 5: Financial Summary

INDIA: Kerala Rural Water Supply and Environmental Sanitation Project

Years Ending
FY 2001-2007 US$ Million

	IMPLEMENTATION PERIOD						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Total Financing Required							
Project Costs							
Investment Costs	4.3	12.5	18.8	19.8	15.6	11.7	2.4
Recurrent Costs	0.6	0.6	0.7	0.7	0.7	0.7	0.7
Total Project Costs	4.9	13.1	19.5	20.5	16.3	12.4	3.1
Total Financing	4.9	13.1	19.5	20.5	16.3	12.4	3.1
Financing							
IBRD/IDA	3.5	9.6	14.2	15.0	11.9	9.1	2.2
Government	0.4	1.0	1.5	1.6	1.2	0.9	0.2
Central	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Provincial							
Co-financiers	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beneficiaries	0.6	1.5	2.3	2.3	2.0	1.5	0.5
Others	0.4	1.0	1.5	1.6	1.2	0.9	0.2
Total Project Financing	4.9	13.1	19.5	20.5	16.3	12.4	3.1

Main assumptions:

Annex 6: Procurement and Disbursement Arrangements
INDIA: Kerala Rural Water Supply and Environmental Sanitation Project

Procurement

Procurement arrangements. The procurement arrangements to be undertaken under the project will be the responsibility of KRWSA, an autonomous society set up by the GOK. Since the bulk of the procurement is to be undertaken by the community, KRWSA will guide the BCs, GPs, and the SOs (like NGOs), in the procurement activities and ensure that the same is carried out in accordance with the World Bank procurement guidelines. All project activities financed under the credit would be procured in accordance with Bank Guidelines for Procurement (January 1995, Revised January and August 1996, September 1997 and January 1999). The procurement methods applicable to the various expenditure categories are summarized in Table A.

Community participation in procurement. To inculcate ownership, ensure project sustainability and achieve the social objectives of the project, the BCs would be involved in the planning, design and implementation of the schemes. The beneficiary community will directly construct small schemes and works and procure materials, and will be guided by the principles of economy, efficiency, equal opportunity, and transparency of the process.

Civil Works $66.6 million Civil works in the project will of two main categories: (a) small water and sanitation schemes involving low technical complexity suitable for construction by the communities themselves; and (b) a few large water supply schemes requiring high technical design and construction skills, which only specialized construction agencies can build. Contracts for civil works estimated to cost over $50,000 equivalent will be carried out following NCB procedures acceptable to the Bank. Attachment 1 summarizes procedures for undertaking procurement on the basis of NCB. Each contract estimated to cost $50,000 equivalent or less will be procured following procedures acceptable to the Bank: (a) under community participation with village committees or NGOs in accordance with provisions of paragraph 3.15 of the Bank Procurement Guidelines (b) under quotations solicited from at least three qualified contractors; or (c) through force account, as a last resort.

Small schemes and works ($61.2 million). The small schemes and works that will be included in the project are: (a) construction of over 2,500 drinking water supply schemes (new/ augmentation/rehabilitation); (b) construction of small-scale storm water drainage schemes in some 30 GPs; (c) construction of about 45,000 private household latrines and conversion of some 8,000 existing unsanitary latrines into sanitary ones; (d) small-scale environmental management schemes on a pilot basis; and (e) some 550 targeted localized GWR works to improve perenniality of drinking water wells. Over 90% of the water supply schemes, and all of the above other works will involve low technical complexity and will be largely built by the BGs with TA from SOs and independent construction quality monitoring by the KRWSA. The threshold of these schemes is $50,000 equivalent or less, although most of these schemes are estimated to cost less than $25,000 and only about 10% of the water supply schemes are expected to cost more than $25,000, but still less than $50,000 per scheme. Communities will contribute at least 15% of the investment cost, and at least another 10% will be contributed by the GPs. The community's contribution would be in cash, as well as in kind and labor. These schemes will therefore be procured in accordance with the provisions of paragraph 3.15 of the Bank Procurement Guidelines covering community participation provision with village communities or NGOs. The small works also include provision of about $1.0 million for works (e.g., support for microenterprises) that would be carried out under the WDP subcomponent.

Materials both manufactured such as pipes, pipe fittings taps, cement etc., and local materials such as brick, stone, metal, and sand required for the small water supply and environmental sanitation schemes would be procured by the BCs based on the standard schedule of rates. The rates for the materials and the quantity would be closely monitored both by the GPs and KRWSA as per provisions of the contract agreement for the implementation of the schemes (see Annex 2, Attachment 13 on Community Contracting Guidelines).

Large water supply schemes ($5.4 million): Some six large-piped water supply schemes will be constructed under the project, which would cost more than the equivalent of $500,000. The largest scheme is not expected to cost more than the equivalent of $1.5 million. These schemes would be procured following NCB procedures in terms of paras 3.3 and 3.4 of the Bank Procurement Guidelines. These schemes will be in scattered locations in four different districts of the state, implemented at different times during the project period, and therefore cannot be grouped in a single package for ICB. Even the cumulative cost of all these six schemes ($5.4 million) is not likely to attract foreign firms. However foreign firms would not be precluded for bidding for these NCB packages.

Goods, equipment, and materials ($2.0 million). The goods and equipment to be procured for the KRWSA and its district offices (DPMUs) and GPs ($1.875 million) would be vehicles, furniture, office equipment (such as computers, copying machines, fax machines, audio visual equipment, soil investigations and survey equipment), and other miscellaneous equipment. A provision of $10,000 per GP has been made as a flexible fund for small development works that GPS may wish to take up. The requirement is small and spread over first three years of the project. Individual contracts are not likely to be more than the equivalent of $50,000, and hence are not suitable for NCB. They would be procured following national shopping procedures as per provisions contained in paras. 3.5 and 3.6 of the Procurement Guidelines. Rate contracts of the Directorate General of Supplies and Disposal, New Delhi, would only be acceptable as a substitute for shopping. Rate contracts of the state government or any other organization is not acceptable as a substitute for shopping. However, they could be considered as one of the quotations for shopping.

Books, periodicals, software, proprietary equipment and spares for existing equipment ($100,000) would be procured following direct contracting procedure, per para 3.7 of the Bank's Procurement Guidelines. Other items or small groups of items valued at less than $500 equivalent per contract ($25,000) may be procured through direct contracting.

Services ($16.5 million). These will include consulting services (national and international) for hiring of SOs, specialists firms and individual consultants (management, HRD, social development, engineering, monitoring, finance, etc.); training institutions; and for sector policy and other studies. Some of the short-term or long-term consultants/firms will need to be recruited internationally, such as for the statewide sector policy study. The number of specialists hired as individuals on contract basis would be providing about 5,000 person months input, the average contract being less than $7,000 each per year. The contracts with SOs for providing community development and technical support to communities will be about 180, the average contract value being about $36,000 each. Six agencies which are government supported to varying degrees have been identified as unique institutions to provide specialized services under the project which would be mainly in the area of training. These will be procured through approximately 30 contracts over a period of five-years. The largest contract out of these will be of the order of about $500,000 over a period of five-years. The justification for hiring these agencies are detailed below. The features of the main types of consultancy contracts are elaborated below.

Support Organizations: SOs which could be either NGOs or other agencies would be hired by

KRWSA and GPs for the planning and implementation phases. It is estimated that about 90 PPTAs of an average value of approximately $36,000 would be signed between KRWSA, GPs, BCs, and the SOs. These contracts would be for community development activities and formulation of the schemes. Some 2,500 IPQA would be signed between BC, GP , SO, and KRWSA. Primary responsibility for implementation of schemes would be with the BC with technical and management support from SO and GP. KRWSA would oversee the implementation. The SO staff and other inputs will be common for all BCs in a given GP. Similar to arrangements in PPTA, there would be a separate IPTA signed between KRWSA, GP and SO. There would be about 90 IPTAs and contract value of each would be about $36,000. Model agreements (stipulating roles and responsibilities of each party) have been developed, for PPTA, IPTA, and IPQA, as per para 3.15 of the Bank's Procurement Guidelines.

A rigorous SO prequalification process (Annex 2, Attachment 7) has been agreed and will be strictly followed to ensure that only qualified SOs participate in the project. The SO eligibility criteria will include: legal status, secular and nongovernment status, at least three years of proven track record, audited accounts, free from litigation and staffing capacity. KRWSA will verify the credibility of the applicant SOs, from the local district/block administration, from government agencies such as CAPART, and from national and international donor agencies. Based on the feedback, a screening will be done and a first stage list will be prepared. Subsequently, the KRWSA will visit the field and verify the track record of the SOs admitted in the first stage list. SOs achieving a minimum of 50 points will be empanelled. This empanelled list along with the details pertaining to each SO will be made available to the GPs for the final selection. No SO will work for more than 2 GPs in a batch. Participation of a SO in subsequent batches will be subject to their satisfactory performance (as assessed by KRWSA) during the previous batches.

Attappady Hills Area Development Society: The project's TDP is specifically targeted to reach tribal communities living in remote inaccessible areas. The TDP will cover only tribal groups in the identified nine tribal GPs, majority of them in the district of Palakkad. Such tribal communities are alienated from the mainstream activities of development and can be reached only by specialist organizations who have credibility, capability and years of experience working with tribals of the locality. Attappady Hills Area Development Society is an autonomous body set up by the GOK. It is currently implementing an OECF-assisted tribal development project (soil, water and biomass management; water resource development for irrigation; and income generating schemes) in Attappady block of Palakkad district. Since AHADS the only suitable organization who can assist implementation of the project's TDP, GOK will seek its services on a sole source basis to serve as the SO for the tribal population.

Local training institute: The project envisages substantial training activities for capacity building of communities, GPs, and SOs. These training activities fall broadly under two categories viz.: (a) community development and technical skills training in preparing community action planning, procurement, engineering designs, construction methods, and in O&M of WSS schemes; and (b) management training in administration and simple accounts and audits. There will also be special programs designed to train women in microenterprises and management of thrift and credit accounts. In view of limited project size and the small number of districts covered, KRWSA considers it prudent to utilize local institutions having the necessary infrastructure, facilities and related past experience, as nodal points for training. These institutions would contract necessary professional expertise for conduct of tailor made programs to suit project requirements. Based on an independent study on capacity building, KRWSA has identified KILA, Thrissur, as nodal agency for undertaking building capacity in community development, technical and management aspects. Agreements have been reached on the staffing pattern and specialization thereof. KILA has the necessary infrastructure and capability. Importantly, KILA offers locational advantages as it is situated in one of the project districts. The courses developed by KILA during the project will also have long-term benefit to Kerala even after project completion as it will have

the opportunity to offer such training on a regular basis to clients. KILA will also adopt the local Malyalam language as a medium of communication and for developing and disseminating many of the training materials. No private sector firms are available to offer unique support to the project and also build local capacity to scale-up future community based approaches.

Other local agencies, like KILA for training, KRWSA has identified five more agencies which it will contract on sole source basis for providing specialized skills. These are: (a) KWA for providing guidance on six multivillage large water supply schemes and for water quality monitoring; (b) Socio-Economic Unit Foundation for providing social, engineering and technical training support; (c) CWRDM; and (d) KAU, in designing and implementing GWR schemes and in conducting scientific surveys for determining locations of future groundwater sources; and (e) TSHM for the SHP for strategy formulation and development of IEC materials. All these are autonomous bodies and are the only organizations which can provide these specialized skills in the Kerala context. These will also contribute to local capacity building in the state for reaping long term benefits to RWSS sector in the state. Furthermore, competitive private sector is neither available nor likely to be developed in a cost effective manner to support such local and community based initiatives.

The six agencies noted above would be contracted in accordance with the Bank's Consultancy Guidelines using documents satisfactory to IDA. GOK intends to enter into annual contracts with them clearly defining the TOR, inputs, outputs and mode of payments. KRWSA will require that these agencies provide detailed basis for their financial proposals and IDA will finance only the incremental cost for providing the contracted services. Their recruitment for subsequent batches will be subject to their satisfactory performance and modifications in terms and conditions of the contract based on experience of the preceding contracts.

Other services/studies: Consultancy contracts for other services, studies would be contracted as per Bank Consultancy Guidelines using documents satisfactory to IDA. These would include services of contracted staff for specific areas of expertise such as management, Finance, HRD, M&E, MIS, etc., in the PMUs--the job description, minimum qualifications, terms of employment, and the selection procedures will be cleared with the Bank.

Incremental operating costs ($4.7 million). Incremental operating costs consist of incremental staff salaries and benefits, operation and maintenance of vehicles and equipment, travel, office (including rent and maintenance of office buildings) and other operating costs. These costs would be financed on a declining basis.

Bank Review of Procurement Decisions (Table B)

Procurement planning. Prior to the issuance of any invitations to prequalify for bidding or to bid for contracts, the proposed procurement plan for the project shall be furnished to the Bank for its review and approval, in accordance with the provisions of paragraph 1 of Appendix 1 to the Guidelines. Procurement of all goods and works shall be undertaken in accordance with procurement plan as agreed during negotiations and with the provisions of said paragraph 1. Annual procurement plans would be reviewed by IDA. Bank-financed works and goods will be procured using *the Guidelines for Procurement under IBRD Loans and IDA Credits* of January 1995, revised January, August 1996, September 1997 and January 1999. Services will be procured using the *Guidelines for Selection and Employment of Consultants by World Bank Borrowers* of January 1997, revised September 1997 and January 1999. The procurement methods applicable to the various expenditure categories are summarized in Table A. For all procurement under the project, the Bank's standard bid documents (developed by the New Delhi Office)

shall be used.

Prior review. Works and Goods Contracts: All NCB contracts for works estimated to cost the equivalent of $300,000 or more would be subject to prior review by IDA as outlined in paras 2 and 3 of Appendix 1 to the Bank Procurement Guidelines. In addition, ten contracts (IPQAs) for each batch of schemes for small piped water supply and environmental sanitation schemes would be subject to prior review by IDA. With respect to each contract not covered above would be subject to post review as per procedures in para 4 of Appendix 1 to the Bank Procurement Guidelines. Post review contracts would be reviewed on a sample basis by the Bank's visiting missions or by IDA's appointed auditors.

Consultancy Contracts. All consultancy contracts with firms or organizations estimated to cost the equivalent of $100,000 or more are subject to prior review by the bank as per procedures in para 1,2 (other than the third subpara of para 2(a)) and 5 of Appendix 1 of the Bank's Consultant Guidelines.

All consultancy contracts with firms or organizations estimated to cost the equivalent of $50,000 or more but less than the equivalent of $100,000 are subject to prior review by Bank as per procedures in paragraphs 1,2 (other than the second subpara of para 2(a)) and 5 of Appendix 1 to the Bank Consultant Guidelines.

For all consultancy contracts with individual consultants estimated to cost the equivalent of $50,000 or more, the qualifications, experience, terms of reference, and terms of employment of the consultants shall be furnished to the Bank for its prior review and approval. The contract shall be awarded only after the said approval has been given by IDA.

Consultancy contracts not covered by the above would be subject to post review as per procedures in paragraph 4 of Appendix 1 to the Bank Consultancy Guidelines. Post review contracts would be reviewed on a sample basis by the visiting Bank missions or auditors appointed by IDA.

Post Review. Works and Goods: Contracts below the prior review threshold for Works and Goods would be subject to post review as per procedure set forth in para 4 of Appendix 1 of the Bank's Guidelines.

Technical Assistance, Studies and Training: Contracts for the employment of consulting firms estimated to cost less than $100,000 and contracts for the employment of individuals estimated to cost less than $50,000 shall be subject to post review provided that terms of reference have been cleared with the Bank.

Proposed Procurement Arrangements: The project elements, their estimated costs and proposed methods of procurement are summarized in Table A. Figures in parenthesis are the respective amounts to be financed by IDA.

Procurement methods (Table A)

Table A: Project Costs by Procurement Arrangements
(US$ million equivalent)

Expenditure Category	Procurement Method[1]				Total Cost
	ICB	NCB	Other[2]	N.B.F.	
1. Works	0.00 (0.00)	5.40 (3.80)	61.20 (40.80)	 ()	66.60 (44.60)
2. Goods	0.00 (0.00)	0.00 (0.00)	2.00 (1.80)	0.00 (0.00)	2.00 (1.80)
3. Services	0.00 (0.00)	0.00 (0.00)	16.50 (16.50)	0.00 (0.00)	16.50 (16.50)
4. Miscellaneous	0.00 (0.00)	0.00 (0.00)	4.70 (2.60)	0.00 (0.00)	4.70 (2.60)
Total	0.00 (0.00)	5.40 (3.80)	84.40 (61.70)	0.00 (0.00)	89.80 (65.50)

1/ Figures in parenthesis are the amounts to be financed by the IDA Credit. All costs include contingencies

2/ Includes civil works and goods to be procured through national shopping, consulting services, services of contracted staff of the project management office, training, technical assistance services, and incremental operating costs related to (a) managing the project, and (b) relending project funds to local government units.

Table A1: Consultant Selection Arrangements (optional)
(US$ million equivalent)

Consultant Services Expenditure Category	Selection Method							
	QCBS	QBS	SFB	LCS	CQ	Other	N.B.F.	Total Cost[1]
A. Firms	5.30 (5.30)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	8.20 (8.20)	1.80 (1.80)	0.00 (0.00)	15.30 (15.30)
B. Individuals	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	1.20 (1.20)	0.00 (0.00)	1.20 (1.20)
Total	5.30 (5.30)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	8.20 (8.20)	3.00 (3.00)	0.00 (0.00)	16.50 (16.50)

1\ Including contingencies

Note: QCBS = Quality- and Cost-Based Selection
QBS = Quality-based Selection
SFB = Selection under a Fixed Budget
LCS = Least-Cost Selection
CQ = Selection Based on Consultants' Qualifications
Other = Selection of individual consultants (per Section V of Consultants Guidelines), Commercial Practices, etc.

N.B.F. = Not Bank-financed
Figures in parenthesis are the amounts to be financed by the Bank Credit.

Prior review thresholds (Table B)

Table B: Thresholds for Procurement Methods and Prior Review [1]

Expenditure Category	Contract Value Threshold ($ thousands)	Procurement Method	Contracts Subject to Prior Review ($ millions)
1. Works			
Small Works	(a) Civil works estimated to cost the equivalent of $50,000 or less per contract, up-to an aggregate not exceeding $61.2 million equivalent may be executed by: (i) community contracting with village committees/NGOs; (ii) Comparison of three bids; (iii) By Force Account as a last resort in a manner satisfactory to IDA	Community Procurement	First ten contracts of each Batch
Large Works	(b) Civil works estimated to cost more than the equivalent of $50,000 per contract.	NCB	All contracts above $300,000 by prior review in accordance with paras 2 and 3 of Appendix 1 to the Guidelines. All others by post review.
2. Goods			
Equipment	$50,000 equivalent or less per contract, up to an aggregate not exceeding $1.875 million equivalent.	National shopping procedures (includes DGS&D rate contracts).	Post review only
Books, Proprietary Software, Learning Resources and Educational Materials and other small items	$50,000 equivalent or less per contract up to an aggregate of $0.10 million equivalent.	Direct contracting	Post review only
	$500 equivalent or less up to an aggregate of $0.025	Direct contracting	Post review only

3. Services Procurement agent, research contracts, professional services, training, workshops and study tours	Consultant services may be procured by : (a) More than $200,000 equivalent per contract. (b) Between the equivalent of $200,000 and $100,000 per contract.	Quality- and Cost-Based Selection (QCBS) Quality- and Cost-Based Selection (QCBS) with short list (would comprise entirely of national consultants) Selection based on Consultant's Qualification (CQ) Other	Prior Review of all consultant contracts shall be governed by the provisions of paragraphs (i), (ii) and (iii) below 1/.
4. Miscellaneous incremental operating costs	Expenses incurred on maintenance of equipment, vehicles and buildings, hiring cost of vehicles and offices, and consumables up to an aggregate of $1.80 million equivalent may be executed by: (i) Each package not exceeding $500 equivalent up to an aggregate of $1,000,000 equivalent; or (ii) On the basis of national shopping	direct contracting national shopping	Post review only Post review only
5. Miscellaneous			
6. Miscellaneous			

Total value of contracts subject to prior review:

Overall Procurement Risk Assessment

Average

Frequency of procurement supervision missions proposed: One every 6 months (includes special procurement supervision for post-review/audits)

1/

(a) With respect to each contract for the employment of consulting firms estimated to cost the equivalent of $100,000 or more, the procedures set forth in paras 1, 2 [other than the second subpara of para 2(a)] and 5 of Appendix 1 to the Guidelines for Selection and Employment of Consultants by World Bank Borrowers shall apply.

(b) With respect to each contract for the employment of consulting firms for technical assistance or training estimated to cost the equivalent of $50,000 or more, but less than the equivalent of $100,000, the procedures set forth in paras 1 and 2 (other than the second subpara 2(a) and 5

of Appendix 1 to the Consultant Guidelines shall apply. With respect to each contract for the employment of individual consultants estimated to cost the equivalent of $50,000 or more, the qualifications, experience, terms of reference and terms of employment of the consultants shall be furnished to the Association for its prior review and approval. The contract shall be awarded only after the said approval to the terms of reference has been given.

(c) Terms of reference for all consultant contracts estimated to cost the equivalent of $12,000 or more per contract in the case of firms, and the equivalent of $5,000 or more per contract in the case of individuals shall be furnished to the Association for its prior review and approval. The contract shall be awarded only after the said approval to the terms of reference has been given.

Note: Procurement Consultants for civil works would comprise entirely of national consultants as cleared by the Bank's Regional Procurement Advisor on April 5, 2000.

[1] Thresholds generally differ by country and project. Consult OD 11.04 "Review of Procurement Documentation" and contact the Regional Procurement Adviser for guidance.

Disbursement

Allocation of credit proceeds (Table C)

Table C: Allocation of Credit Proceeds

Expenditure Category	Amount in US$million	Financing Percentage
Works	40.10	70%
Goods	1.60	80%
Services	15.10	100%
Incremental Operating costs	2.20	80% until 3/31,2003 60% until 3/31/2005 40% until project closing
Unallocated	6.50	
Total Project Costs	65.50	
Total	65.50	

Financial Management System

The institutional arrangements at the KRWSA/DPMU level are fairly new and proper financial management systems, that are compatible with the Bank's LACI requirement, are being evolved with the help of Consultants. KRWSA and DPMU accounting systems will be computerized. KRWSA has appointed a Finance Director to head the finance and accounting function. He is assisted by a Finance Manager who is a Chartered Accountant with private sector experience.

A financial management system for the project is currently being developed. KRWSA has prepared a draft financial management manual which contains detailed description of the financial accounting, budgeting, funds flow, and reporting systems and procedures. KRWSA has appointed consultants to design, develop, and implement computerized financial management systems. Assurances have been obtained that the system would be ready for implementation by March 31, 2000. Batch 1 data would be used as a test data in system development.

Funds Flow

GOK has set up KRWSA as a registered society to manage the project. The society has opened a separate special TSB account. The project director and the finance director are joint signatories to the project Bank account. The society withdraws funds from the state consolidated fund and deposits it in the special TSB account. The funds thus drawn are not subject to normal government rules regarding lapsing of funds at the financial year end, ways and means constraints, or austerity measures. For transacting routine business expenses, GOK has authorized KRWSA to open a separate Bank account in a nationalized commercial bank.

KRWSA would transfer on a monthly basis the project funds to DPMUs on the basis of funds requirement submitted by the DPMUs. DPMUs would open a separate bank account in a nationalized commercial bank. The bank account would be operated jointly by the DPMU manager and accounts officer.

For the transfer of funds to GP the following procedure has been agreed. GP would open a separate Bank account for managing the project funds. During the planning phase, transfer to GP would be made in two equal installments. However, during implementation phase the first installment would be 40%, the second 40%, and the last installment 20% (see Attachment 2 for a flow chart).

For the transfer of funds by KRWSA to SO, the following procedure would be adopted. SO would open a separate Bank account for managing the project funds. During the planning phase, GP would transfer 40% of the agreed amount to SO as first installment on signing PPTA. The second installment of 30% would be transferred after the audited utilization certificate for the first installment is received. The third and fourth installments would be 20% and 10% respectively. Similarly, during the implementation phase the first installment would be 40%, the second 40%, and the last installment 20% (see Attachment 2 for a flow chart).

For transfer of funds by GP to BC the following procedure would be adopted. BC would open a separate Bank account for managing the project funds. During the preplanning and planning phases, there will not be any transfer of funds to BC. During the implementation phase the first installment would be 40%, the second 40%, and the last installment 20%. The second and third installments would be released by GP upon receipt of audited utilization certificates (see Attachment 2 for a flow chart).

GOK/KRWSA has issued the necessary GO in respect of the agreed funds flow arrangements per GO (Rt) No.2069/2000/LSGD. GOK has committed to release the project funds included in the approved annual state budget to KRWSA as equity grant and as requested by KRWSA.

Accounting and Reporting Arrangements

The KRWSA and DPMU would maintain primary and subsidiary ledgers including cash/bank book, general ledger, scheme register. DPMU would furnish trial balances and other required information to KRWSA on a monthly basis. The accounting systems of KRWSA and DPMU would be computerized.

KRWSA has financed a financial management manual which contains detailed description of the financial accounting, budgeting, funds flow, and reporting systems and procedures. As KRWSA has appointed consultants to design and develop a computerized project financial management system, the manual would be finalized once the system design is frozen by the consultants.

KRWSA would be responsible for the preparation of quarterly project management reports (PMRs), and annual financial statements. GP accounting systems would be strengthened to meet the project accounting requirements particularly scheme-wise project cost details. Simple manual accounting systems would be implemented at BC level. Particular attention would be paid to devising accounting for labor contribution by the beneficiaries. KRWSA would also be responsible for ensuring maintenance of adequate and reliable accounting systems at DPMU, SO, GP, and BC levels (see Attachment 4 for a flow chart).

PMRs would be prepared using the computerized financial management system from the beginning of the project and be used for project management purposes. Disbursements would be converted to the PMR-based system promptly after the satisfactory operation of the financial management system and the preparation of regular, timely and adequate quality-PMRs, has been demonstrated to GOK, KRWSA, and IDA (expected March 31, 2001). The formats of the PMRs are given in the PIP (Attachment 5).

Currently, GPs do have rudimentary systems of capturing and processing scheme-wise expenditures. These would be strengthened to meet the project accounting requirements particularly scheme-wise project cost details. GOK has announced its intention to introduce computerized accounting and reporting systems at GP level. Taking advantage of this opportunity, KRWSA would ask the consultants to devise a simple computerized accounting system for GPs.

Simple manual accounting systems would be implemented at BC level. Particular attention would be paid to devising accounting for labor contribution by the beneficiaries. GPs/BCs would be required to maintain a separate cash book and scheme register for accounting project resources and expenditures. The Consultants would also be responsible for designing simple manual accounting systems at BC level (see Attachment 3 for a flow chart).

For providing training and implementation assistance in accounting and reporting to SOs, GPs, and BCs, KRWSA would appoint two Chartered Accountancy firms. The TOR for this consultancy have been agreed and are included in the PIP.

Staffing and Training

KRWSA has appointed a finance director to head the finance and accounting function. In order to complement the strong government accounting experience of the present finance director and to provide expertise in commercial accounting systems and operation of computerized accounting systems, KRWSA has also appointed a chartered accountant with private sector experience. DPMUs at Kozhikode and Thrissur have been established. The appointment of accounts officers at DPMUs Kozhikode and Thrissur was a condition of negotiation, and has been fulfilled.

During negotiations, assurances were obtained that, as and when DPMUs are formed, KRWSA would appoint accounts officers preferably having some computer background to manage the accounting function at DPMU. Due to the increased work load on the GP staff as a result of decentralization, KRWSA has decided to provide one accountant to each GP for accounts keeping and report preparation.

KRWSA would make adequate provision for training the finance and accounting staff both in KRWSA and DPMU in financial management and use of computerized systems. For providing training and implementation assistance in accounting and reporting to SOs, GPs, and BCs, KRWSA would appoint two chartered accountancy firms. The draft TORs have been agreed and are included in the PIP.

Audit Arrangements

KRWSA, being a society, would appoint an independent chartered accountancy firm to audit the books of account of the KRWSA and DPMU and to certify the annual project financial statements. KRWSA would furnish to the Bank annual audited financial statements and the audit report thereon within six months from the close of the fiscal year. KRWSA would also appoint separate audit firm(s) to audit and certify the use of funds by SO, GP, and BC during the preplanning, planning, and implementation stage. The audit of such utilization of funds would be done in two stages. The first audit would be done before release of the second installment and the second audit would be done before the release of the last installment. The TORs for both the audit assignments have been agreed and are included in PIP. Appointment of the auditors was a condition of negotiations, and has been fulfilled.

The special account, to be operated by GOI, would be audited annually by the comptroller and auditor general of India (C&AG). The audit report would be furnished to the Bank with in six months from the close of the fiscal year.

Disbursement, Special Account

Allocation of loan/credit proceeds is given in Table C. The proposed IDA Credit of $65.5 million would be disbursed over about six years. It is expected that the disbursements would be based on the quarterly PMRs to be submitted by KRWSA within 45 days from the end of the quarter. The computerized system being developed by the consultants would have the capability to produce PMRs. The formats for PMRs were agreed during the appraisal mission. In view of the PMR based disbursement system the special account limit will be $8 million. The actual release of loan proceeds towards special account would be based on the cash forecast submitted by KRWSA. Eligible expenditures incurred by KRWSA prior to loan signing, but after December 31, 1999, will be financed under retroactive financing with a limit of $2 million and subject to KRWSA following IDA's procurement procedures.

National Component

It was agreed during negotiations that the quarterly PMRs for components, A, B, and C of the project would be prepared by KRWSA and for component D by RGNDWM. KRWSA would consolidate the PMRs for the entire project and submit these to IDA through Department of Economic Affairs, GOI to enable disbursement of the credit proceeds.

Attachment 1

All NCB contracts to be financed from the credit under the project would follow procedures satisfactory to the Bank, which are:

(a) Only the model bidding documents for NCB agreed with the GOI Task Force (as amended from time to time) shall be used for bidding.

(b) Invitations to bid shall be advertised in at least one widely circulated national daily newspaper, at least 30 days prior to the deadline for submission of bids.

(c) No special preference will be accorded to any bidder when competing with foreign bidders, state-owned enterprises, small-scale enterprises or enterprises from any given state.

(d) Except with the prior concurrence of the Bank, there shall be no negotiation of price with the bidders, even with the lowest evaluated bidder.

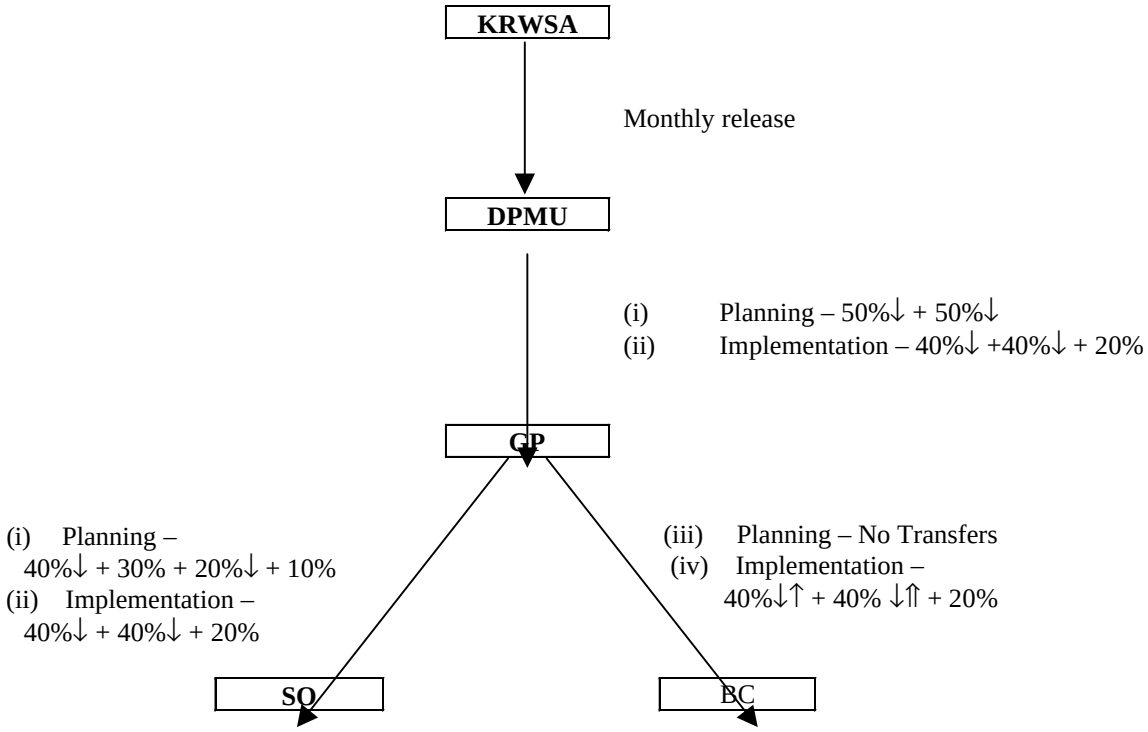
(e) Except in cases of force majeure and/or situations beyond the control of the state, extension of bid validity shall not be allowed without the prior concurrence of the Bank (i) for the first request for extension if it is longer than eight weeks; and (ii) for all subsequent requests for extension irrespective of the period.

(f) Rebidding shall not be carried out without the prior concurrence of the Bank. The system of rejecting bids outside a predetermined margin or "bracket" of prices shall not be used.

(g) Rate contracts entered into by direct rate general of supplies and disposables will not be acceptable as a substitute for NCB procedures. Such contracts will be acceptable for any procurement under national shopping procedures.

Attachment 2

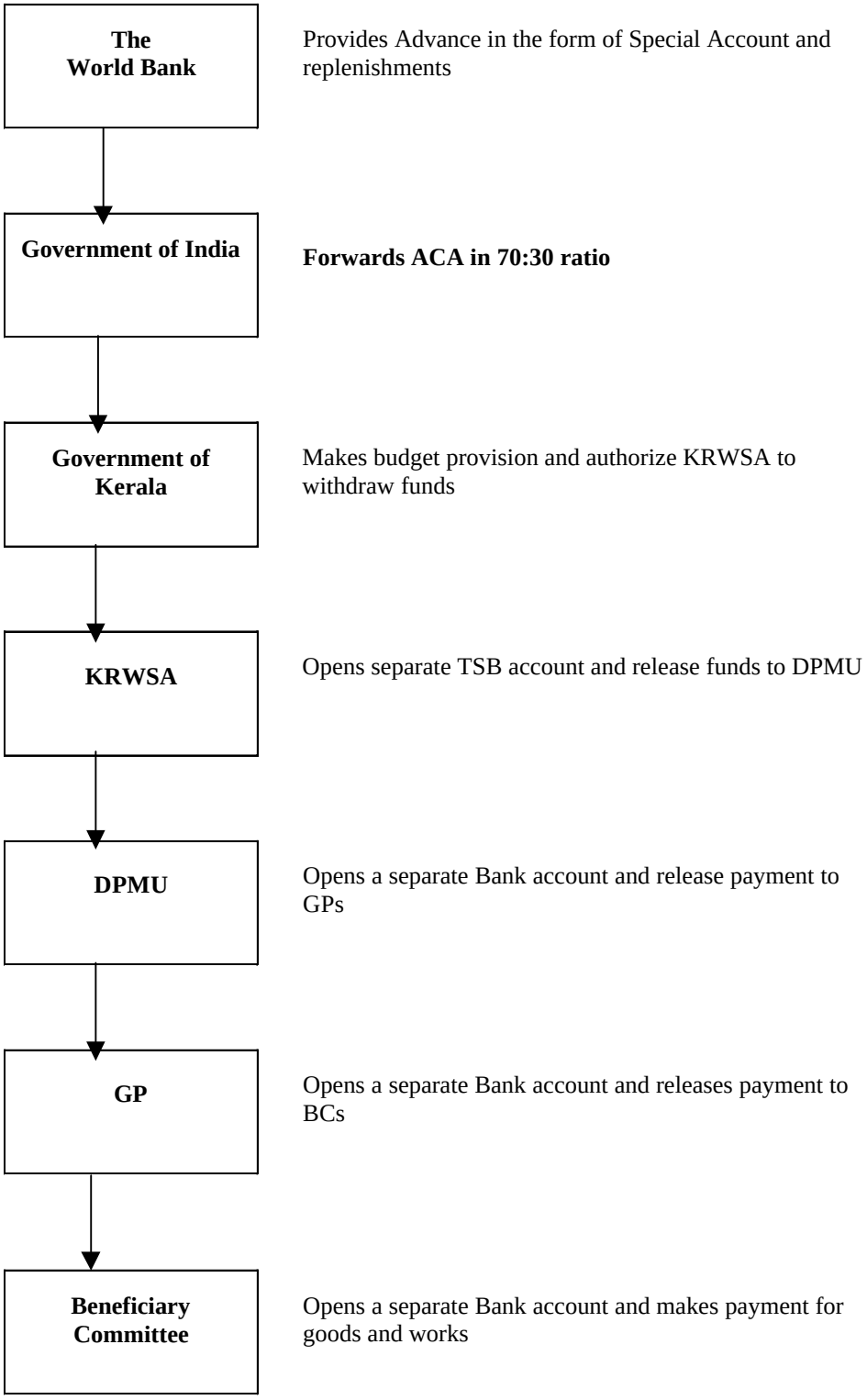
FUNDS FLOW (Size and Timing)



↓ : Audit of utilization by KRWSA appointed auditors
↑ : Certified by SO
⇑ : Certified by Supervising (construction) Engineers

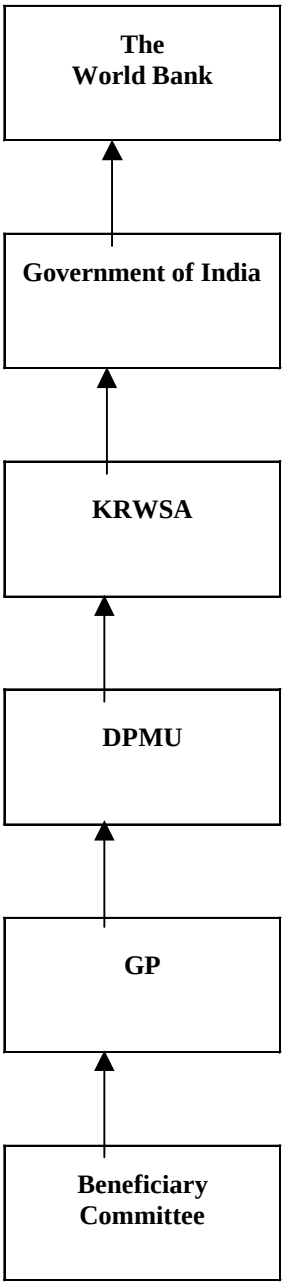
Attachment 3

Funds Flow Mechanism



Attachment 4

Accounting Information Flow



Provides Advance in the form of Special Account and replenishments

Forwards PMR to the Bank

Forwards quarterly PMRs to CAA&A, DEA/GOI (including national component)

Compiles information from GPs and forwards compiled statement to PMU

Compiles Scheme information on a monthly basis and forwards to DPMU

Submits bills for payments, provides periodic statements

Annex 7: Project Processing Schedule

INDIA: Kerala Rural Water Supply and Environmental Sanitation Project

Project Schedule	Planned	Actual
Time taken to prepare the project (months)		17
First Bank mission (identification)		01/18/99
Appraisal mission departure	05/29/2000	05/29/2000
Negotiations	09/11/2000	09/18/2000
Planned Date of Effectiveness	02/28/2001	

Prepared by:

Government of Kerala

Preparation assistance:

Consultants and India Country Department

Bank staff who worked on the project included:

Name	Speciality
G.V. Abhyankar	Sanitary Engineer, Task Leader
Meena Munshi	Economist, Co-Task Leader
S. Satish	Social Development
Parameswaran Iyer	Institutions/Community Development
Salman Salman	Lawyer
D.M. Mohan	Water Supply Engineer
Deepak Ahluwalia	Economist
Sanjay Vani	Financial Management
S. Krishnan	Procurement
R.R. Mohan	Social Development
L. Panneer Selvam	Environmentalist
Smita Misra	Environmentalist
Meera Mehta	Urban development
T.C. Jain	Agriculturist
P.C. Mohan	Communication
Ava Shreshta	Anthropology
K.N. Venkata Raman	Procurement
S. Santhakumar	Program Assistant
Peer Reviewers	
Jennifer Sara	Leader, Global RWSS Thematic Group and knowledge management
Vijay Jagannathan	Principal Water & Sanitation Specialist, East Asia & Pacific Region

Annex 8: Documents in the Project File*

INDIA: Kerala Rural Water Supply and Environmental Sanitation Project

A. Project Implementation Plan

Kerala Rural Water Supply and Sanitation Agency, PIP, July 31, 2000.

Supporting Documents for the PIP

- Social Assessment Study Report (Socio Economic Unit Foundation), May 2000
- Study on Financial and Economic Analysis (Socio Economic Unit Foundation and Dalal Consultants), June 2000
- Environmental Analysis (R. Paramasivam), May 2000
- Technical Manual (Socio Economic Unit Foundation), June 2000
- HSHE Strategy (Total Sanitation and Health Mission), April 2000
- Need Assessment Study for Capacity Building (Loyola Extension Services), May 2000
- Tribal Development Plan (Loyola Extension Services), June 2000
- Rapid Sector Assessment Study (Om Consultants), May 2000
- Water Quality Analysis of Dug Wells in Selected Panchayats (Kerala Water Authority), April 2000
- Watershed Development Schemes for Rural Water Supply Projects in Kunnemmel Panchayat (Centre for Water Resources Development and Management), April 2000
- Detailed engineering designs for 53 schemes: KWA, September-December 1999

B. Bank Staff Assessments

- Generic Project Concept Document on Rural Water Supply and Environmental Sanitation, October 1998 (Revised June 1999)
- India: Water Resources Management Sector Work (6 volumes), Rural Development, South Asia region, 1998
- India: Impact Evaluation Report Comparative Review of Rural Water Systems Experience , OED, 1998
- India: World Bank assistance for Water Resources management (Draft, February 2000);
- India: Effectiveness of Bank Lending for Rural Water Projects, A Review of Evaluation Results, OED February 3, 1999
- India: Supervision Qualiyty in FY99, A QAG Assessment, August 2000
- Field Note: Villagers Treat Water as an Economic Good, Olavanna, Kerala, India, Water and Sanitation Program-South Asia
- India: Towards Rural Development and Poverty Alleviation, June 1999

C. Other

- Kerala Water Authority: Preliminary Report for Integrated Rural Water Supply and Environmental Sanitation Projects in Kerala State, December 1998
- Department of Economic Affairs, GOI: Letter with Project Proposal for World Bank Funding for Implementation of Water Supply Schemes, December 23, 1998
- Kerala Water Authority: Final Report on Cost & Revenue Study (A.F. Ferguson & Co), July 1992
- Government of Kerala, Final Report of the Committee on Provision of Drinking Water to All by 2000 A.D., 1998
- Government of The Netherlands: Assessment of 48 Rural Water Supply Scheme in Malapuram District, Final Report (Sujala), September 1999
- Government of Netherlands: Formulation Report, Task Force on Second Generation Water Supply and Environmental Sanitation Programme (3 volumes), July 1998

- Kerala Water Authority: Annual Accounts, 1996-97 & 1997-98
- Kerala Water Authority: Budget Estimates, 1991-92, 1993-94, 1996-97, 1997-98, 1998-99, 1999-2000
- Accelerated Rural Water Supply Programme, Guidelines, Rajiv Gandhi National Drinking Water Mission, Government of India
- Restructured Centrally Sponsored Rural Sanitation Programme, Guidelines, Rajiv Gandhi National Drinking Water Mission, Government of India
- National Water Policy 1987, Government of India, Ministry of Water Resources

*Including electronic files

Annex 9: Statement of Loans and Credits

INDIA: Kerala Rural Water Supply and Environmental Sanitation Project

				Original Amount in US$ Millions			Difference between expected and actual disbursements[a]		
Project ID	FY	Borrower	Purpose	IBRD	IDA	Cancel.	Undisb.	Orig	Frm Rev'd
P045051	1999	India	2ND NATL HIV/AIDS CO	0.00	191.00	0.00	165.07	4.57	0.00
P049301	1997	India	A.P. EMERG. CYCLONE	50.00	100.00	0.00	95.50	95.71	0.00
P010503	1995	India	AGRIC HUMAN RES DEVT	0.00	59.50	0.00	16.69	20.34	0.00
P010489	1995	India	AP 1ST REF. HEALTH S	0.00	133.00	0.00	39.82	19.26	0.00
P045049	2000	India	AP DPIP	0.00	111.00	0.00	103.25	-3.60	0.00
P049385	1998	India	AP ECON RESTRUCTURIN	301.30	241.90	0.00	401.16	104.38	0.00
P035158	1997	India	AP IRRIGATION III	175.00	150.00	0.00	230.96	88.48	0.00
P049537	1999	India	AP POWER APL I	210.00	0.00	0.00	145.78	52.78	0.00
P010522	1995	India	ASSAM RURAL INFRA	0.00	126.00	0.00	77.39	49.46	0.74
P010455	1994	India	BLINDNESS CONTROL	0.00	117.80	0.00	65.87	51.00	0.00
P010480	1996	India	BOMBAY SEW DISPOSAL	167.00	25.00	0.00	102.01	96.03	0.00
P043310	1996	India	COAL ENV & SOCIAL MITIGATION	0.00	63.00	0.00	32.95	24.79	0.00
P009979	1998	India	COAL SECTOR REHAB	530.00	2.00	268.70	34.51	145.36	145.36
P009870	1994	India	CONTAINER TRANSPORT	94.00	0.00	15.00	40.62	55.62	55.31
P010464	1995	India	DISTRICT PRIMARY ED	0.00	260.30	0.00	91.91	64.77	0.00
P035821	1996	India	DPEP II	0.00	425.20	0.00	195.57	18.91	0.00
P038021	1998	India	DPEP III (BIHAR)	0.00	152.00	0.00	121.93	63.62	0.00
P036062	1997	India	ECODEVELOPMENT	0.00	28.00	0.00	18.46	11.15	0.00
P043728	1997	India	ENV CAPACITY BLDG TA	0.00	50.00	0.00	39.46	25.19	0.00
P010563	1995	India	FINANCIAL SECTOR DEV PROJ. (FSDP)	700.00	0.00	301.30	84.13	0.00	0.00
P010448	1994	India	FORESTRY RESEARCH ED	0.00	47.00	0.00	11.25	30.29	0.95
P010566	2001	India	GUJARAT HWYS	381.00	0.00	0.00	381.00	8.00	0.00
P035160	1998	India	HARYANA POWER APL-I	60.00	0.00	0.00	26.35	23.35	0.00
P010485	1996	India	HYDROLOGY PROJECT	0.00	142.00	0.00	71.30	74.47	0.00
P039935	1996	India	ILFS-INFRAS FINANCE	200.00	5.00	0.00	178.79	154.20	0.00
P067330	2000	India	IMMUNIZATION STRENGTHENING PROJECT	0.00	142.60	0.00	138.23	0.00	0.00
P010463	1995	India	INDUS POLLUTION PREV	143.00	25.00	1.64	141.63	131.02	4.66
P049477	1998	India	KERALA FORESTRY	0.00	39.00	0.00	27.12	1.19	0.00
P010461	1995	India	MADRAS WAT SUP II	275.80	0.00	189.30	31.68	213.77	4.58
P050651	1999	India	MAHARASH HEALTH SYS	0.00	134.00	0.00	122.87	130.47	0.00
P010511	1997	India	MALARIA CONTROL	0.00	164.80	0.00	130.11	67.69	0.00
P009946	1992	India	NAT. HIGHWAYS II	153.00	153.00	0.00	70.14	56.50	21.84
P009869	1989	India	NATHPA JHAKRI HYDRO	485.00	0.00	0.00	80.50	80.50	19.95
P009972	2000	India	NATIONAL HIGHWAYS III PROJECT	516.00	0.00	0.00	516.00	0.00	0.00
P010561	1998	India	NATL AGR TECHNOLOGY	96.80	100.00	0.00	185.33	67.56	0.00
P010496	1998	India	ORISSA HEALTH SYS	0.00	76.40	0.00	70.37	19.04	0.00
P035170	1996	India	ORISSA POWER SECTOR	350.00	0.00	0.00	260.59	160.60	0.00
P010529	1996	India	ORISSA WRCP	0.00	290.90	0.00	118.06	39.81	0.00
P010416	1993	India	PGC POWER SYSTEM	350.00	0.00	75.00	37.46	112.46	0.00
P010457	1994	India	POPULATION IX	0.00	88.60	0.00	38.03	29.15	0.00
P009963	1992	India	POPULATION VIII	0.00	79.00	0.00	40.82	42.76	0.00
P045050	1999	India	RAJASTHAN DPEP	0.00	85.70	0.00	78.83	16.17	0.00
P010505	2000	India	RAJASTHAN DPIP	0.00	100.48	0.00	93.71	-2.96	0.00
P049770	2000	India	REN EGY II	80.00	50.00	0.00	127.93	0.00	0.00

				Original Amount in US$ Millions				Difference between expected and actual disbursements[a]	
Project ID	FY	Borrower	Purpose	IBRD	IDA	Cancel.	Undisb.	Orig	Frm Rev'd
P010410	1993	India	RENEWABLE RESOURCES	75.00	115.00	0.00	62.62	94.26	0.00
P010531	1997	India	REPRODUCTIVE HEALTH1	0.00	248.30	0.00	169.10	91.19	49.51
P044449	1997	India	RURAL WOMEN'S DEVELOPMENT	0.00	19.50	0.00	16.07	12.39	0.00
P009921	1992	India	SHRIMP & FISH CULTUR	0.00	85.00	50.02	14.58	62.95	14.34
P035825	1996	India	STATE HEALTH SYS II	0.00	350.00	0.00	182.62	153.49	0.00
P009995	1997	India	STATE HIGHWAYS I(AP)	350.00	0.00	0.00	264.64	79.64	0.00
P045600	1997	India	TA ST'S RD INFRA DEV	51.50	0.00	0.00	17.24	14.24	14.99
P059501	2000	India	TA for Econ Reform Project	0.00	45.00	0.00	43.55	0.00	0.00
P010476	1995	India	TAMIL NADU WRCP	0.00	282.90	0.00	136.73	112.76	0.00
P050658	2001	India	TECHN EDUC III	0.00	64.90	0.00	63.65	0.00	0.00
P050637	1999	India	TN URBAN DEV II	105.00	0.00	0.00	87.21	19.88	0.00
P010473	1997	India	TUBERCULOSIS CONTROL	0.00	142.40	0.00	109.35	76.40	0.00
P055456	2000	India	Telecommunications Sector Reform TA	62.00	0.00	0.00	61.38	-0.62	0.00
P035824	1998	India	UP DIV AGRC SUPPORT	79.90	50.00	0.00	114.50	48.44	0.00
P050667	2000	India	UP DPEP III	0.00	182.40	0.00	164.60	-7.76	0.00
P035169	1998	India	UP FORESTRY	0.00	52.94	0.00	33.86	10.07	0.00
P050657	2000	India	UP Health Systems Development Project	0.00	110.00	0.00	103.32	-0.72	0.00
P035172	2000	India	UP POWER SECTOR RESTRUCTURING PROJECT	150.00	0.00	0.00	138.88	0.00	0.00
P010484	1996	India	UP RURAL WATER	59.60	0.00	7.20	37.60	26.90	0.00
P050646	1999	India	UP SODIC LANDS II	0.00	194.10	0.00	170.40	30.20	0.00
P009961	1993	India	UP SODIC LANDS RECLA	0.00	54.70	0.00	2.33	2.35	0.00
P009964	1994	India	WATER RES CONSOLID H	0.00	258.00	0.00	97.38	82.35	0.00
P035827	1998	India	WOMEN & CHILD DEVLPM	0.00	300.00	0.00	279.72	17.91	0.00
P041264	1999	India	WTRSHD MGMT HILLS II	85.00	50.00	0.00	118.25	5.41	0.00
			Total:	6335.90	6564.32	908.16	7570.72	3375.59	332.23

INDIA
STATEMENT OF IFC's
Held and Disbursed Portfolio
15-Oct-2000
In Millions US Dollars

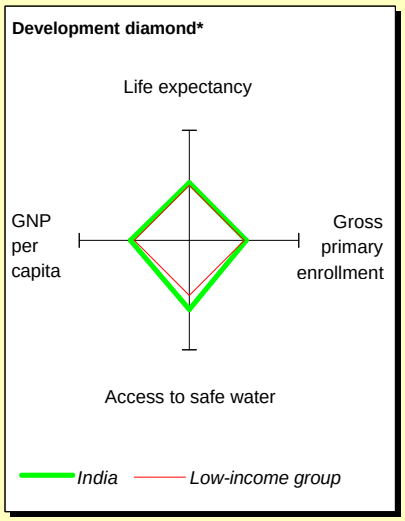
		Committed				Disbursed			
		IFC				IFC			
FY Approval	Company	Loan	Equity	Quasi	Partic	Loan	Equity	Quasi	Partic
1997	20TH Century	8.50	0.00	0.00	0.00	8.50	0.00	0.00	0.00
1993	20th Century	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1989	AEC	6.76	0.00	0.00	0.00	6.76	0.00	0.00	0.00
1994	Ambuja Cement	2.67	4.94	0.00	0.00	2.67	4.94	0.00	0.00
1992/93	Arvind Mills	0.00	10.18	0.00	0.00	0.00	10.18	0.00	0.00
1997	Asian Electronic	0.00	5.50	0.00	0.00	0.00	5.50	0.00	0.00
1984/91	Bihar Sponge	0.00	0.05	0.00	0.00	0.00	0.05	0.00	0.00
1997	CEAT	19.80	0.00	0.00	0.00	19.80	0.00	0.00	0.00
1990/92	CESC	21.00	0.00	0.00	46.90	21.00	0.00	0.00	46.90
1995	Centurion Bank	0.00	4.67	0.00	0.00	0.00	4.67	0.00	0.00
2000	Chinai	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1994	Chowgule	12.63	4.58	0.00	19.38	12.63	4.58	0.00	19.38
1997	Duncan Hospital	7.00	0.00	0.00	0.00	7.00	0.00	0.00	0.00
1997	EEPL	0.00	0.03	0.00	0.00	0.00	0.03	0.00	0.00
1986	EXB-City Mills	0.48	0.00	0.00	0.00	0.48	0.00	0.00	0.00
1986	EXB-STG	0.31	0.00	0.00	0.00	0.31	0.00	0.00	0.00
1995	EXIMBANK	11.37	0.00	0.00	0.00	11.37	0.00	0.00	0.00
1995	GE Capital	6.25	5.00	0.00	0.00	6.25	4.39	0.00	0.00
1986/92/93/94	GESCO	0.00	1.86	0.00	0.00	0.00	1.86	0.00	0.00
1988/94	GKN Driveshafts	0.00	0.33	0.00	0.00	0.00	0.33	0.00	0.00
1994/97	GVK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	Gesco Corp. Ltd	0.00	1.18	0.00	0.00	0.00	1.18	0.00	0.00
1994/98/00	Global Trust	0.00	5.00	0.00	0.00	0.00	2.78	0.00	0.00
	Gujarat Ambuja	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1994	HDFC	0.00	0.50	0.00	0.00	0.00	0.50	0.00	0.00
1978/87/91/93	HOEL	0.00	0.28	0.00	0.00	0.00	0.28	0.00	0.00
1990	Hindustan	0.62	0.00	0.00	0.00	0.62	0.00	0.00	0.00
1987	IAAF	0.00	6.50	0.00	0.00	0.00	0.98	0.00	0.00
1998	ICICI-IFGL	0.00	0.14	0.00	0.00	0.00	0.14	0.00	0.00
1990/94	ICICI-SPIC Fine	0.00	2.79	0.00	0.00	0.00	2.79	0.00	0.00
1990/95/00	IDFC	0.00	15.46	0.00	0.00	0.00	15.46	0.00	0.00
1998	IL & FS	0.00	3.12	0.00	0.00	0.00	3.12	0.00	0.00
1990/93/94/98	IL&FS Venture	0.00	0.60	0.00	0.00	0.00	0.60	0.00	0.00
1992/95	ITW Signode	0.00	0.34	0.00	0.00	0.00	0.34	0.00	0.00
1981/86/91/93/96	India Direct Fnd	0.00	7.47	0.00	0.00	0.00	6.29	0.00	0.00
1996	India Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1986/93/94/95	India Lease	0.00	0.30	0.00	0.00	0.00	0.30	0.00	0.00
1984/90/94	Indo Rama	0.00	2.14	0.00	0.00	0.00	2.14	0.00	0.00
1993/94/96	Indus II	0.00	5.00	0.00	0.00	0.00	4.50	0.00	0.00
1996	Indus Mauritius	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1996	Indus VC Mgt Co	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00
1992	Indus VCF	0.00	0.93	0.00	0.00	0.00	0.93	0.00	0.00
1992	Info Tech Fund	0.00	0.64	0.00	0.00	0.00	0.64	0.00	0.00
1992	Ispat Industries	0.00	3.64	0.00	0.00	0.00	3.64	0.00	0.00
1992/94/97									
	Total Portfolio:	188.28	151.33	5.00	75.28	154.77	135.27	5.00	75.28

		Approvals Pending Commitment			
FY Approval	Company	Loan	Equity	Quasi	Partic
2000	APCL	7100.00	0.00	1900.00	0.00
1999	Carraro	10000.00	0.00	0.00	0.00
2001	GTB SME Facility	20000.00	0.00	0.00	0.00
2000	IndAsia	0.00	0.00	15000.00	0.00
2001	Internet Express	0.00	0.00	5000.00	0.00
2001	Jetair	0.00	15000.00	0.00	0.00
2000	SREI II	10000.00	0.00	0.00	0.00
1999	Sarshatali Coal	30000.00	0.00	5000.00	0.00
	Total Pending Commitment:	77100.00	15000.00	26900.00	0.00

Annex 10: Country at a Glance

INDIA: Kerala Rural Water Supply and Environmental Sanitation Project

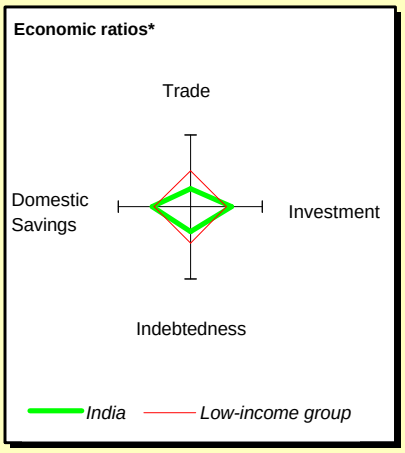
POVERTY and SOCIAL	India	South Asia	Low-income
1999			
Population, mid-year *(millions)*	997.5	1,329	2,417
GNP per capita *(Atlas method, US$)*	440	440	410
GNP *(Atlas method, US$ billions)*	441.8	581	988
Average annual growth, 1993-99			
Population *(%)*	1.7	1.9	1.9
Labor force *(%)*	2.1	2.3	2.3
Most recent estimate (latest year available, 1993-99)			
Poverty *(% of population below national poverty line)*	35	..	..
Urban population *(% of total population)*	28	28	31
Life expectancy at birth *(years)*	63	62	60
Infant mortality *(per 1,000 live births)*	70	75	77
Child malnutrition *(% of children under 5)*	53	51	43
Access to improved water source *(% of population)*	81	77	64
Illiteracy *(% of population age 15+)*	44	46	39
Gross primary enrollment *(% of school-age population)*	100	100	96
Male	109	110	102
Female	90	90	86



KEY ECONOMIC RATIOS and LONG-TERM TRENDS

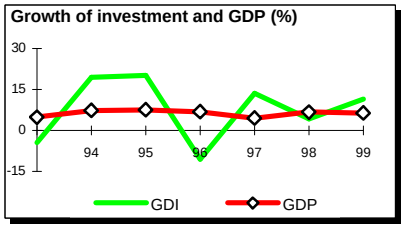
	1979	1989	1998	1999
GDP *(US$ billions)*	150.1	290.5	419.1	447.3
Gross domestic investment/GDP	22.8	24.1	21.8	22.9
Exports of goods and services/GDP	6.7	7.3	11.3	12.1
Gross domestic savings/GDP	20.7	21.8	19.2	20.0
Gross national savings/GDP	22.2	21.4	20.8	22.1
Current account balance/GDP	-0.5	-1.8	-0.8	-0.8
Interest payments/GDP	0.3	1.1	1.1	1.2
Total debt/GDP	11.9	26.0	23.4	22.9
Total debt service/exports	10.1	28.6	17.0	15.6
Present value of debt/GDP	..	..	20.1	..
Present value of debt/exports	..	..	143.3	..

	1979-89	1989-99	1998	1999	1999-03
(average annual growth)					
GDP	5.7	5.8	6.8	6.5	6.4
GNP per capita	3.3	3.9	4.9	4.9	4.7
Exports of goods and services	4.9	11.8	12.5	1.7	7.5

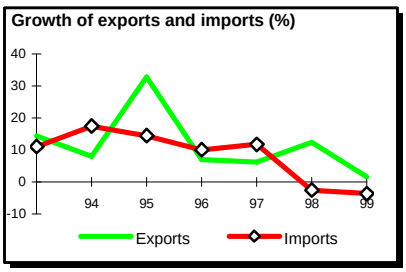


STRUCTURE of the ECONOMY

	1979	1989	1998	1999
(% of GDP)				
Agriculture	36.8	31.6	29.1	27.7
Industry	25.0	27.6	25.7	26.3
Manufacturing	17.4	17.4	15.6	15.9
Services	38.3	40.8	45.2	46.0
Private consumption	69.2	66.1	68.6	68.0
General government consumption	10.0	12.2	12.3	12.0
Imports of goods and services	8.7	9.6	14.0	15.0



	1979-89	1989-99	1998	1999
(average annual growth)				
Agriculture	3.4	3.3	7.2	1.3
Industry	6.6	6.5	4.0	8.8
Manufacturing	7.0	7.0	3.6	8.5
Services	6.7	7.5	8.3	7.9
Private consumption	5.5	5.2	3.2	2.9
General government consumption	7.8	5.9	14.5	10.3
Gross domestic investment	5.7	6.2	4.3	11.5
Imports of goods and services	6.5	8.8	-2.5	-3.6
Gross national product	5.5	5.8	6.7	6.8



Note: 1999 data are preliminary estimates.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.