Document of
The World Bank

FOR OFFICIAL USE ONLY

Report No: 64658-IN

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF
SDR 98 MILLION
(US$ 155.3 MILLION EQUIVALENT)

TO THE REPUBLIC OF INDIA

FOR A

SECOND KERALA RURAL WATER SUPPLY AND SANITATION PROJECT

November 14, 2011

Sustainable Development Department
Urban and Water Unit
South Asia Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective October 31, 2011)

Currency Unit = Indian Rupees

INR 45.40 = US$ 1

US$ 1.5859 = SDR 1

FISCAL YEAR

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

BCs	Beneficiary Committees	LSGD	Local Self Government Department
BGs	Beneficiary Groups	LWSS	Large Water Supply Scheme
BPL	Below Poverty Line	MOA	Memorandum of Association
CAS	Country Assistance Strategy	MDWS	Ministry of Drinking Water Supply
CAG	Comptroller and Auditor General of Government of India	MOU	Memorandum of Understanding
CBO	Community-Based Organization	NCB	National Competitive Bidding
CCDU	Communication and Capacity Development Unit	NGO	Non Governmental Organization
CWRDM	Centre for Water Resources Development and Management	NRW	Non Revenue Water
DGS&D	Directorate General of Supplies and Disposal	OM	Operations Manual
DRA	Demand Responsive Approach	ORAF	Operational Risk Assessment Framework
EA	Environmental Assessment	PDO	Project Development Objective
EDS	Environmental Data Sheet	PIP	Project Implementation Plan
EIA	Environmental Impact Assessment	PMU	Project Management Unit
EMF	Environmental Management Framework	PRI	Panchayati Raj Institutions
EMP	Environmental Management Plan	QBS	Quality Based Selection
GAAP	Governance and Accountability Action Plan	QCBS	Quality and Cost Based Selection
GC	Governing Council	RBI	Reserve Bank of India
GOI	Government of India	RPMU	Regional Project Management Unit
GOK	Government of Kerala	RWS	Rural Water Supply
GPAT	Gram Panchayat Action Team	RWSS	Rural Water Supply and Sanitation
GP	Gram Panchayat	SBD	Standard Bidding Document
GPST	Gram Panchayat Support Team	SEE	Sustainability Evaluation Exercise
GPWSC	Gram Panchayat Water Supply Committee	SLC	Scheme Level Committee
GWR	Groundwater Recharge	SO	Support Organization
ICB	International Competitive Bidding	SWSM	State Water and Sanitation Mission
ICQS	Independent Construction Quality and Surveillance	SWSS	Small Water Supply Scheme
IDA	International Development Association	TDP	Tribal Development Plan
IEC	Information, Education and Communication	TOR	Terms of Reference
IFR	Interim Financial Report	TSC	Total Sanitation Campaign
KWA	Kerala Water Authority	WRD	Water Resources Department
KRWSA	Kerala Rural Water Supply and Sanitation Agency	WRM	Water Resources Management
LEA	Limited Environmental Assessment	WSSO	Water and Sanitation Support Organization

Regional Vice President:	Isabel M. Guerrero
Country Director:	N. Roberto Zagha
Sector Director:	John Henry Stein
Sector Manager:	Ming Zhang
Task Team Leader:	Martin Gambrill

INDIA
SECOND KERALA RURAL WATER SUPPLY AND SANITATION PROJECT

TABLE OF CONTENTS

INDIA

SECOND KERALA RURAL WATER SUPPLY AND SANITATION PROJECT

PROJECT APPRAISAL DOCUMENT

South Asia
SASDU

Date: November 14, 2011 Country Director: N. Roberto Zagha Sector Director: John Henry Stein Sector Manager: Ming Zhang Team Leader(s): Martin Gambrill Project ID: P121774 Lending Instrument: Specific Investment Loan	Sector(s): Rural Water and Sanitation Theme(s): Rural services and infrastructure (P); Water resources management (S); Participation and civic engagement (S); EA Category: B

Project Financing Data:

Proposed terms:

[ ] Loan [X] Credit [ ] Grant [ ] Guarantee [ ] Other:

Source	Total Amount (US$ 241.2 M)
Total Project Cost:	
Cofinancing:	
Borrower:	
Government of Kerala	US$ 46.2 million
Rural Local Govts./Communities	US$ 39.7 million
Total Bank Financing:	US$ 155.3 million
IDA	
New	US$ 155.3 million
Recommitted	

Borrower: Government of India

Responsible Agency: Water Resources Department of the Government of Kerala (GOK) through the Kerala Rural Water Supply and Sanitation Agency (KRWSA)

Contact Person: Ashok Kumar Singh, Executive Director
Telephone No.: +91 47-1233-7006
Fax No.: +91-47-1233-7004
Email: pmujalanidhi@gmail.com

Estimated Disbursements (Bank FY/US$ m)

FY	FY12	FY13	FY14	FY15	FY16	FY17
Annual	0.7	18.5	35.0	40.0	40.3	20.8
Cumulative	0.7	19.2	54.2	94.2	134.5	155.3

Project Implementation Period: 5.5 years Expected effectiveness date: January 1, 2012 Expected closing date: End: June 30, 2017	
Does the project depart from the CAS in content or other significant respects?	○ Yes **X** ○ No
If yes, please explain:	
Does the project require any exceptions from Bank policies? Have these been approved/endorsed (as appropriate by Bank management? Is approval for any policy exception sought from the Board?	○ Yes **X** ○ No ○ Yes ○ No ○ Yes **X** ○ No
If yes, please explain:	
Does the project meet the Regional criteria for readiness for implementation?	**X** Yes ○ No
If no, please explain:	
Project Development Objective: To increase the access of rural communities to improved and sustainable water supply and sanitation services in Kerala, using a decentralized, demand-responsive approach.	
Project description: *Component A*: Institution Building. This component will: (i) support capacity building of sector institutions and support organizations; (ii) assist GOK in implementing a statewide sector development program; and (iii) support project management costs. *Component B*: Technical Assistance to Implementing Agencies. This component will provide technical assistance to implementing agencies such that the infrastructure investments under Component C are properly implemented and the resultant services efficiently provided. *Component C*: Infrastructure Development. This component will fund the implementation of infrastructure investments for: (i) new and rehabilitated intra-GP rural water supply schemes; (ii) pilot rehabilitation and modernization of multi-GP water supply schemes and transfer of internal distribution to GPs; and (iii) sanitation schemes, mainly covering community-centric solid and liquid waste management and household sanitation solutions in difficult terrain.	
Safeguard policies triggered?	
Environmental Assessment (OP/BP 4.01)	**X** Yes No
Natural Habitats (OP/BP 4.04)	**X** Yes No
Forests (OP/BP 4.36)	**X** Yes No
Pest Management (OP 4.09)	Yes **X** No
Physical Cultural Resources (OP/BP 4.11)	Yes **X** No
Indigenous Peoples (OP/BP 4.10)	**X** Yes No
Involuntary Resettlement (OP/BP 4.12)	Yes **X** No
Safety of Dams (OP/BP 4.37)	Yes **X** No
Projects on International Waterways (OP/BP 7.50)	Yes **X** No
Projects in Disputed Areas (OP/BP 7.60	Yes **X** No

Conditions and Legal Covenants:		
Financing/Project Agreement Reference	Description of Condition/Covenant	Date Due
PA Schedule, Section I .B.1	Kerala shall vest WRD with the responsibility for providing general oversight and policy guidance to the Project, making any changes in the PIP, the Operational Manual, the Related Manuals and the Safeguards Instruments during implementation as may be needed, and approving annual action plans and budgets prepared by KRWSA.	Ongoing
PA Schedule, Section I .B.2	Kerala and KRWSA shall carry out the Project in accordance with the PIP, the OM, the Related Manuals and the Safeguards Instruments.	Ongoing
PA Schedule, Section I .B.3	Kerala shall appoint and maintain during the entire project duration an Executive Director at KRWSA to work on the Project on a full-time basis, and ensure that the tenure of any such Executive Director shall be for a period of not less than three years.	Ongoing
PA Schedule, Section I .B.16	KRWSA shall, consistent with a mutually agreed staffing plan, appoint within the PMU, the RPMUs and the GPSTs an adequate number of staff and external and internal auditor(s), with suitable qualifications and experience.	Ongoing
PA Schedule, Section I .B.14	Kerala shall, through KRWSA, ensure that: (a) the operational management and the financing responsibilities of selected existing single-GP Schemes and intra-GP parts of selected existing multi-GP Schemes are transferred from KWA to the relevant Participating GP in accordance with an agreed time-bound action plan and schedule; (b) appropriate capital cost-sharing arrangements are implemented in respect of the users and the Participating GP for each Scheme; and (c) all GP level activities, for which Financing proceeds are provided, are based upon demand-responsive approaches as described in the PIP.	Ongoing
PA Schedule, Section I .B.18	For the purpose of implementing the multi-GP Schemes, KRWSA shall enter into a tripartite MOU with KWA and Participating GPs.	Ongoing

I. STRATEGIC CONTEXT

A. Country Context

1. India spends over US$ 2 billion annually through various programs to improve access to rural water supply and sanitation (RWSS) facilities, which has resulted in significant coverage in rural areas. There is, nevertheless, a considerable gap between infrastructure created and service availability at the household level. Key RWSS sector issues in the country contributing to this situation include: poor service reliability and sustainability; inadequate sanitation coverage and emerging 'second generation' sanitation challenges for solid and liquid waste; the challenges of water stressed and water quality affected areas; widespread use of top-down, supply-driven approaches running counter to the devolution intended by the 73rd Constitutional Amendment; and monitoring and evaluation (M&E) systems that focus on infrastructure and expenditure rather than on outcomes of efficient and reliable service delivery. The picture is not uniform throughout the country, with these issues being relevant to differing degrees and some states demonstrating established approaches to sustainable RWSS service delivery.

B. Sectoral and Institutional Context

2. The challenge facing India is not to increase access to RWSS infrastructure *per se*, but to increase access to reliable, sustainable and affordable services. The Government of India (GOI) recognizes the need to improve the functionality and sustainability of schemes and has launched significant sector reforms since 1999 in this regard. The two major 'demand responsive' reform programs, the Sector Reform Project (SRP) and the *Swajaldhara Program*, launched in early 2000 for decentralizing service delivery, have yet to be scaled-up and their reform policies fully adopted. Establishing the necessary institutional arrangements, building capacity, bridging financing gaps for scaling-up and tracking service delivery performance are major related challenges. Recognizing continuous slippages of '*fully covered*' habitations to '*partial*' or '*not covered*' status, GOI plans have emphasized decentralized approaches and community participation, while giving flexibility to states to adopt *Swajaldhara* bottom-up, community-driven principles to greater or lesser degrees. GOI's Ministry of Drinking Water Supply (MDWS) Implementation Action Plan for 2009-2012 and its National Rural Drinking Water Program guidelines of April 2010 articulate RWSS goals, principles and action steps governing interventions. The framework and guidelines bring *Panchaayati Raj Institutions*[1] and communities to the center of the RWSS decision-making process.

3. ***RWSS in Kerala*** As a beneficiary of GOI programs, the Government of Kerala (GOK) has significantly improved rural water supply (RWS) coverage from 58.6% in 2003 to a reported 67.7%[2]by 2010. GOK pioneered rural water reforms by carrying out the Bank-financed *Jalanidhi-I*[3] project, in which a demand responsive approach (DRA) – encompassing beneficiary participation, capital cost contributions from communities and the *gram panchayats* (GPs – the

[1]*Panchaayati Raj* is a system of governance encompassing lower tiers of government, in which *gram panchayats* (village governments, GPs) are one of the basic units of administration.
[2]According to the latest KWA figures, countaing the provision of piped water supply and private wells, Kerala achieved 100% coverage in December 2008 in rural areas with 40 lpcd supply in the state's 11,883 habitations. However, it now reports that 4,466 of these habitations '*slipped back*' due to water quality and quantity issues (not guaranteeing 40 lpcd supply during the summer season, for example).
[3]"*Jalanidhi*" means 'water is treasure' in Malayalam.

lowest elected level of local government), universal household connection provision, full operation and maintenance (O&M) cost recovery from user fees, and an integrated strategy to the water, sanitation, environment and health sectors – was explored in 112 (or 11%) of the state's GPs. Nevertheless, a wide gap still needs to be bridged in terms of rural households without adequate water supply through the scaling-up of such sustainable approaches and through rationalization of the roles and responsibilities within and between the state's RWSS stakeholder institutions. Kerala has achieved impressive coverage of household sanitation with 95% of rural households having access to a toilet facility[4] and 87% of GPs having achieved 100% '*open defecation free*' status and thus receiving GOI's '*Clean Village Award*'.

4. ***Kerala RWSS institutions*** Kerala Water Authority (KWA) has traditionally been the main state sector institution for the design, implementation and operation of RWS schemes. Its emphasis has mostly been on building large piped water schemes based on distant surface water sources, with schemes often covering multiple GPs. The planning is supply driven, the distant and hilly parts of GPs are generally left uncovered and scheme operations rarely satisfy end users; poor cost recovery is prevalent – with unsustainable subsidies for below poverty line (BPL) populations adding to the lack of sustainability. The resultant services from these schemes are often poor. With its decentralization initiative in 1997, GOK took a major policy decision to entrust rural local bodies with responsibility for RWS and transfer all single-GP water schemes to GPs with concomitant powers to levy and collect user charges for services. The Kerala Rural Water Supply and Sanitation Agency (KRWSA) was created to implement a pilot program, *Jalanidhi I*, based on GOI sector reform principles, which successfully demonstrating an alternative service delivery model focused on clear roles and responsibilities for communities and GPs and on reaching those without coverage. GOK's Local Self Government Department (LSGD) is the nodal agency entrusted with the delivery of rural sanitation services. In 2001, the *Kerala Total Sanitation and Health Mission* was created for the implementation of the GOI-sponsored *Total Sanitation Campaign*. In 2006 this was merged with LSGD's *Clean Kerala Mission* and the *Suchithwa Mission* (Sanitation Mission) was created to provide technical and financial assistance and information, education and communication support to rural and urban local government bodies to promote improved sanitation coverage in the state. The main RWSS sector issues faced in Kerala include those described below.

5. *Continued presence of unsustainable water sources and systems and persistent coverage gap* The RWS coverage gap in Kerala is acute in remote villages and areas affected by water quality and quantity issues, with much still left to be done to achieve water security for every rural household. Issues include: increasing presence of fluoride, iron and salinity[5]; contamination of private drinking wells due to poor sanitation; emergence of water stressed areas where demand outstrips local supply; increasing numbers of '*slipped back*' habitations[6]; continued dependence of large number of households on private open wells that dry up in the summer; and low coverage of household connections from piped water systems. In contrast, those schemes implemented following the *Jalanidhi* principles have been assessed as demonstrating highly sustainable and satisfactory RWS services. There is limited reliable data available on actual sector coverage and service standards in the state. The interface of water resources management

[4]National Family Health Survey (HFHS-3) data 2005-6.
[5] KWA reports 357 habitations as 'quality affected' in the state; a 'habitation' is a settlement of households forming a distinct habitation area.
[6] KWA recently classified 4,466 out of the 11,883 habitations in the state as '*slipped back*' habitations based on water quality and quantity issues.

(WRM) and water services for potable and other uses, in a state where – despite ample annual rainfall – many areas suffer droughts during the dry season, is a clear challenge.

6. *Inconsistent sector policies and implementation responsibilities* In addition to GOI and GOK funding support, KWA still implements RWS schemes funded by external agencies, following approaches that need to further comply with GOI guidelines and *Jalanidhi* policies – investments are often implemented with no participation of rural communities and local bodies, cost recovery is poor and O&M inadequate. MDWS's National Policy Framework calls for an institutional structure at the state level, with clear roles and responsibilities, to implement GOI funds for RWS schemes – encompassing scheme planning, design, fund release, auditing, M&E, regulation and pricing. These institutions need to be consolidated and empowered in Kerala to carry out their mandates effectively. GOK has no medium term plan for the sector and there is still a need to align state sector policy with GOI guidelines. There is provision for subsidized water for BPL families under KWA schemes – presenting inconsistencies with the tried and tested *Jalanidhi* principles.

7. *Residual sanitation challenges* While improvements in household sanitation have been impressive in Kerala, the remaining sanitation challenges involve 'second generation' issues including: a growing problem of solid and liquid waste management in urbanizing rural areas, closing the hard-to-reach household sanitation gap, replicating successful community sanitation interventions, and improving local drainage.

8. *Capacity building and service efficiency* Although KWA has much experience in undertaking engineering design and construction of RWS schemes, there is a need to build capacity in KWA, LSGD and the GPs to help transition to community-driven approaches for water schemes. There is ample scope to improve the operational efficiency of KWA managed multi-GP schemes in terms of energy efficiency, non-revenue water and overall performance.

9. *Transfering schemes to GPs* There are a large number single-GP schemes still operated by KWA, that require ownership and management transfer to GPs, rehabilitating, upgrading and augmentation. Transferring and subsequent rehabilitation of existing single-GP schemes is a pillar of GOK's decentralization initiative. However, beyond the *Jalanidhi* program, the consistent implementation of such an approach remains elusive.

10. *Multi-GP schemes* A participatory approach to the design and implementation of multi-GP schemes was piloted with KWA under *Jalanidhi-I*. The approach involved community participation for the intra-GP distribution networks and clear roles and responsibilities for KWA regarding the management of bulk water supply and for the GPs and communities for the distribution systems. There is scope for improvement and replication in those cases where multi-GP schemes are deemed the most effective and efficient solution to RWS provision.

11. *Scheme management back-up* Beneficiary groups (BGs, the term used for water user associations in Kerala) and GPs may confront situations in which their water schemes require management assistance beyond them – for example, where major equipment breaks down, water treatment plants are required, water meters need recalibration, or billing systems need implementation and maintenance. Ongoing capacity building for BGs and GPs is key to ensuring sustainable services are provided. There is need to explore models of back-up technical and

management support in which economies of scale can be promoted and public-private partnerships developed.

12. The RWSS reforms achieved under GOK's *Jalanidhi-I* program represented a paradigm shift for the sector, demonstrating how to undertake decentralized, bottom-up investment, while achieving highly satisfactory service delivery. With the support of the proposed project, GOK now aims to: (i) supply habitations dependent solely on private open wells with public water systems, incorporating universal household connections and service delivery cost recovery from user fees; (ii) transfer and rehabilitate some 800 KWA operated single-GP water schemes to their GPs; (iii) augment and upgrade existing single- and multi-GP schemes and improve their management models, service delivery sustainability and efficiency; and (iv) rationalize roles and responsibilities of the state's RWSS sector entities and build capacity so they can effectively deliver on their mandates. Having already attained impressive coverage in household sanitation, GOK now intends to bridge the remaining coverage gap (mainly in the more inaccessible coastal and tribal GPs) and to move up the 'sanitation ladder' by promoting community sanitation solutions in rural areas with the implementation of solid and liquid waste management schemes.

13. ***Rationale for Bank engagement*** The Bank has been an important actor in advancing the RWSS agenda in partnership with a number of state governments throughout India over the last two decades, and has played this role in Kerala since early 2000. *Jalanidhi I*, the first Bank-funded project with GOK, represented a paradigm shift in comparison to the traditional top-down, engineering-based approach followed in the state, employing demand responsiveness in order to bring key decision-making responsibilities throughout the subproject cycle to the GP and community. The project closed in September 2008 having provided RWS services to 1.3 million people through the involvement of 3,712 beneficiary groups. The ICR gave the project a '*satisfactory*' outcome and a '*low or negligible*' risk to development ratings. *Ex post* surveys of the project's RWS schemes provided the following indicators: overall scheme functionality, 94%; beneficiary satisfaction, 90%; prospects of sustainability, 92%; and major breakdowns and supply disruptions due to financial constraints, both nil.

14. The proposed project will broaden and deepen this agenda through: (i) scaling up the DRA for single- and multi-GP scheme construction and rehabilitation; (ii) transferring to GPs and rehabilitating more KWA single-GP schemes; (iii) promoting the design and implementation of sustainable multi-GP schemes and service delivery models based on shared responsibilities; (iv) exploring back-up management models for single- and multi-GP systems; (v) reviewing and rationalizing the roles and responsibilities of the state's RWSS sector entities and building capacity so they can deliver on their mandates; and (vi) better understanding and managing the interface between WRM and water users. The Bank is well-placed to consolidate the *Jalanidhi* approach and help GOK harmonize its RWSS policies and move the sector to the next level. The project will assist in improving sector transparency through better M&E and dissemination of indicators, and in enhancing efficient operation of single- and multi-GP schemes.

C. Higher Level Objectives to which the Project Contributes

15. The project is consistent with the November 2008 CAS (FY09-FY12) which is organized around three pillars: rapid and inclusive growth, sustainable development, and service delivery, with a cross-cutting focus on improving the effectiveness of public spending and achieving results. The project will help both enhance sustainable development and improve service

delivery in rural areas. In addition, the project will help GOK achieve its development goals of improving water security and health, reducing poverty, increasing school enrollment, particularly for girls, and reducing infant mortality, as well as contributing to its efforts to accelerate decentralization by building GP capacity in the development and delivery of services.

II. PROJECT DEVELOPMENT OBJECTIVES

A. Project Development Objective

16. The development objective of the proposed project is to increase the access of rural communities to improved and sustainable water supply and sanitation services in Kerala, using a decentralized, demand-responsive approach.

B. Project Beneficiaries

17. The proposed Project is expected to directly benefit some 1.15 million people with water supply interventions, or some 288,000 households, and some 690,000 people with sanitation services – totaling 1.84 million project beneficiaries. Women and children would significantly benefit from the project interventions – 51% of the overall project beneficiaries are expected to be women. In addition to these direct benefits, women would be empowered to have voice and choice through full membership in the beneficiary committees (BCs) responsible for subproject implementation. Some 200 participating GPs will benefit from strengthening and capacity building programs. GOK will benefit from improved institutional capacity to facilitate and scale-up community-driven, decentralized RWSS service delivery. The Project's universe for infrastructure investment will be eight districts identified by GOK[7]. The 200 beneficiary GPs from this universe will be identified and ranked based on criteria weighing water scarcity, water quality, the size of vulnerable groups, the prevalence of poverty, and the GP's implementation capacity. The GP selection process includes 'rules of the game' to which GPs and BGs have to adhere to be eligible for project funds. The Project will provide targeted assistance to the tribal populations of 22 GPs – as a subset of the prioritized 200 GPs within the eight Project districts – with 65,000 beneficiaries expected from tribal populations.

C. PDO Level Results Indicators

- *Direct project beneficiaries (number), of which female (percentage)*
- *Number of people provided with access to improved water sources under the project*
- *Number of people with access to improved facilities for safe disposal of solid and liquid waste*
- *Number of GPs in the State implementing decentralized, demand-responsive projects in RWSS*
- *Number of operational water schemes for which KRWSA's sustainability index[8] is >80%*

[7]This will not be the universe for the Batch-I GPs which have been selected based on unmet demand overflow from *Jalanidhi-I*.
[8]*Jalanidhi* sustainability index is defined as a weighted index of source assessment, technical assessment, financial assessment and institutional assessment of the water supply schemes

III. PROJECT DESCRIPTION

A. Project components

18. The Project is organized into three components: Institution Building, Technical Assistance to Implementing Agencies, and Infrastructure Development, as described below and in more detail in Annex 2.

- ***Component A – Institution Building (US$ 26.8 million)*** will provide funds to implement the following subcomponents:

  - *A1 – Project Management* including the establishment and operating costs of the project implementation units and related consultancies, equipment, goods and services for project management support.
  - *A2 – Capacity Building of sector institutions and of support organizations*.
  - *A3 – Statewide Sector Development Program* involving setting up and operation of a state level unit and conducting a range of sector development programs and studies such as preparing medium-term sector development and investment plans, conducting performance assessments of existing schemes, conducting independent M&E and consumer surveys, and integrating and optimizing the functions of the multiple sector institutions in the state.

- ***Component B – Technical Assistance to Implementing Agencies (US$ 27.2 million)*** will provide TA (through consultants and support organizations) to the implementing agencies (GPs, BGs and KWA), such that the corresponding infrastructure investments under Component C are properly implemented and the resultant services are efficiently provided:

  - *B1 – New and Rehabilitated Intra-GP Rural Water Supply Schemes*
  - *B2 – Pilot Rehabilitation and Modernization of Multi-GP Water Supply Schemes and transfer of the internal distribution to GPs*
  - *B3 – Sanitation schemes, mainly covering community-centric solid and liquid waste management and household sanitation solutions in difficult terrain*

- ***Component C – Infrastructure Development (US$ 187.2 million)*** will fund the implementation of infrastructure investments through the following subcomponents:

  - *C1 – New and Rehabilitated Intra-GP Rural Water Supply Schemes*
  - *C2 – Pilot Rehabilitation and Modernization of Multi-GP Water Supply Schemes and transfer of the internal distribution to GPs*
  - *C3 – Sanitation schemes, mainly covering community-centric solid and liquid waste management and household sanitation solutions in difficult terrain*

B. Project Financing

(i) ***Lending Instrument*** The Project will be implemented through a Specific Investment Loan (SIL).

(ii) Project Cost and Financing

Component	Total Project Cost (US$ M)	Financing Share (US$ M)			IDA Share (US$ M)	IDA Share (percentageof total cost)
		GOK	GPs	BGs		
A. Institution Building	26.8	9.5	0	0	17.3	64.4%
B. TA to Implementing Agencies	27.2	9.7	0	0	17.5	64.4%
C. Infrastructure Development	187.2	27	28.2	11.5	120.5	64.4%
Total	***241.2***	***46.2***	***28.2***	***11.5***	***155.3***	***64.4%***
Financing shares (of total project cost)	*100%*	*19.2%*	*11.7%*	*4.8%*	*64.4%*	

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

19. GOK's Water Resources Department (WRD) will be the nodal department for the Project. KRWSA, the entity legally established by GOK for implementing the predecessor project, will continue to be the agency responsible for implementation management of the proposed project, providing statewide leadership to ensure the Project's development objectives are achieved in a timely and efficient manner. The functions of policy, implementation support and service delivery under the project are as follows.

Main Function	Responsible Institution
Policy setting, Annual Plans budget approval, and implementation oversight	• WRD with Governing Council (*ie*, Empowered Committee) of KRWSA
Leading and managing sector reform process, implementation support, and monitoring implementation and outcomes	• KRWSA Project Management Unit (PMU) and Regional Project Management Units (RPMUs), GP Support Teams (GPSTs)
Implementation and service provision	• GPs in partnership with Beneficiary Groups (BGs) for all intra-GP activities • Kerala Water Authority (KWA) for common infrastructure of multi-GP schemes including modernization and service provision to GPs

Project Component	Subcomponents	Responsible Institution
A: Institution Building	A1: Project Management A2: Capacity Building A3: Statewide Sector Development Program	• KRWSA • KRWSA • KRWSA through WRD-level unit
B: TA to Implementing Agencies	B1: Intra-GP Rural Water Supply Schemes B2: Pilot Multi-GP Water Supply Schemes B3: Sanitation Schemes	• KRWSA and GPs through SOs • KRWSA, KWA and GPs with SOs • KRWSA and GPs through SOs
C: Infrastructure Development	C1: Intra-GP Rural Water Supply Schemes C2: Pilot Multi GP Water Supply Schemes C4: Sanitation Schemes	• GPs with BGs and SOs • KWA and GPs with SLCs and SOs • GPs and BGs with SOs

20. KRWSA has prepared a comprehensive Project Implementation Plan (PIP) which includes the project scope, objectives, indicators, component descriptions, cost estimates, financing plans, institutional and implementation arrangements, fiduciary policies and procedures, safeguard policies and mitigation plans, implementation schedules, O&M management arrangements, and the project M&E evaluation arrangements. It has also prepared

an Operations Manual (OM) encompassing a range of manuals and guidelines which form the basis for project implementation and performance monitoring. Many of the OM documents are updated versions of those used under *Jalanidhi-I*, reflecting the operational changes for the proposed project, and include: (i) administrative manuals, model agreements, model MOUs; (ii) procurement and FM manuals, procurement plan and standard bidding documents; (iii) technical manuals and guidelines; (iv) Tribal Development Plan; (v) M&E manual; (vi) capacity building plan, (vii) model scheme cycles; and (viii) model TORs; and (viii) cost estimate and expenditure monitoring model.

21. The bulk of procurement under the Project will be undertaken by the beneficiary communities. KRWSA will guide the implementing agencies (the GPs, BGs and KWA) in their procurement activities through the Regional Project Management Units (RPMUs), and will ensure that procurement is carried out in accordance with the Bank guidelines. The main procurement methods to be used will be: (i) community contracting for small water supply schemes (SWSSs); (ii) national competitive bidding (NCB) for large water supply and sanitation schemes (LWSSs); (iii) national shopping procedures for purchasing goods, equipment and materials; and (iv) consultancies (national and international) for hiring support organizations (SOs), and individual consultants and firms for sector policy and other studies. KRWSA has prepared a Procurement Plan and Procurement Manual which provide guidance on all procurement processes to be carried out and procedures to be followed.

22. The PMU will have a finance manager with an adequate number of accounts staff responsible for overall project financial management (FM), project accounting including consolidation of RPMU accounts, preparation of quarterly interim financial reports (IFRs) based on information from RPMUs and GPs, and disbursements. The RPMUs (each responsible for 2-3 districts) will have accounts officers supported by accounts staff and will be responsible for accounting project transactions in their districts, including the consolidation of accounts for the GPs. There will be project-specific accountants at the GP level with full responsibility for collecting BG expenditure data, coordinating on FM matters, and accounting of GP-level project transactions. The RPMU FM staff will be in place before project implementation initiates in the corresponding GP, and the GPST accountant in place prior to signing the agreement between KRWSA and the GP and releasing project funds. KWA will have a dedicated finance professional (supported by adequate staff) in place before they initiate project-funded activities.

23. The Bank-funded Kerala Local Government and Service Delivery Project (KLGP), through which all the GPs and municipalities in the state are the principal beneficiaries and play a central role, recently initiated implementation. The complementary nature of KLGP and *Jalanidhi-II* offers opportunities for developing synergies as detailed in Annex 2.

B. Results Monitoring and Evaluation

24. The M&E approach builds on the lessons learnt from the predecessor project and incorporates new features, including better capture of baseline information and monitoring of inclusion parameters and of newly introduced subcomponents. The objective of the M&E system is to provide a basis for moving towards sector-wide monitoring over the project period. The system will be integrated with the project's FM information system through common coding of GPs and BGs and includes tracking of physical implementation and monitoring of processes, outputs and outcomes, sustainability and project capital and O&M costs.

C. Sustainability

25. The whole premise of the project design, being based on the DRA, is to maximize the sustainability of the RWSS systems implemented through it. The DRA piloted in Kerala under the predecessor project demonstrated that the methodology maximized the sustainability of the resultant RWSS services – with average sustainability indicators[9] of over 80% achieved for the 3,700-plus systems implemented. The DRA methodology ensures that the GPs and, especially, the BGs are fully engaged throughout the subproject implementation cycle, in the planning, procurement, construction and management phases. This bottom-up, participatory approach – through which GPs make commitments including a 15% contribution to the scheme's capital costs and in which the BGs are the central actors in implementing the subproject, making a 10% contribution to capital costs, fully participating in the planning and design phases, undertaking the works procurement and having responsibility for fully covering the system's O&M costs – engenders a strong sense of ownership for and responsibility towards the water system. In nearly all cases, the systems implemented under the predecessor project demonstrated they were still delivering water services to the target beneficiaries a number of years after the schemes were inaugurated – and in many cases the BGs managing the systems would use, or supplement, the reserve fund created for the system in order to purchase and install household water meters, replace burnt-out pumps, or install additional distribution pipes. Such results and actions are testament to the sustainability of the project and its design and implementation philosophy. The proposed project builds on these sustainability outcomes and complements them further by including: (i) implementation of GP-wide water security plans and mapping to allow the GPs and communities to take informed decisions on improving the raw water source sustainability of the system, especially during the dry months, selecting sources in an informed way, including groundwater recharge, *etc*; (ii) inclusion of the costs of providing each household with individual meters; (iii) ongoing capacity building for BGs and GPs as a key element of ensuring sustainable services; (iv) exploring back-up technical and management support models wherever economies of scale can be capitalized upon and/or public-private partnerships explored; and (v) actions to reduce non-revenue water of large single-GP schemes and of multi-GP schemes.

26. The DRA methodology has demonstrated a positive impact on the sustainability of the resultant water supply schemes. The proposed project is intended to ensure that the *Jalanidhi* DRA principles are mainstreamed for use for all new and rehabilitated intra-GP schemes in the state, and that sustainable models for the management of multi-GP schemes and of second generation sanitation issues are demonstrated for future scale-up. An overarching element of this mainstreaming will be the setting-up of a state-level task force to review the functions of the state's multiple sector agencies and to support the effective integration and rationalization of their roles and responsibilities, with a view to utilizing GOK and GOI resources more effectively. The project will support diagnoses and planning work to assist GOK in exploring the critical links between WRM and water supply provision and to look at rationalizing and bringing further efficiencies to the spectrum of water and sanitation service provision in the state.

[9] KRWSA water supply scheme sustainability indicator.

V. KEY RISKS AND MITIGATION MEASURES

27. The overall risk rating for project implementation is *low*, reflecting the fact that its design builds on the proven experiences and lessons from *Jalanidhi-I* which was successful in achieving its development objectives and implementing its decentralized, demand-responsive, community-centric approach to planning, procuring, implementing and managing RWSS systems, on account of the intensive participation of the beneficiary communities throughout the subproject cycle. The proposed project builds on the best practices and the organization and capacity of the various agencies involved in implementing the predecessor project, with additional support to scale-up activities. The project will strengthen existing WRM understanding at the state level while undertaking water security planning at the GP level in order to identify and implement groundwater recharge measures to mitigate the raw water scarcity and quality risks that partly affected the first project and may otherwise impede the proposed project from achieving its development objectives. There are a number of lesser risks associated with implementation capacity which will be especially relevant during the initial stages of project implementation, though the likelihood of these materializing is deemed low and the possible impact on implementation is considered manageable over the project life. KWA's tariff policy of providing subsidized water to BPL populations served by their schemes might cause some GPs to resist taking over KWA schemes following *Jalanidhi* project principles of full cost recovery. KRWSA will use outreach, mobilization and education initiatives with the GPs to demonstrate the advantages and sustainability of those schemes run following *Jalanidhi* principles. The project's risks and mitigation measures are summarized in Annex 4. The risk mitigation measures have been addressed in the scope and design of the project including extensive capacity building and increased hand-holding support for beneficiaries.

VI. APPRAISAL SUMMARY

A. Economic and Financial Analysis

28. The economic analysis demonstrates that investments to be supported under the project are economically feasible. The financial analysis shows that the proposed project investments are sustainable when BGs and GPs contribute to the investment costs and, in the case of the BGs, are responsible for full O&M cost recovery through user charges – with cost recovery performance of schemes managed by BGs being far better than for publicly managed schemes The fiscal risks associated with the project are low and can be accommodated by GOK. The economic justification for investing in the project is that there are either no private providers for provision of improved RWSS services or that the few existing private providers have no incentive to provide such 'quasi public' basic service provision to the poor. There are several benefits expected from the project. Improved provision of water supply and sanitation is likely to generate external benefits, including improved health conditions of the direct and indirect project beneficiaries. Some 288,000 households (or about 1.15 million people) are likely to directly benefit from the water supply investments and 691,000 from sanitation interventions, totaling 1.84 million project beneficiaries. The quantifiable economic benefits of improved water supply include benefits from non-incremental water consumption, incremental water consumption, and other time and resource savings. Project beneficiaries will also benefit from sanitation interventions resulting in improved community environments and better household health and hygiene activities. Better health is likely to enhance household productivity. There are possible efficiency gains likely to result from implementation of demand-driven and decentralized

provision of RWSS through GPs and BGs in Kerala, particularly given the advanced nature of the state's decentralization reforms. Additional expected benefits, which can be partly attributed to the project's sanitation investments, include the reduction of the impact of water-related diseases such as diarrhea, gastroenteritis and dengue, and the improvement in well-being and quality of life through the elimination of foul smells and visual pollution from the uncontrolled disposal of solid and liquid wastes. The project's economic internal rate of return is estimated at 19.4% when a beneficiary population of some 288,000 households was assumed. The corresponding net present value and benefit-cost ratio are about US$ 90 million and 1.64, respectively. A robust check on the estimates of the key parameters was carried out to ascertain the responsiveness of the rate of return. The key parameters used were changes in opportunity cost of time, value of incremental water consumption, water consumption, and population growth. At two hours and 40 minutes of time savings, the rate of return is most sensitive to changes in the opportunity cost of time.

B. Technical

29. The project will implement water supply improvements in eligible GPs by rehabilitating existing water supply schemes and constructing new schemes in a demand-responsive way. Over 90 percent of the target BGs are expected to opt for local groundwater sources such as open wells, deep bore wells and springs. Where local water sources are not adequate, river-based schemes will be provided which will involve the construction of infiltration wells or water treatment plants. GP-wide water security maps will be prepared to identify water resources and to help plan groundwater recharge structures in order to improve the sustainability of raw water sources. A small number of multi-GP schemes will be partially transferred to their GPs and then rehabilitated, expanded and improved. In water quality affected habitations, GP-wide design, build and operate contracts for treatment plants will be piloted. The project will motivate communities to practice regularly chlorination though onsite generation of hypo solution. A technical manual has been prepared which includes project design criteria, guidelines on sound engineering practices, standard drawings and cost estimates, and specifications for construction materials, goods, equipment and works. The BGs will control chlorination through daily checking of residual chlorine. Regular potable water analyses will be undertaken by trained womens groups during scheme operation. The multi-GP schemes supported by the project will also benefit from modernization and efficiency-gains approaches aimed at reducing non-revenue water (NRW), improving energy efficiency, and increasing overall system efficiency from physical, operational and financial perspectives. The Project will also address 'second generation' sanitation issues facing the state, particularly those of solid and liquid waste management in its urbanizing rural areas, including the following interventions: (i) household- and community-level solid waste management solutions; (ii) demonstrating sanitation solutions for difficult areas (high water tables or difficult terrain); (iii) piloting a regional septage management facility; (iv) replicating successfully-implemented community sanitation facilities; and (v) improving local (community-wide rather than household-centric) drainage solutions.

C. Financial Management

30. A financial management (FM) capacity assessment of the GPs was undertaken in August 2010[10] and the key finding was that, as long as the GPs use the current state systems of FM and oversight and adhere to the relevant state rules and guidelines, they are capable of handling project funds and maintaining reasonable fiduciary oversight and control over these. KRWSA has experience of implementing the predecessor project and has adequate FM and internal control procedures in place for the proposed project. The project's post-mitigation FM risk is rated as *moderate*. An FM assessment of KWA (which will handle significant project funds under components B2 and C2) indicated significant FM and internal control weaknesses. The statutory audit of the annual financial statements of KWA is in arrears and the last available audit report expressed an adverse opinion and mentioned inadequacies in the internal control systems, including inadequate coverage of internal audit and an absence of physical verification of fixed assets. The risk related to the KWA activities under the project is thus rated *high* and it was agreed that KWA will be involved under a closely-monitored, ring-fenced FM arrangement with the flow of funds and their expenditure closely monitored by KRWSA. Limited amounts of funds will be provided to dedicated project bank accounts of KWA and its regional divisions. KWA will regularly report on the usage of these funds. All KWA expenditure will be audited by the project internal and external auditors. Project FM arrangements, outlined in Annex 3, are documented in the PIP and in the FM Manual.

31. The project will be pre-financed by GOK through a dedicated budget head opened in WRD's annual demand for grants[11]. Funds will be transferred to KRWSA's PMU treasury account and thereon to the RPMU bank accounts and to those of the other agencies such as KWA. The RPMUs will transfer funds to GPs as per approved annual action plans. The GPs will transfer funds to the BGs, in tranches, based on a pre-defined formula. Funds at the GP and BG levels will be deposited in dedicated project bank accounts. GPs will qualify for access to project funds on compliance with minimum eligibility criteria, including the availability of up-to-date accounts and acceptable audit reports that do not contain observations adversely affecting the integrity of the GPs' financial statements. All expenditure incurred by the GPs/BGs will be audited by internal auditors, and the release of subsequent tranches of funds to GPs/BGs will be subject to certification by the auditors of project expenditure in respect of the earlier releases. Accounting of project transactions will be done on the financial management information system (FMIS) at the GP, RPMU and PMU levels. The FMIS used in the earlier project will be upgraded to suit the needs of the current project. BGs will not be treated as accounting centers but will maintain a simple cash/bank book and a simple stock register/measurement book. The PMU will report actual project expenditure through quarterly Interim Financial Reports. 'Actual expenditure' at the GP/BG level means the expenditure as verified and certified by the internal auditors. Internal audits of the project will be conducted by independent chartered accountants (CAs) under agreed TOR. The external audit of the project financial statements will be conducted by a firm of CAs acceptable to the Bank under agreed TOR. The PMU finance manager will be assisted by accounts staff in the RPMUs and an accountant in each GPST. The applicable method for Bank funds disbursement will be reimbursement. KRWSA will prepare quarterly IFRs including the total 'actual expenditure' incurred by the project under each component. The Bank will approve the IFRs and KRWSA will send the disbursement claims to

[10] As part of the preparation of the Kerala Local Governance and Service Delivery Project.
[11] GOK's budget document for approval by the legislature.

the Bank through the office of the Controller of Aid Accounts and Audit (CAAA). The Bank funds will be reimbursed into the account provided in the applications as designated by CAAA.

D. Procurement

32. KRWSA, an autonomous registered society with its own MOA and bylaws, successfully implemented the first Bank-funded project adopting Bank procurement guidelines and is familiar with Bank procurement procedures and guidelines. The standard bidding documents and procurement procedures used under the first project were in compliance with Bank guidelines. The procurement assessment of KWA suggested that, while they have been involved in the procurement of large RWSS schemes for GOK, they are not entirely familiar with Bank procurement procedures. A brief summary of the procurement assessment for GPs focused on procurement arrangements used, a formulation of the measures to be taken with regard to the GPs, and their undertaking of procurement, is provided in Annex 3. Based on the assessment of GPs, the following risks were identified, *inter alia*: a lack of clarity on procurement processes; deficiency in planning, evaluation and reporting; weakness in implementation; lack of transparency in decision making; weakness in procurement audit follow-up; inadequacy in record keeping; limited capacity in GPs to implement and manage procurement processes; and insufficient procurement monitoring and accountability measures. However, the very positive experience of having successfully undertaken community contracting of small water schemes by the BGs under the first project, together with risk mitigation measures under the follow-up project, helps mitigate risk and the residual risk is therefore considered to be '*substantial*'.

33. Procurement of all goods, works and services under the Project shall be carried out in accordance with the Bank's "Guidelines: Procurement under IBRD Loans and IDA Credits" and "Guidelines: Selection and Employment of Consultants by World Bank Borrowers", both dated January 2011. In order to ensure consistent application of the processes and procedures across all implementing agencies, KRWSA has developed a project Procurement Manual for works, goods and services, which details the procurement rules and regulations, definitions of roles and responsibilities and functional process flows, standard bidding documents, formats for tendering and evaluation, grievance handling mechanisms, and a monitoring and evaluation framework. A Procurement Plan (PP) for the first 18 months of implementation has been prepared, presenting thresholds for prior- and post-review and specifying the methods to be followed for different procurement activities. The PP will be updated annually, or as required, to reflect actual project implementation needs and improvements in institutional capacity. All project procurement will be carried out in accordance with the PP. The procurement arrangements outlined in Annex 3 are documented in the KRWSA's PIP and the Procurement Manual.

E. Social (including safeguards)

34. The project follows the successfully implemented predecessor project which helped establish a sound set of procedures to ensure compliance with Bank safeguard policies and to promote a broader social development agenda encompassing inclusion, participation, accountability and transparency. *Jalanidhi-I* was the recipient of the Bank's '*People First Award'* award, chosen from among several global projects for its promotion of inclusion, transparency, accountability and sustainability. A social assessment was undertaken to obtain first-hand feedback from key stakeholders on the proposed operation, the main findings of which were incorporated in the project design.

35. ***Involuntary resettlement*** **(OP 4.12)** The project will not resort to involuntary land acquisition and hence OP 4.12 is not triggered. Over 85% of the water supply schemes will require very small amounts of land, and the rest will not require any land as they will involve the rehabilitation/modernization of existing schemes. This land will be procured outright at market rates, as was successfully done under the predecessor project. The RWSS schemes are mostly very small in size catering to a small group of households (30-40) – the land requirement for the construction of the corresponding water source intake and the overhead tanks is very small. All facilities will be located either on public land or will be procured at market rates from willing sellers. Voluntary land donation may be resorted to on rare occasions, provided it adheres to the guidelines. All land transactions will meet the criteria detailed in Annex 3. KRWSA will arrange for an independent agency to examine all land purchases before approving interventions. Land donation will be discouraged, particularly from small land holders. The GPSTs will verify all land transactions as part of scheme appraisal and ensure there are no significant adverse impacts on incomes or access as a result.

36. ***Indigenous Peoples (OP 4.10)*** Kerala has an overall tribal population of just over 1%. The tribal communities are mainly concentrated in the districts of Palakkad, Wayanad and Idukki. Due to the presence of tribal populations in the project areas, OP 4.10 was triggered. Considering that the tribal areas of Palakkad district have already been covered under *Jalanidhi-I*, the proposed project will focus on the districts of Wayanad and Idukki. As a result, the following documents were prepared: a fully-fledged Tribal Development Plan (TDP) for all GPs with significant tribal population in these two districts; and an overarching framework for working with tribal communities under the project, where such communities may reside but in a less concentrated manner. The TDP was prepared for Wayanad and Idukki districts after extensive consultations with tribal groups. The proposed approach to providing RWSS interventions in tribal communities under the project, provides for free and prior informed consent of the tribal populations. Special provisions have been made in the Project's cost-sharing rules to enable these communities to fully participate in the Project. All lessons learnt from the *Jalanidhi-I* have been incorporated in the project design. The TDP was finalized following consultations with key stakeholders in a workshop in the state capital. In order to improve the effectiveness of Project implementation, the following design modifications were introduced based on the lessons learnt and the feedback received: (i) an exclusive division to manage the tribal component, focusing on districts with significant tribal populations; (ii) a menu of flexible technological options which are appropriate to the local culture; (iii) better collaboration with traditional tribal leadership; (iv) more stringent criteria for selecting SOs for tribal communities; (v) longer subproject cycle to allow for preparatory phase (to ensure prior, freely informed, consultations) and extended post-implementation hand-holding support period; (vi) enlisting local tribal promoters as part of the mobilization teams and providing suitable capacity building for post-project support; and (vii) engaging with other government entities and tribal affairs departments to gain from their local presence for long-term support. There may also be tribal communities in other GPs covered by the project, in which the above principles will continue to apply and for whom: (a) the mobilization process will ensure prior, freely informed consultations so broad support is ascertained; (b) concessional cost-sharing rules will be applied as appropriate; and (c) an enhanced subproject cycle will be adopted to provide adequate time and capacity support for the preparatory and hand holding periods for tribal BGs.

37. Based on the lessons learnt from *Jalanidhi-I* and the findings of the social assessment, processes and institutional arrangements for the project have been made to improve: (i) gender

empowerment; (ii) inclusion of vulnerable groups; (iii) process monitoring; (iv) transparency and accountability; and (v) participatory monitoring.

F. Environment (including safeguards)

38. The *Jalanidhi-II* Project falls in the environmental screening category B as per OP 4.01. An Environmental Assessment (EA) study has been undertaken by KRWSA. The project will support investments in small water supply schemes, in sanitation schemes focusing primarily on solid and liquid waste management activities on a pilot basis and on individual household latrines in difficult areas (high groundwater levels or other difficult ground conditions), and on the construction, rehabilitation and service optimization of some larger single-GP water supply schemes and a small number of multi-GP schemes (some five systems) with a view to providing better service provision, having water used more rationally, and thus creating less wastewater. The associated environmental issues are mostly related to water source sustainability, water contamination, water quality and improper waste disposal. Accordingly, the Project triggers the following Bank safeguard policies: Environmental Assessment (OP 4.01), Forests (OP 4.36) and Natural Habitats (OP 4.04).

39. As a consequence, an Environmental Assessment (EA) of the proposed project was undertaken, and an Environmental Management Framework (EMF) was prepared, to ensure compliance with the applicable regulations and triggered safeguards policies. The EMF sets out the procedures that will be applied to the schemes to be implemented by GPs making use of funds provided to them under Component C of the project. The EMF comprises a set of procedures for granting environmental approval including: (i) screening through a regulatory requirements list in order to approve those activities that do not contravene the relevant national and state regulations and the triggered Bank safeguard policies; (ii) classification criteria for categorization of schemes on the basis of the perceived intensity of risk/impact of the schemes being low, medium or high; (iii) Environmental Data Sheets (EDSs) to record the relevant baseline information for water supply, sanitation, and solid and liquid waste management schemes; and (iv) environmental codes of practice and technical guidelines for the various types of scheme. The EMF also includes a provision for undertaking Limited Environmental Assessments (LEAs) for the medium impact schemes and Environmental Impact Assessments (EIAs) for the high impact schemes. An Environmental Management Plan (EMP) will be developed for each scheme as a result of applying the above procedures. The EMP will include the environmental protection measures for the implementation of the scheme, as well as administrative and monitoring arrangements to ensure the EMP's implementation. The EMP will be incorporated as part of the scheme-specific engineering designs and will become a binding provision in the contract documents, where applicable.

40. The EMF contains institutional arrangements, capacity building plans and monitoring mechanisms to enable effective implementation of the safeguard measures. Monitoring and supervision of the EMF will be undertaken twice a year by the senior engineer in the RPMU and by engineers in the GPs, and environmental audits will be undertaken as part of the project's Sustainability Evaluation Exercises (SSEs) and its Independent Construction Quality and Surveillance (ICQS) audits, each to be conducted annually during the course of the project by independent specialized agencies hired by KRWSA. While the SSE audits will cover the environmental management issues of small schemes, the ICQS audits will address the environmental management issues of the medium and large schemes.

Annex 1: Results Framework and Monitoring

INDIA: SECOND KERALA RURAL WATER SUPPLY AND SANITATION PROJECT

Project Development Objective (PDO):
To increase the access of rural communities to improved and sustainable water supply and sanitation services in Kerala, using a decentralized, demand-responsive approach.

PDO Level Results Indicators	Core	Unit of Measure	Baseline	Cumulative Target Values						Frequency	Data Source/ Methodology	Responsibility for Data Collection	Description (indicator definition etc.)
				YR 1	YR 2	YR3	YR 4	YR 5	YR6				
Indicator One: *Direct project beneficiaries (number)*, of which female (percentage)	☒	Number	0		205,520	616,560	927,600	1,498,848	1,841,848	Annual	Project MIS	KRWSA	This indicator includes the beneficiaries of both the water supply and sanitation interventions
Indicator Two: *Number of people provided with access to improved water sources under the project*[12]	☒	Number	0		105,520	316,560	527,600	998,848	1,150,848	Annual	Project MIS	KRWSA	Core indicator as defined in footnote
Indicator Three: *Number of people with access to improved facilities for safe disposal of solid and liquid waste (cumulative*)	☐	Number	0	0	100,000	300,000	400,000	500,000	691,000	Annual	Project MIS	KRWSA	
Indicator Four: *Number of GPs in the State that are implementing decentralized, demand responsive projects in RWSS*	☐	Number	0	25	84	140	200	200	200	Annual	Project MIS/ Sector MIS	KRWSA	Total number of GPs (both project and non-project) that are implementing or have implemented in the past 5 years, any type decentralized, demand responsive project in rural WSS

[12]This indicator measures the cumulative actual number of people who benefited from improved water supply services that have been constructed under the project. "Improved Water Sources" include piped household connections (house or yard connections), public standpipe, boreholes, protected dug well, protected spring and rainwater collection. Hence, "Improved Water Sources" do not include, inter alia, water provided through tanker truck, or vendor, unprotected well, unprotected spring, surface water (river, pond, dam, lake, stream, irrigation channel), or bottled water.

PDO Level Results Indicators	Core	Unit of Measure	Baseline	Cumulative Target Values						Frequency	Data Source/ Methodology	Responsibility for Data Collection	Description (indicator definition etc.)
				YR 1	YR 2	YR3	YR 4	YR 5	YR6				
Indicator Five *Number of operational water schemes for which KRWSA's sustainability index is >80%*[13]	☐	Number	0	NA	NA	422	1,280	2,135	3,150	Annual	Sustainability Evaluation Exercise	KRWSA	Schemes must have been operating for greater than or equal to 12 months from the day of commissioning. Data will lag the implementation schedule by one year. Final target for Y6 post completion is 500
INTERMEDIATE RESULTS													
Intermediate Result (Component One): Institution Building													
Intermediate Result Indicator One: *Number of capacity building training events carried out (cumulative)*	☐	number	0	748	6,062	10,791	14,542	15,022	15,179	Annual	Project MIS	KRWSA	
Intermediate Result Indicator Two: *Number of sector development studies successfully completed (cumulative)*	☐	number	0	NA	2	4	7	9	9	Annual	Project MIS	KRWSA	
Intermediate Result (Component Two): Technical Assistance to Implementing Agencies													
Intermediate Result Indicator Three: *Number of project GPs benefiting from technical assistance and capacity building (cumulative)*	☐	number	GPs BGs	25	84	140	200	200	200	Annual	Project MIS	KRWSA	

[13]KRWSA/Jalanidhi sustainability indicator definition: a weighted index of source assessment, technical assessment, financial assessment and institutional assessment of the water supply scheme

PDO Level Results Indicators	Core	Unit of Measure	Baseline	Cumulative Target Values						Frequency	Data Source/ Methodology	Responsibility for Data Collection	Description (indicator definition etc.)
				YR 1	YR 2	YR3	YR 4	YR 5	YR6				
Intermediate Result Indicator Four: *Number of water utilities that the project is supporting*	☒	number	0	1	1	1	1	1	1				
Intermediate Result Indicator Five: *Number of other water service providers, i.e. BGs and GPs, that the project is supporting (cumulative)*[14]	☒	number	0	553	2,017	3,384	4,713	4,713	4,713	Annual	Project MIS	KRWSA	Core indicator as defined in footnote
Intermediate Result (Component Three): Infrastructure development													
Intermediate Result Indicator Six: *Total number of new and rehabilitated water supply schemes being operated (cumulative)*	☐	number	0	528	1,600	2,669	3,938	3,938	3,938		Project MIS	KRWSA	
Intermediate Result Indicator Seven: *Total number of multi-GP schemes partially transferred to GPs and rehabilitated/modernized (cumulative number of GPs benefited)*	☐	Number	0	0	6	9	12	15	15	Annual	Project MIS	KRWSA	

[14]This indicator measures the total cumulative number of other water service providers (other than utilities) providing water supply support under the project. Other water service providers are water providers that are *not* utilities, but provide water supply services (often on a small scale) such as community based organizations (including water committees), small-scale providers, NGOs, *etc.*

PDO Level Results Indicators	Core	Unit of Measure	Baseline	Cumulative Target Values						Frequency	Data Source/ Methodology	Responsibility for Data Collection	Description (indicator definition etc.)
				YR 1	YR 2	YR3	YR 4	YR 5	YR6				
Intermediate Result Indicator Eight: *Number of GPs where interventions for safe disposal of solid waste successfully implemented and managed (cumulative)*	☐	Number	0	0	20	40	60	75	75				
Intermediate Result Indicator Nine: *Number of piped household water connections affected by rehabilitation works under the project (cumulative)*	☒	Number	0	NA	12,688	117,264	195,440	225,891	225,891	Annual	Project MIS	KRWSA	

Annex 2: Detailed Project Description

INDIA: SECOND KERALA RURAL WATER SUPPLY AND SANITATION PROJECT

1. ***Project Development Objective (PDO)*** The development objective of the proposed project is to increase the access of rural communities to improved and sustainable water supply and sanitation services in Kerala, using a decentralized, demand-responsive approach. The PDO-level results indicators for the project are:

- Direct project beneficiaries (number), of which female (percentage)
- Number of people provided with access to improved water sources under the project
- Number of people with access to improved facilities for safe disposal of solid and liquid waste
- Number of GPs in the State that are implementing decentralized, demand-responsive projects in rural WSS
- Number of operational water schemes for which KRWSA's sustainability index is >80%

2. ***Key policy and institutional reforms*** Major policy reforms were successfully implemented in 112 GPs on a pilot basis under the first *Jalanidhi* project by which RWSS service responsibility was transferred to local governments and user groups with concurrent empowerment and accountability measures. The approach was also shifted from a top-down, supply-driven mode to a bottom-up, demand-driven approach. The challenge for the proposed project is to now scale-up and institutionalize the approach across the sector and across the state. To provide policy support to implement the next level of sector reforms, GOK have issued a series of Government Orders (GOs), covering the following:

(i) All investment funds for RWSS service provision will be channelled to GPs, in the spirit of the 73rd Constitutional Amendment, following a decentralized and demand-driven approach, irrespective of the sources of financing or implementing agencies, adopting the *Jalanidhi* principles.
(ii) For the rehabilitation and modernisation of multi-GP schemes to be financed under *Jalanidhi-II*, GOI's April 2010 guidelines will be followed (in which bulk water provision is provided by KWA and internal distribution by the GPs).
(iii) A task force will be constituted to undertake diagnoses of the current institutional arrangements and roles and responsibilities of the key actors in the state's RWSS sector, and to recommend how to rationalize and optimize the institutional set-up and realign and strengthen the related agencies.

3. ***Project scope*** The project will support GOK: (i) in the implementation of sectoral institutional strengthening programs throughout the state; and (ii) in extending investment support for RWSS interventions in about 200 GPs, mainly from eight selected districts, and, in some of these GPs, in the piloting of implementation models for meeting a next generation of sector challenges.

4. ***Geographical area*** The project's sector strengthening activities under Component A will be undertaken statewide, whereas the infrastructure development and related technical assistance

will be mainly targeted in eight selected districts of the 14 in the state (with the exception of the 26 Batch-I GPs which have already been selected from the residual demand from *Jalanidhi-I* and which are spread over all 14 districts) in the following way:

- In order to derive maximum benefit to the state from the project's resources, specific infrastructure investments will focus on water-stressed, tribal and BPL areas that have not benefited from recent/ongoing investments in the sector. Based on an analysis of the recently completed/ongoing investments through various programs, GOK has focused the project infrastructure investments in the following eight districts: Kasargode, Kannur, Malappuram, Palakkad, Kozhicode, Wayanad, Idukki and Kottayam. Even within these districts, those GPs that receive project support will be identified adopting a selection process based on agreed criteria for eligibility and prioritization (for water-stressed locations and areas with socially disadvantaged populations).

- Investments under the rehabilitation, partial transfer and modernization of multi-GP schemes will be selected, as far as is possible, from the same eight districts when identifying candidate systems with the most potential for efficient turnaround. The identified systems will be further screened, in collaboration with LSGD, based on the willingness of the concerned GPs to participate in the new approach to multi-GP partial transfer, rehabilitation, expansion and modernization.

5. ***Project implementation period*** The project will be implemented over a five-and-a-half year time period (January 2012 to June 2017). The overall implementation schedule is shown in Annex 3.

6. ***Project components*** The Project is organized into the following three components:

- ***Component A – Institution Building (US$ 26.8 million)*** This component will provide funds to implement the following subcomponents:
  - *A1 – Project Management* including the establishment and operating costs of the project implementation units and related consultancies, equipment, goods and services for project management support.
  - *A2 – Capacity Building* of sector institutions and of support organizations.
  - *A3 – Statewide Sector Development Program* involving setting up and operation of a state level unit and conducting a range of sector development programs and studies such as preparing medium-term sector development and investment plans, conducting performance assessments of existing schemes, conducting independent M&E and consumer surveys, and integrating and optimizing the functions of the multiple sector institutions in the state.

- ***Component B – Technical Assistance to Implementing Agencies (US$ 27.2 million)*** This component will provide technical assistance (mainly through consultants and support organizations) to the implementing agencies (GPs, BGs and KWA), such that the corresponding infrastructure investments under Component C are properly implemented and the resultant services are efficiently provided:
  - *B1 – New and Rehabilitated Intra-GP Rural Water Supply Schemes*

- *B2 – Pilot Rehabilitation and Modernization of Multi-GP Water Supply Schemes and transfer of internal distribution to GPs*
- *B3 – Sanitation schemes*

➢ ***Component C – Infrastructure Development (US$ 187.2 million)*** This component will fund the implementation of infrastructure investments through the following subcomponents:

- *C1 – New and Rehabilitated Intra-GP Rural Water Supply Schemes*
- *C2 – Pilot Rehabilitation and Modernization of Multi-GP Water Supply Schemes and transfer of internal distribution to GPs*
- *C3 – Sanitation schemes,*

Project base costs

Components and Subcomponents	Costs(US$ million)
A. Institution Building	
A1. Project Management	16.8
A2. Capacity Building	2.1
A3. Statewide Sector Development Program	4.2
Total-Institution Building	*23.1*
B. Technical Assistance to Implementing Agencies	
B1. For Intra GP Rural Water Supply Schemes	20.2
B2. For Pilot Multi-GP Scheme Rehabilitation and Modernization	1.1
B3.For Sanitation Schemes	1.8
Total-Technical Assistance	*23.1*
C. Infrastructure Development	
C1. Intra GP Rural Water Supply Schemes	119.7
C2. Pilot Multi-GP Schemes Rehabilitation and Modernization	18.5
C3. Sanitation Schemes	14.1
Total-Infrastructure Development	*152.3*
Total Project Base Costs	198.4
Physical Contingencies	9.4
Price Contingencies	33.4
Total Project Costs	241.2
Interest during construction	0.0
Front-end Fee	0.0
Total Financing Required	241.2

Component A: Institution Building *(US$ 26.8 million)*

7. ***Subcomponent A1: Project Management*** *(US$ 19.9 million)* This subcomponent will finance the costs of strengthening KRWSA's existing project management unit (PMU), of setting up its field units in the region, the Regional Project Management Units (RPMUs), and in the GPs, the GP Support Teams (GPSTs), and of the day-to-day operations of all KRWSA offices. For the KRWSA PMU, RPMUs and GPSTs, the costs will cover purchasing computers, office equipment and vehicles and funding a range of consultancies for technical assistance (including for project management, M&E, information, education and communication, auditing, preparing water security plans for project GPs, and quality monitoring of construction). Recurring costs will include incremental operating costs covering staff salaries (for staff on deputation or staff as

individual consultants or from consulting firms), all staff travel costs, and the administrative and running costs of the project offices.

8. The composition, functions and operational procedures of KRWSA, and of the other related implementing units, have been agreed and are described in Annex 3 and in greater detail in the PIP. GOK will ensure that KRWSA's 'autonomous' status is not compromised, so that the only issues referred up to GOK are those which do not fall within KRWSA's authority and mandate, as per KRWSA's memorandum of association (MOA) and bylaws. KRWSA is not mandated for direct implementation or service delivery but, instead, will act in the facilitation and support to GPs, BGs, KWA and other sector implementing agencies, facilitating entities and stakeholders. The PMU and RPMU teams will be equipped with computers, office facilities and efficient communication facilities, and will travel to the Project GPs and BGs for at least some 50 percent of their time every month.

9. In addition to covering the administrative and running costs of the project offices, this subcomponent will finance the procurement of goods equipment and a range of consultancies to support KRWSA and KWA in successfully carrying out their project management responsibilities. This support will include the following aspects, as appropriate for each IA: M&E; computerized project management systems; audits and accounts; independent construction quality monitoring; environmental and sanitation hygiene promotion; development and disseminating IEC materials; post-implementation water quality monitoring and surveillance; and conducting surveys, analyses and studies to assess the adequacy and effectiveness of Project strategies, implementation experiences, processes, results, outcomes and impacts, and to recommend course changes as appropriate.

10. ***Monitoring and Evaluation*** Drawing on the best-practice M&E system developed and used under the first project, an updated comprehensive M&E strategy and implementation manual have been prepared by KRWSA for *Jalanidhi-II*, along with a set of comprehensive indicators as part of a robust results monitoring framework. The main M&E activities to be supported by this subcomponent include: (i) preparing routine monthly/quarterly progress reports on inputs, processes and outputs; (ii) conducting concurrent independent technical, process, fiduciary and safeguard audits and independent verification of the results on the ground – for purposes of triangulation and for informing course corrections where needed; (iii) enhancing the current computerized FMIS and expanding it to become a comprehensive web-based MIS for the Project – in order to fully report on its implementation performance and achievements; (iv) conducting regular sustainability evaluation exercises for completed water supply and sanitation schemes (using both community monitoring and external assessments); (v) conducting large sample size household surveys for feedback, and for Project design adjustment as appropriate, in the third and fifth years of Project implementation; (vi) conducting detailed implementation phase completion reports for each GP and, as per the Bank's standard requirements, a mid-term review (MTR) report half-way through Project implementation and an Implementation Completion and Results Report at the end of the Project; (vii) conducting impact assessment surveys; (viii) documenting good practices and periodic state and district level sector performance reports; (ix) assisting with 'best GP' awards as a result of regular performance monitoring; and (x) setting up the Project's water quality surveillance systems and disseminating their findings in the public domain.

11. ***Subcomponent A2: Capacity Building (US$ 2.4 million)*** *(including information, education and communications, IEC)* The objective of the capacity building program will be to: (i) impart knowledge and skills to all key stakeholders; (ii) facilitate desired attitudinal change; and (iii) create an enabling environment for effective and efficient achievement of project objectives with emphasis on sustainability. Substantial evolution took place in capacity building during *Jalanidhi-I*. The approach to capacity building under the proposed project will build on the lessons learnt from its predecessor. The capacity building program is designed to be responsive to field realities and needs. KRWSA will adopt an overall strategy for capacity development that will enable the development of sufficient social assets at the policy, program and grassroots level in the state in order to sustain the project's demand-driven, decentralized service delivery model in the RWSS sector. The overall framework involves the training of key resource persons and support organizations which, in turn, will build the capacity of communities, GPs and other stakeholders. To achieve this, the following areas of focus have been identified for training and capacity development under the project:

- Enhance knowledge, attitudes and management practices at the policy and program level of *Jalanidhi*;
- Build skills and facilitate the development of the necessary attitudes for bringing about change in the sector for stakeholders at all project levels;
- Allow exposure to simplified technologies, share information, and thereby enable communities to arrive at informed choices;
- Synchronize capacities to be in tune with the project components and scheme cycle;
- Provide continuous feedback and sharing of past learning and experiences from the previous project and from similar projects from within and outside the state, and updating the capacity building program accordingly;
- Transfer management, technical, financial and social skills to the community for long-term community management, sustainability and development within the RWSS sector, and beyond it as appropriate; and
- Make the PMU's human resources (HR) team lean and efficient, while hiring expertise and services from the private sector to support training and capacity building as appropriate.

12. The capacity building needs of the project's policy level and strategic level actors will be taken care of directly by the PMU's HR division with the support of externally accredited training agencies. The training of trainers (TOT) method will be used to address the capacity building needs of the intermediary level and grassroots level actors, such as the SO core teams or the GPATs. GP level resource teams will also be identified and set-up, comprising two to three committed professionals with the inclination to undertake training activities and the willingness to do so voluntarily. The GP level resource teams will be identified by the GP from people living in the GP area itself. The three member task team may be selected from the *Kudumbasree* CDS (womens empowerment institutions in the state), the National Literacy Mission, Prerak (promoter), or may comprise committed members from the BG federation. The team will be identified by the GP during the project entry stage, and will be attached to the Support Organization or GPAT and given TOT activities along with the SO staff. The team members will support the entire capacity building requirements during the various phases of subproject

implementation, along with the SO/GPAT core staff. Following the exit of the SO from the GP, or the withdrawal of the GPAT, the GP level resource team can remain in place, reporting to the GP with the support either from the GP or the BG federation. This arrangement will thus address the follow-up capacity building requirements of the BGs. The project's capacity building requirements are summarized in the following table.

Level	No. of Programs	No. of Persons to be Trained
Policy/Apex level	13	500
Strategic level (KRWSA – PMU, RPMU and GPMU)	132	2,100
Intermediary level (GP, SO, GPAT, *etc*)	1,500	63,000
Grassroots level (BG, WLC, SLC and SLEC, *etc*)	13,500	537,000
Total	15,200	602,000

13. ***Information, education and communication (IEC) campaign*** The project's communications strategy includes innovative measures such as the *Jalanidhi Journalist awards* (for covering water related news in depth), the *Jalanidhi press photography award* (raising awareness on water issues), *the best implementation award* for GPs and BGs, audio/video promotional competitions for project components, *etc*, and have been incorporated to allow the project to avail of a larger variety of quality promotional/IEC material at a lower cost and to encourage larger creative partnerships. Frequent theme competitions (paintings and essays) for school children are also envisaged. IEC materials developed for the project will focus mainly on the reform initiatives in the RWSS sector in Kerala. The main IEC materials developed under the project will be produced in the local language and will be simple in nature to allow the key stakeholders to fully understand them. IEC activities will be converged with the relevant GOK line departments, such as health and TSC, in order to save costs and time. The methods used for disseminating the IEC materials and for ensuring their reach, effectiveness and impact (*i.e.*, the measurement of sustainable behavioral changes), will be continuously monitored to allow for improvements as project implementation progresses.

14. All stages of project implementation, and their corresponding developments, outcome, success stories and best practices, will be studied, documented and published widely and at prompt intervals. Best practice stories may be documented in multiple formats in order to maximize dissemination and impact of the same. Mass communication tools, along with other communication methods, will be used for promoting RWSS sector-related messages. The project communication strategy will be combined with sector-related messages in order to maximize sustainable cognitive changes. The IEC activities will use modern approaches and technologies in order to disseminate the selected messages and will be under the direct supervision of the deputy executive director, with the support of a dedicated communication specialist in collaboration with the PMU's capacity building and M&E professionals, with outsourcing of the production of IEC materials wherever appropriate. The capacity building and communication activities will be closely coordinated with CCDU to ensure that the training and IEC materials are shared for the overall benefit of the sector.

15. ***Subcomponent A3: Statewide Sector Development Program (US$ 4.6 million)*** The sector institutional strengthening activities to be supported under this subcomponent will be statewide and will involve reviewing institutional arrangements, rationalization and integration of functions, and strengthening capacities of the multiple institutions in the sector (State Water and Sanitation Mission, Water and Sanitation Support Organization, KRWSA, KWA, PRIs, Communication and Capacity Development Unit, District Water and Sanitation Missions, *etc* – noting that KRWSA has already been nominated by GOK as the state's WSSO). In this context, the Project will support the following activities under Subcomponent A3: (i) statewide water resources studies; (ii) an MIS designed for the for the rural water supply sector of the whole state and based on GIS, initially implemented for the project GPs, with a view to its subsequent roll-out to all the state's GPs; (iii) statewide sector policy analyses/studies; (iv) development of a medium-term plan for the sector; (v) performance assessments of all existing multi-GP schemes in the state; (vi) performance assessments of a sample of existing single-GP schemes; (vii) sector institutional development studies, (viii) statewide independent M&E of RWSS schemes (*eg*, through consumer household surveys); (ix) the setting-up and operationalization of a state level sector development unit and project appraisal unit; and (x) a program for water quality surveillance of samples of all drinking water sources in the GPs of the eight project districts.

16. The subcomponent will thus support technical assistance, studies and other analyses into the current status of the state's RWSS sector with a view to providing a diagnosis of how the sector is currently organized and a prognosis of how the roles and responsibilities of the different sector entities can be better organized to bring more rationality, accountability and efficiency such that they are in line with recent GOI sector guidelines and relevant GOK legislation and sector orientation. The diagnosis and prognosis will be undertaken in full concert with a task force comprising representatives of the key sectoral and related agencies in the state, to whom the different consultants will report and with whom the studies/analyses will be reviewed in order that decisions are made and State sign-off provided. The prognosis will identify capacity building needs for new and established sector entities in order to help better align them with the agreed new sectoral vision. The Project will assist in implementing selected elements of these realignment, capacity building and training requirements. Subcomponent A3 will also finance TA to support other elements of the development of the RWSS sector in the state, including the piloting of new initiatives in the sector as they become germane during Project implementation. Some such initiatives that have been identified for support include those listed above.

Component B: Technical Assistance to Implementing Agencies (US$ 27.2 million)

17. ***Subcomponent B1: New and Rehabilitated Intra-GP Rural Water Supply Schemes (US$ 23.7 million)*** This subcomponent will mainly finance consultancy contract fees of the Support Organizations (personnel, other resources, travel, documentation, *etc*) that will be recruited for providing community development, engineering and implementation management support for implementing subcomponent C1. The SO support will be provided in two ways, as outlined below.

18. For *new small rural water supply schemes* and for the *transfer and rehabilitation of existing single-GP KWA/GP schemes*: The SOs will be NGOs, consultant firms or a group of professionals recruited individually by the GPs (called '*GP Action Teams*' or GPATs). The SO

staff will work with the GPs and BGs to provide single-window assistance to GPs in social, technical, financial and management aspects for the schemes implemented under C1. The TOR and the model contract documents to be signed with the SOs, and the SO selection criteria, have been finalized duly reflecting lessons learnt from *Jalanidhi-I* and are presented in the PIP. For the universe of 200 Project GPs about 65 SO/GPAT agencies are expected to be recruited, with each GP-level SO contract costing about US$ 50,000. Many SOs have successfully worked under the first project and have developed the requisite experience and capacity to expand their roles under this follow-up operation.

19. The activities of the SOs/GPATs include: awareness creation; community mobilization; preparing GP-wide RWSS development and O&M management plans; assisting GPs and BGs in making informed decisions; preparing engineering designs and cost estimates; assisting in procurement, construction supervision, contract management and in the management of project funds; and conducting capacity building programs for GPs and BGs. The SOs/GPATs themselves will also be initially eligible for capacity building activities by KRWSA, to enable them to provide the requisite capacity support to the GPs and BGs in each stage of the subproject implementation cycle.

20. For *new large intra-GP water supply schemes* and for the *transfer and rehabilitation of existing large intra-GP KWA/GP schemes*: For such schemes targeted under the Project, the beneficiary GPs will recruit SOs similar in profile to those used under the small water supply schemes. However, in the cases where large schemes are involved, the SO TOR will be limited to community development and the full subproject cycle work for the few small RWS schemes within the GP. To complement this SO work, KRWSA will also recruit an engineering consultant firm for the GP in question to provide engineering design and construction supervision support for the large RWS schemes, since these schemes are technically more complex.

21. ***Subcomponent B2: Pilot Rehabilitation and Modernization of Multi-GP Water Supply Schemes (US$ 1.3 million)*** This subcomponent will finance the consultant contract fees of SOs for multi-GP water supply schemes. KWA will recruit design engineering and construction supervision consultants for the intake, treatment and transmission bulk supply portions of the schemes, whereas the beneficiary GPs will recruit SOs to provide the necessary community development for the intra-GP (storage and distribution networks) elements of the scheme, while KRWSA recruit the engineering and management support for these intra-GP elements. The scheme as a whole, encompassing the bulk provision infrastructure and the intra-GP storage and distribution infrastructure, will also benefit under this subcomponent from modernization and efficiency-gains approaches provided by experienced consultants aimed at reducing non-revenue water (NRW), improving energy efficiency, and increasing overall system efficiency from physical, operational and financial perspectives.

22. ***Service delivery modernization*** For the partial transfer, rehabilitation/construction and expansion of multi-GP schemes under Subcomponent B2, and possibly larger single-GP schemes under Subcomponent B1, the provision of best practice approaches to NRW reduction, energy efficiency improvement and overall system efficiency gains will be supported by the Project – with a view to providing '24/7' water supply services, through the appropriate design,

implementation and management of bulk flow meters, district meters and district metering areas, consumer meters, pressure rationalization and control measures, and state-of-the-art system management and financial control mechanisms. Furthermore, as an extension of this initiative, this subcomponent will prepare a road map for the reduction of NRW in selected parts of the rural/small town elements of the Trivandrum and Kochi multi-GP schemes maintained by KWA.

23. ***Subcomponent B3: Sanitation (US$ 2.1 million)*** This subcomponent will finance the provision of TA to GPs and BGs for the implementation of the sanitation infrastructure investments described in Subcomponent C3 below, and encompassing community mobilization and design/implementation support for the simpler household sanitation solutions through to engineering design, construction supervision and institutional capacity building/service delivery arrangements for the more complex, community-centric sanitation solutions. Design and research work will also be provided under this subcomponent for the development of new technological solutions for difficult-to-resolve sanitation challenges.

Component C: Infrastructure Development: (US$ 187.2 million)

24. This component will finance the construction of new RWSS schemes and the upgrading, rehabilitation, extension and expansion of existing RWSS facilities through the following subcomponents:

25. ***Subcomponent C1: New and Rehabilitated Intra-GP Rural Water Supply Schemes (US$ 147.6 million)*** The water supply schemes supported under this subcomponent will be of three types:

(i) *New small water supply schemes*: Some 3,330 small piped water systems covering about 40 households each and costing between US$ 30,000-50,000 per scheme will be financed under this subcomponent. These will mainly be groundwater-based schemes consisting of an open well or a tubewell, a small pumping unit with a rising main, a disinfection unit, a small water tank, a distribution piped network of an average 2 km length and water connections to each household with a meter. For isolated individual households which cannot be viably included in the distribution network, roof rainwater harvesting tanks will be implemented. These schemes will be procured by the BGs through community contracting methods and constructed with technical support from the SOs.

(ii) *New large water supply schemes*: Some 10 large water supply schemes covering about 1,000 households each, and costing between US$ 0.5-1.5 million per scheme, are expected to be financed in GPs where groundwater of acceptable quality or sufficient quantity is not available for building small schemes. These will generally be based on local surface water sources and will have similar components to the small water supply schemes, but with the addition of water treatment plants that will necessarily require more elaborate O&M management arrangements. These schemes will be procured following NCB and implemented and managed by a scheme level committee (SLC) set up in the GP with technical support from an engineering consultant firm and from KRWSA.

(iii) *Transfer and rehabilitation of existing small water supply schemes*: There are about 160 such small water supply schemes in the Project universe of GPs which are currently owned/managed by KWA but that will be transferred to the corresponding GP and subsequently rehabilitated with Project funds and managed thereafter by the beneficiary GP or BG as appropriate. These schemes will have similar physical elements as the small water supply schemes but will maximize the utilization of the existing assets through upgrading activities, at a cost of about US$ 90,000 per scheme. KWA, KRWSA, the beneficiary GPs and their SOs will each contribute to carrying out the important supporting roles of resolving the socio-political, management and financial issues involved in the proper transfer and rehabilitation of the schemes. In addition, about 426 similar schemes – but in these cases, being owned by the GPs – will be transferred to BGs and rehabilitated, at a cost of about USD 13,000 per scheme.

26. GP-wide water security maps will first be prepared for the GP before any water supply schemes are implemented under Subcomponent C1, and will be used to choose the optimal water sources to be developed and the groundwater recharge interventions and source protection works to be implemented for enhanced source sustainability.

27. ***Subcomponent C2: Pilot Rehabilitation and Modernization of Multi-GP Water Supply Schemes (US$ 22.2 million)*** The Project will finance the partial transfer (of the distribution network from KWA to the respective GPs) and subsequent rehabilitation of up to five multi-GP schemes (each covering about three GPs on average) on a demonstration basis. Multi-GP schemes become necessary where local ground or surface water sources are not available in sufficient quantity or quality (such as in coastal belts with saline water intrusion or in groundwater aquifer tracts having significant fluoride or iron presence). In such cases, water is transported from longer distances in larger diameter pipes, treated in water treatment plants, and provided as a bulk supply at the entry points to a group of contiguous GPs. The bulk supply elements of the schemes will be designed (by consultants or in-house), implemented (through NCB contracts), and managed (through PPP models, where new staff recruitment is required) by KWA, while the improvement of the local distribution networks will be designed and implemented by the participating GPs (with support from consulting firms or SOs, as appropriate) and subsequently managed by the GPs (with or without outside management expertise). GPs will pay bulk supply water tariffs to KWA on a predetermined basis and levy and collect user charges from the consumers. These schemes will be initially identified by KWA with support from LSGD and in partnership with potential GPs, and will be subject to prior review by the Bank for technical, economic and safeguard compliance. A typical multi-GP scheme will cover 3,000-5,000 households and have a rehabilitation, expansion and improvement cost in the range of US$ 3-5 million.

28. ***Subcomponent C3: Sanitation Schemes (USD 17.3 million)*** This subcomponent will address ‘second generation’ sanitation issues facing the state, particularly those related to solid and liquid waste management in its urbanizing rural areas. It will finance the provision of TA, civil works, goods and equipment for the sanitation interventions, which will be subject to the Bank’s prior review for their technical, economic and safeguard compliance, and which will encompass the following groups of intervention: (i) *the safe disposal of human excreta through* (a) the piloting of new technologies for latrine solutions in water-logged and other difficult areas, (b) the installation of pay-and-use public latrines in appropriate locations (markets, tourist spots,

etc), and (c) the piloting of regional septage treatment facilities; (ii) *the safe disposal of solid waste through* (a) household level vermi-composting, pit composting and biogas units, (b) the processing of market waste through bio-methanation technologies, and (c) cluster-level processing units for plastic waste (shredding units); and (iii) *the safe disposal of liquid waste* through drainage system interventions in critical areas of GPs, with a view to protecting the GPs' raw water sources.

29. *Community septic tanks* The project will pilot the construction of community septic tanks for groups of families in densely populated areas where sufficient space is not available for individual facilities. The sites for the location of the septic tank will be selected by the GP and the BGs with facilitation support from the SO/GPAT. The capacity of the communal septic tank will be based on the design number of users and the discharge will be directed to a soak pit. The project has provision for 100 such units with an average cost for each unit of some US$ 8,500.

30. *New technologies for latrine solutions* The project will demonstrate latrine solutions for difficult areas, such as waterlogged or rocky terrain, through an action research program. KRWSA will associate itself with institutions which are developing practical models for difficult areas. The construction cost of each demonstration unit is estimated at US$ 1,100, and the number of units proposed for implementation is 15. There is also provision for related research activities under separate consultancy assignments.

31. *Pay-and-use latrines* The project will support investments for constructing '*pay-and-use*' latrines in GPs where these are deemed necessary as a result of, for example, floating populations from migrant workers, tourists, markets, bus stands, *etc*. The site for establishing the unit will be identified and provided by the GP, and the O&M will be entrusted by the GP to *Kudumbasree* or to another appropriate organization. Each unit will consist of four toilet seats and six urinals, with separate blocks for men and women. The estimated cost of such units is about US$ 18,500, and 100 units are proposed for implementation under the project.

32. *Piloting septage treatment* At present septage from various households and other establishments is collected by private operators and indiscriminately dumped, often causing pollution of the recipient water bodies. The project will support investment for piloting regional septage treatment facilities. The intervention will be implemented jointly by KRWSA and other stakeholders including LSGD, the PRIs, the Suchithwa Mission and the State Pollution Control Board. KRWSA will engage a consultant to conduct a needs assessment and prepare a detailed project report with cost estimates. GOK will help identify a site for the location of the facilities. The necessary institutional arrangements for construction and operation will be finalized after discussions with the relevant PRIs, ULBs and the Suchitwta Mission. KRWSA will play the lead facilitation role in the piloting of this intervention. A provision of US$ 450,000) has been made in the project for implementing this pilot.

33. *Household biodegradable waste management* The project will encourage families to manage their biodegradable wastes through various technology options such as vermi composting, pit composting or biogas facilities at the household level. The estimated cost of a vermi composting unit is US$ 20, of a pit composting unit is US$ 40 and of a 1 m^3 household

level biogas unit is US$ 250. The SO/GPAT will do the IEC work and identify the beneficiaries for these interventions.

34. *Community biodegradable waste management* The Project will provide investment support for setting up community level biogas units at hotspots such as markets, tourism centers, schools, *etc*. The quantity of waste to be processed through these units can vary from 200 to 600 kg/day. The cost of setting up a biogas unit of 400 kg/day is about US$ 12,500, and the project has included for the implementation of 100 such units of varying capacities in needy GPs. The capital costs will be shared between the project and the GP in a ratio of 80:20. The facilities will be owned by the GP, and *Kudumbasree* or an alternative appropriate organization will be engaged to operate them. The SO/GPAT team will facilitate their implementation, under the technical supervision of the concerned RPMU staff.

35. *Plastic waste management* The project includes for the implementation of cluster-level processing units for plastic wastes, encompassing the segregation of the plastics from other wastes and their subsequent shredding and suitable disposal. The cost of a plastic shredder unit with a 50-100 kg/hr capacity and with the necessary storage shed and other accessories, is about US$ 11,700. The facilities will be owned by the GP and *Kudumbasree* or other appropriate CBO or, alternatively, a private operator can be engaged to operate it. The operating costs of the unit will be met from the revenue generated by selling the shredded plastic.

36. *Liquid waste management* The project will support construction of drainage facilities in critical locations of the selected GPs with a view to protecting the raw potable water sources. The length of drains to be provided in a GP will not exceed 1 km, to be used to divert stormwater and wastewater away from the GP's water sources. A provision of US$ 6,500 is made for the construction of 1 km of drainage channels in a GP.

37. *Sanitation IEC activities* The Project will undertake IEC activities for educating the community on sanitation issues and the importance of maintaining a healthy environment. Necessary IEC material will be prepared for dissemination and training events, with technical support from the Total Sanitation Campaign (TSC) program and from other organizations involved in the implementation of various sanitation initiatives in the state. As part of a subproject intervention in a beneficiary GP, a survey will be conducted of all the GP's water sources, including domestic wells, in order to identify any water pollution 'hotspots' such that Project-supported sanitation interventions, or those from other programs, can be mobilized to mitigate to them.

Technical issues

38. ***Water Supply*** There are no major technical/engineering issues to be addressed during the preparation of water supply scheme subprojects or during their implementation, since KRWSA has successfully demonstrated, through *Jalanidhi-I*, an alternative service delivery model focused on reaching those without coverage within each GP. The project will finance investments in about 200 GPs. The project's strategy is to achieve maximum coverage in water supply in eligible GPs by rehabilitating all existing water supply schemes and constructing new small drinking water supply schemes, and including the transfer from KWA to the responsible

GP of existing single-GP schemes and their subsequent rehabilitation and expansion. Over 90% of BGs are expected to opt for local groundwater sources like open wells, deep bore wells and springs during the participatory planning and design stage of the water supply scheme subprojects. Where local water sources are not adequate or are not of sufficient quality, river-based schemes will be provided which will involve the construction of infiltration wells/galleries or conventional water treatment plants; these solutions may cover an entire GP. The water supply schemes will normally involve intake/pumping installations, storage tanks, piped distribution networks, and consumer connections (including up to 10 meters of pipework from the public domain) including household meters. GP-wide water security maps will be prepared which will show the existing water supply schemes and will identify potential water resources around the problem habitations. The maps will also help in planning groundwater recharge structures to improve the sustainability of drinking water sources, and will help select source sites to avoid the risks of affecting the raw water safety.

39. ***Rehabilitation of single-GP schemes*** The project would support the transfer of existing KWA-managed water schemes from KWA to the responsible GP/community and their subsequent rehabilitation and expansion. The rehabilitation of such systems will include augmenting the raw water source (where required), protection of the source from pollution, construction of new – or repair/replacement of existing – intake, transmission, pumping, storage, treatment and distribution facilities, expansion of the distribution network, and elimination of public standposts in favour of household connections.

40. ***Rehabilitation and modernization of multi-GP schemes*** A selected number of multi-GP schemes will be rehabilitated, expanded and improved under the project, in a manner which follows recent MDWS/GOI guidelines on the same, such that: (i) the GPs will design, implement and manage the internal water distribution system in a participatory way with the community/BG within their respective GP, with the assistance of consultants as appropriate; (ii) KWA will design, implement and manage the bulk water supply system from the source to the GP entry points; and (iii) KWA will collect bulk water tariffs from the GPs, as determined by GOK guidelines; (iv) the GPs will collect user tariffs from the beneficiary households; and (v) KWA and the GPs will be provided with cutting-edge technical assistance to help them to increase the overall efficiency of their water schemes generally, and reduce non-revenue water and increase energy efficiency of their systems, specifically.

41. ***Water quality affected habitations*** The groundwater in many parts of Kerala is generally of good quality. However a few areas have iron and fluoride present at concentrations exceeding the permissible levels for potable use. Furthermore, salinity of groundwater is a significant problem in coastal areas. In view of the inability of communities to manage the O&M of iron removal plants under *Jalanidhi-I*, the proposed Project makes provision for the use of GP-wide design, build and operate turnkey contracts, for a five year period, for water treatment plants for the removal of iron, fluoride and/or salinity in such situations. These contracts will be implemented by the respective GPs with TA provided by the RPMU. As part of the participatory planning, implementing and management process, there will be outreach to the BGs to explain to them the importance of paying the full costs of the treated water through user fees, as is the case for the simpler water systems. Furthermore, drawing on international experience, the project will investigate and pilot back-up technical and management support/professionalization models for

water supply schemes generally under the project such that economies of scale can be capitalized upon and public-private partnerships explored.

42. ***Disinfection*** *Jalanidhi-I* demonstrated that disinfection using chlorine/bleaching powder is not practiced by the community on a regular basis as was intended. The proposed project will support programs for motivating communities to practice chlorination regularly and will provide supply chain management for bleaching powder/hypo-solution provision through self help groups in the community.

43. ***Technical Manual*** Under *Jalandhi-I*, most small water supply schemes were designed by engineers employed by the SOs and large schemes were designed by private sector engineering consultants using a technical manual developed specifically for the project. The technical manual prepared for *Jalanidhi-I* includes design criteria, guidelines on sound engineering practices, standard drawings and cost estimates, specifications for construction materials, goods, equipment and civil works. The *Jalandihi-I* technical manual has been updated for use under the proposed *Jalanidhi-II* project to include: (i) revised designs of overhead water tanks to conform to the latest IS codes; (ii) preparation of water security maps for each GP; (iii) the use of package treatment plants with new technologies such as reverse osmosis, defluoridation and iron removal, for providing safe drinking water in water quality affected GPs; (iv) disinfection with on-site generation of hypo-solution with small capacity plants; and (v) the use of standard software for the design of distribution systems. The use of the technical manual is designed to result in good quality construction and to maximize the sustainability of the resultant water supply schemes.

44. ***Quality assurance*** The SO engineers and the GPST engineers will undertake the day-to-day monitoring of the works and of the materials procured for the project's physical interventions. GPST engineers will provide on-site concurrent monitoring of SO engineers and provide technical clearances as needed. In addition, KRWSA will retain consultants for independent construction quality reviews and for surveillance of the quality of supervision, the quality of the materials procured, and the construction quality of the works.

45. ***Groundwater recharge (GWR)*** In view of the high rainfall that Kerala experiences annually, but also given the months of drought that occur in many locations throughout the state, special emphasis is required to make full use of the excess runoff by percolatation into the ground such that it is captured and groundwater levels/capacities are increased. Water security maps prepared under the proposed project for each eligible GP will identify prospective areas for the location of raw water sources and for the simultaneous implementation of GP-centric GWR interventions to be funded by the project.

46. ***Water quality monitoring*** Water quality testing of *Jalanidhi-II* schemes during project implementation will be carried out by the BG members who will collect water samples and take them to the nearest entities/laboratories for the undertaking of physical, chemical and bacteriological analyses. During the O&M period of the water supply schemes implemented under the project, the respective BGs/GPs, with assistance of trained women groups, will have routine water samples collected and tested using test kits. The water tariffs practiced by the BGs should also include the cost of water sampling, collection and testing.

47. ***GP selection criteria*** The GPs selected for participation in the project would be identified from the universe of GPs in the project districts by applying transparent selection criteria which give weights to factors such as: water scarcity, water quality, and the size of vulnerable groups within the target GP. Details of the project's GP selection criteria and related issues are provided below.

Criteria	Indicator	Source of Data*	Weightage/ score
Water supply coverage (WS)	Non coverage denoted by N$^{o.}$ of BPL households traversing a distance of 300 meters or more to fetch water to the total no of HHs in the GP	BPL Survey - 2009 conducted by GOK's CRD	40
Water quality affected GPs (WQ)	N$^{o.}$ of wards affected with water quality problems (*eg*, iron, fluoride, salinity and nitrates) to the total no of wards in the GP	GOI's MWSS website	20
Poverty (P)	Total N$^{o.}$ of BPL HHs to the total N$^{o.}$ of HHs in the GP	BPL 2009 survey conducted by GOK's CRD	20
SC/ST population (SCST)	Total SC/ST population to the total population in the GP	2001 Census	10
Efficiency in implementing developmental projects (E)	Average use of Plan Funds for the preceding three years - based on allotment and utilization	Data from GOK's Directorate of Panchayaths,	10
Total			**100**

*Data will be updated at the time of GP selection from latest official figures available

48. Interested GPs will apply for inclusion in the project and the above criteria applied in or to rank the GPs. Once the rankings have been undertaken, the GPs will be arranged in a descending order and those at the top of the list will be prioritized to qualify for the next phase of project implementation. The *Jalanidhi* rules of the game are broadcast to all GPs so that those applying for inclusion in the project are fully aware of them from the outset. To promote an adequate geographical spread, the rankings will be undertaken on a district-by-district basis. The district-wise selected lists will be placed on KRWSA's website, as well as shared with the district administration and with all relevant line departments. The process of ranking of eligible GPs will be carried out at the commencement of each project implementation phase. The selected GPs have to comply with the *Jalanidhi* principles, procedures and processes, as explained to them before the ranking process and as a prerequisite of their selection, in order to be eligible for funds under the project. In order to avoid duplication of efforts, exclusion criteria will be used to eliminate GPs that have already benefited from, or will benefit from, funds for WSS investments under *Jalanidhi-I* or under other state investment projects and programs.

49. ***Audit and accounts criteria*** The following audit and accounts criteria have been established with GOK for providing an additional filter for those GPs which will be eligible for project funding: (i) the GP accounts are up-to-date, the LFA audit for the immediate past year is complete and a clean audit opinion has been issued – *ie* the audit opinion is not adverse or disclaimed and does not have any observations/comments/ qualifications that are either adverse or could affect the integrity of the financial statements or their true and fair view (an indicative

list of such qualifications is described in the FM manual – GPs with such qualifications will not be eligible to receive funds for the year under consideration and until the qualifications are addressed; (ii) at least 50% of the GP's own contribution has been mobilized and deposited into the GP project bank account; and (iii) the GP project accountant has been engaged and is in place.

50. ***Cost-sharing and cost recovery rules*** As was the case under *Jalanidhi-I*, the beneficiaries and the GPs will share a portion of the capital costs of the schemes and the BGs will fully cover the O&M costs through tariffs. The cost sharing rules for beneficiaries and GPs for the different project activities are given in the first table below.

51. ***Administration of cost recovery*** The cost sharing contributions will be provided during different phases of the respective scheme cycles as further detailed below.

- The upfront cash payment for water supply works shall represent a minimum of 50% of the beneficiary contribution (ie, 5% of the total subproject cost). For vulnerable groups (Fisher populations, SCs and STs), the upfront cash contribution will be restricted to 20% of the overall beneficiary contribution (*ie* 1% of the total subproject cost). For BG-wide groundwater recharge interventions, the BG contribution to capital costs is the same as for water supply interventions.
- The entire contribution by GPs shall be in cash.
- For individual latrine schemes the contributions will be made by individual households.
- Operation and maintenance costs for the first six months of operations shall be collected during the subproject implementation phase.
- Any beneficiary contributions collected which are in excess of the stipulated percentages for capital cost sharing will be appropriated towards the BG's O&M reserve fund.

52. ***Labor contribution accounting***

- The labor contribution for any beneficiary cannot exceed 50% of the contribution amount arrived at as per DSR. However, the labor contribution can be 100% in the case of GWR works, where this is feasible.
- The requirements of skilled, semi-skilled and unskilled labor contributions will be determined in a form which is consistent with the implementation schedule of the works.
- The allotment of work under a labor-contribution plan will be done giving preference to the poorer households (as determined from the GP/community wealth ranking).
- Those whose labor contribution cannot be accommodated as per the implementation schedule shall be requested to make cash contributions instead.
- The community shall be given indications as early as possible in the scheme implementation cycle about labor requirements. Wherever upfront cash is required, arrangements shall be made to collect the same in installments before starting the implementation phase.
- A member register shall be maintained by the BG and GP to record the cash and labor contributions under a scheme.
- The labor contribution shall be valued as per the rates in the DSR and as per the measurement of the output of the works.

Cost sharing rules for beneficiaries and GPs for different project activities

Component	Contribution (as percentage of construction costs estimated at market prices as contained in the Detailed Scheme Reports and agreed to by the beneficiaries and GPs)	
	Household	**GP**
I. Capital Costs of Schemes*		
Drinking water schemes (up to 70 lpcd)[1] - small and large schemes – rehabilitation and new	10% for general beneficiaries; 5% for SC/ST and fisher populations	15%
Drinking water schemes (multi-GP rehabilitation)	Nil	
- Common infrastructure	10% for general beneficiaries; 5% for SC/ST and fisher populations[@]	Nil
-Intra-GP distribution works		15%
Groundwater recharge measures - GP wide - BG specific (included in the BG specific WSS scheme costs)	Nil	20%
Environmental management schemes including solid and liquid waste management/ sullage drainage schemes - Community level schemes - Household level schemes	 Nil 50%	 20% Nil
II. Operation and maintenance costs of schemes		
Operation and maintenance of water supply and GWR schemes (recurrent costs, minor repairs and replacements, *etc*) - For BG and GP level schemes	 100%	 Nil#
- For multi-GP schemes[#]	100 % of local dist O&M costs + 100 % of bulk charges payable to KWA (by levying and collecting sufficient user charges)	Nil #
- Environmental management schemes including solid and liquid waste management/sullage drainage schemes (community level schemes)	100% (through collection of user charges	Nil

[@]For BGs having at least 50% HHs of SC/ST/fisher populations.

[1]Full capital cost of single BG/GP schemes including KWA single-GP schemes transferred to GPs/BGs and for intra-GP capital cost of multi-GP schemes .This will include the cost of a consumer connection up to a maximum length of 10 metres from the distribution mains or up to the boundary of the premises – whichever is less – and the cost of a household water meter.

*Upper ceiling of capital cost of WS schemes = Rs 25,000 per household.

#GPs will be responsible for O&M of large WS schemes and the intra-GP elements of multi-GP WS schemes, as well as for the collection of user charges sufficient for 100% financing of O&M expenditures.

Administration of Cost Recovery[1] (figures in %)

I Capital Costs	**BC**		**GP**		**GOK**			
	PP	**IP**	**PP**	**IP**	**PP**	**IP**		
Community Schemes						IP1	IP2	IP3
Water Supply Cash/private land Labor#	5.0 0	0 5.0#	7.5 0	7.5 0	0 0	30 0	30 0	15 0
Water Supply (SC/ST/Fishers) Cash/private land Labor#	1.0 0	0 4.0#	7.5 0	7.5 0	0 0	32 0	32 0	16 0
GP-wide GWR Schemes	0	0	10	10	0	32	32	16
Solid and liquid waste management/sullage drainage schemes, etc Cash	0	0	10	10	0	32	32	16
II O&M Costs (100% to be paid by beneficiaries)	0	50	0	0	0	0	0	0

[1]for SC/ST/Fisher communities, contribution will be at least 1% in cash and rest in labor
BC - Beneficiary Committee; GP - Gram Panchayat; PP - Planning Phase; IP - Implementation Phase

53. ***SO selection criteria*** The project has developed detailed criteria for the selection of SOs and these are described in the Procurement Manual. Some of the key criteria include: legal status, human and physical resources, community sensitivity, financial capacity, track record, operational experience, and not being black-listed by state, central or international agencies.

54. ***Relationship to Local Government and Service Delivery Project*** The World Bank has recently prepared the Kerala Local Government and Service Delivery Project (KLGP) in which GPs are the principal beneficiaries and will play a central role. The complementary nature of KLGP and *Jalanidhi-II* offers significant opportunities for developing synergies. In this regard the following points should be noted:

- In many respects the projects are clearly delineated. KLGP focuses on all 1,038 rural and (non-municipal corporation, MC) urban local governments in Kerala – specifically supporting 978 GPs and 60 municipalities across the state; it has an institutional development objective; supports broad cross-cutting institutional capacity enhancement and provides discretionary (*ie* non sector-specific) funding. *Jalanidhi-II* covers some 200 rural local governments, has a sectoral, service delivery development objective, and provides earmarked funding for specific investments. The project overlaps are thus not extensive but, where they do exist, are potentially beneficial.

- All of the 200 *Jalanidhi-II* GPs may receive both *Jalanidhi-II* and KLGP funding. *Jalanidhi-II* is intended to cater for a specific priority need and it follows that the targeted GPs will receive such funding in addition to the discretionary funding under the performance grant (PG) system supported by KLGP. Moreover, the allocation of *Jalanidhi-II* funding has a specific rationale related to the computation of this need, namely the existing service coverage, water scarcity and water quality issues and the presence of disadvantaged communities within

a GP area, *etc*, which should not be conflated with the broad, cross-cutting performance criteria which determine KLGP funding allocations. From a practical point of view, analysis undertaken for the KLGP, and on-the-ground experience of *Jalanidhi-I*, indicate that GP absorption capacity is not likely to be a problem – and, insofar as it is, both projects have capacity-enhancement measures to cater for it. In fact, the complementarity of the two operations means that activities identified under *Jalanidhi-II* (water resource protection and recharge needs, solid and liquid waste and other sanitation interventions, *etc*) can leverage investment funds through KLGP's funding allocations and/or through other funding sources managed by LSGD.

- Under *Jalanidhi-II* it has been recognized that, while BGs should remain the core subproject implementing agencies and need to retain, in the majority of cases, basic O&M responsibilities for the water supply schemes (including user charge administration) that were developed under *Jalanidhi-I*, GPs have important roles to play both in respect of *Jalanidhi* project execution and, in the longer term, as regards providing or facilitating professionalized back-up TA support of the water schemes, asset management, monitoring of service delivery, monitoring and management of water quality, inter-BG issues (such as dispute resolution), and the further development of water supply systems. To this end, the institutional model under *Jalanidhi-II* has been modified such that GPs have formal accountability and oversight of the various BG-implemented subprojects in their areas, approve the overall subproject plan and manage and account for subproject funding at the aggregate level. Each recipient GP enters into an agreement with the state regarding the usage of, and procedures surrounding, *Jalanidhi-II* funding and, in turn, enters into an agreement with each recipient BG regarding the specific scheme/s it will be implementing. This overall approach converges with the KLGP objective of strengthening decentralization, consolidating the *de facto* role of GPs in respect of their functional responsibilities, and building capacity at the local level. The cross-cutting institutional strengthening that KLGP intends to achieve will enhance the capabilities of GPs in respect of their roles as envisaged under *Jalanidhi-II*, and *vice versa*. It is important to note, however, that whereas their project-specific roles are relatively well defined and institutionalized, an institutional framework relating to the long-term relationship between GPs and BGs has to be further developed. This will receive attention through the implementation of the two projects and the relevant GOK departments.

55. Finally, it is important to note that LSGD participated in a positive and effective way in the implementation of the first *Jalanidhi* project – providing administrative and policy support to implement *Jalanidhi*'s demand-responsive and decentralized service delivery approach, in areas including GP/BG empowerment and controls over the GPs, where needed. In order to maximize ongoing coordination during project implementation, a simple coordination structure will be set up to ensure that the senior management of the respective projects meet periodically to review progress under the above areas of complementarity and address, as needed, any issues or difficulties that may arise in a systematic fashion – at least once every six months.

56. ***Collaboration with the Water and Sanitation Program*** The Water and Sanitation Program (WSP) will collaborate with *Jalanidhi-II* by providing technical support to GOK to prepare a strategy and plan for septage management across the state. WSP will bring technical assistance consultant services to the Suchithwa Mission and to KRWSA for the development of

this statewide strategy and plan. This TA support will: (i) conduct a rapid assessment on the issues related to septage management in Kerala, including of existing practices; (ii) evaluate the various options for developing septage management facilities, including the institutional arrangements, financing options, O&M arrangements, *etc*; (iii) propose the communication support required for dissemination of the strategy and the plan; (iv) facilitate workshops, stakeholder consultations and other mechanisms in order to finalize the strategy and the plan; and (v) provide necessary guidance and support to KRWSA to pilot the implementation of a regional septage treatment facility in the state under the proposed *Jalanidhi-II* project. The development of the statewide strategy and plan will thus prepare the ground for the proposed piloting of the septage treatment facility in one district under *Jalanidhi-II*.

57. ***Exit strategy*** The project is designed to maximize the medium- to long-term sustainability of Kerala's RWSS sector: firstly, regarding the sustainability of the RWSS schemes themselves, when implemented following the project's DRA methodology; and, secondly, through the project's initiatives to support the effective integration and rationalization of the multiple sector agencies, so that GOK and GOI resources are used more effectively.

The DRA methodology has demonstrated a positive impact on the sustainability of the resultant water supply schemes. The proposed project is intended to ensure that the *Jalanidhi* DRA principles are mainstreamed for use under the funding of all new and rehabilitated intra-GP schemes in the state, and that sustainable models for the management of multi-GP schemes and of second generation sanitation issues are demonstrated for future scale-up. The project will explore back-up management models for single- and multi-GP systems, will support diagnoses and planning work to assist GOK in exploring the critical service sustainability links between WRM and water supply provision, and will pilot a program for water quality surveillance of all drinking water sources in the eight project districts.

The project will also set-up a state-level task force to review the functions of the state's multiple sector agencies and to support the effective integration and rationalization of their roles and responsibilities, with a view to utilizing GOK and GOI resources more effectively in the medium- to long-term. The prognosis will identify capacity building needs for new and established sector entities in order to help better align them with the agreed new sectoral vision – to be overseen by a state level sector development unit within WRD, also funded by the project. The project will support the preparation of a medium-term plan for the sector to implement this vision, and will assist in implementing selected elements of the identified realignment, capacity building and training requirements in order to assist the different sector entities deliver on their mandates. The project will also assist in improving sector transparency in the medium-term through the better use of independent M&E and performance assessments of RWSS schemes throughout the state, and through the dissemination of the related indicators.

Annex 3: Implementation Arrangements

INDIA: SECOND KERALA RURAL WATER SUPPLY AND SANITATION PROJECT

A. Institutional and Implementation Arrangements

1. GOK's Water Resources Department (WRD) will be the nodal department for the Project. The Kerala Rural Water Supply and Sanitation Agency (KRWSA), the entity legally established by GOK for implementing the predecessor *Jalanidhi-I* project, will continue to be the agency responsible for implementation management of the second project, providing statewide leadership and ensuring that the Project's development objectives are achieved in a timely and efficient manner. The functions of policy, implementation support and service delivery would be separated as below:

Main Function	Responsible Institution
Policy setting, Annual Plans, budget approval, and implementation oversight	• WRD with Governing Council (*i.e.*, Empowered Committee) of KRWSA
Leading and managing sector reform process, implementation support, and monitoring implementation and outcomes	• KRWSA's Project Management Unit (PMU), Regional Project Management Units (RPMUs) and GP Support Teams (GPSTs)
Implementation and service provision	• GPs in partnership with Beneficiary Groups (BGs) for all intra-GP activities of small schemes; Scheme Level Committees (SLCs) for large and multi-GP activities • Kerala Water Authority (KWA) for common infrastructure of multi-GP schemes including modernization and service provision to GPs

Component-wise distribution of primary institutional responsibilities is as follows:

Project Component	Subcomponents	Responsible Institution
A: Institution Building	A1: Project Management A2: Capacity Building A3: Statewide Sector Development Program	• KRWSA • KRWSA • KRWSA through WRD-level unit
B: Technical Assistance to Implementing Agencies	B1: Intra-GP Rural Water Supply Schemes B2: Pilot Multi-GP Water Supply Schemes B3: Sanitation Schemes	• KRWSA and GPs through Support Organizations (SOs) • KRWSA, KWA and GPs with SOs • KRWSA and GPs through SOs
C: Infrastructure Development	C1: Intra-GP Rural Water Supply Schemes C2: Pilot Multi GP Water Supply Schemes C4: Sanitation Schemes	• GPs with BGs, SLCs and SOs • KWA and GPs with SLCs and SOs • GPs and BGs with SOs

2. The roles and responsibilities of all the above institutions, staffing composition, job description of key staff, with method and timing of recruitment, have all been agreed and included in the PIP.

3. ***Main changes from Jalanidhi-I*** Some changes have been made to the *Jalanidhi-I* implementation arrangements to reflect lessons learnt and to improve project management efficiency while scaling up. These changes include:

(i) Shifting field staff of the erstwhile District Project Management Units (DPMUs) to the GPs to provide on-the-spot support to GPs and Beneficiary Groups (BGs) and to conduct

continuous implementation status monitoring – consequently reducing the number and size of the DPMUs (now renamed Regional Project Management Units, RPMUs);

(ii) Greater GP responsibility and accountability *vis-à-vis* BG activities though extra capacity support, M&E, fiduciary controls, joint ownership of scheme assets with BGs, and provision of O&M back-up support to BGs;

(iii) Enhanced delegation of administrative and financial approval powers to KRWSA and its field units (RPMUs and GP Support Teams, GPSTs);

(iv) Modifying GP selection criteria to better target poor and socially disadvantaged populations and areas having water scarcity and water quality problems;

(v) Strengthening collaboration and partnership with KWA;

(vi) Upfront setting-up and operating institutional mechanism at the GP level to implement schemes and provide sustainable O&M back-up support to all RWSS schemes (not only for *Jalanidhi* schemes);

(vii) Initiating statewide scaling up of RWSS sector reforms to progressively align these with GOI's 2010 guidelines and related GOK policy and legislation (which were successfully implemented under *Jalanidhi-I* in 10% of the state's GPs); and

(viii) Setting up and operation of a state level unit, and conducting a range of sector development programs and studies – such as preparing medium term sector development and investment plans, conducting performance assessments of existing schemes, conducting independent M&E and consumer surveys, and integrating functions of multiple sector institutions in the State.

4. The proposed institutional arrangements, roles and responsibilities of the various actors and their organizational linkages are described in detail in the PIP. An organizational chart is presented in this Annex. A description of the key actors and their implementation responsibilities is provided below.

State level institutions

5. ***Water Resources Department*** GOK's WRD, headed by the Principal Secretary, is the nodal state department with overall responsibility for the Project. In 1999, WRD set up a special purpose vehicle, in the form of KRWSA, to successfully manage the implementation of the predecessor *Jalanidhi-I* project, and also established a Governing Council (GC) to facilitate speedy decision making regarding the project. The GC has the Secretary WRD as its Chairman and the Executive Director of KRWSA as its Member Secretary. The other members of the GC include representatives of select state level departments and agencies, GPs, NGOs and RWSS experts. In coordination with WRD, the GC's main functions are: approval of Annual Action Plans (AAPs) and budgets; approval of GP selection and SO empanelment; ratification of annual reports and accounts; approval of project completion report; and approval of high-cost consultancies (more than US$ 300,000) and works contracts (more than US$ 1 million).

6. ***KRWSA*** was set up as a registered society and its updated MOA and bylaws, mandate, composition, functions, powers and operational procedures are included in the Project Implementation Plan (PIP) and the Operations Manual (OM). KRWSA has a state-level unit called the Project Management Unit (PMU). The PMU has six organizational units: one each for operations, technical, finance and administration, human resources development (HRD), and

monitoring and evaluation (M&E), and one which reports to the Principal Secretary WRD for managing the statewide sector development activities. The KRWSA PMU is headed by an Executive Director (an officer not below the rank of an Additional Secretary of GOK) and has some 20 key professional staff. The staff are multi-disciplinary and include specialists in operations, water supply, sanitation, environment, social development, finance, HRD, M&E, procurement and communications disciplines. The PMU professional staff are drafted from within the State government offices/agencies or recruited from the private sector on a contract basis. In addition, the PMU will recruit private sector consultants/experts (individuals, institutions or firms) from time to time and as necessary in order to strengthen its project management capacity.

7. ***KRWSA's PMU*** The main functions of the KRWSA PMU include: achieving the PDOs; project management; implementation of Component A and facilitating implementation of the multi-GP water supply schemes and piloting of the regional septage management facility. Other main functions of the PMU include: approval of GP-wide RWSS Development Plans; ensuring compliance with project rules and fiduciary and safeguard policies and procedures; conducting statewide IEC and communication plans; staff capacity building for KRWSA, KWA and the support agencies such as the SOs/GPATs; release of advance project funds to RPMUs and KWA; management of project funds; ensuring high quality engineering design and construction; M&E, including independent technical, financial, procurement and process audits and triangulation; and progress reporting to, and liaising with, GOK, GOI and the World Bank.

Regional level institutions

8. ***Regional Project Management Units (RPMUs)*** There will be three RPMUs located in the field. Each RPMU will cover 2-3 districts and will be headed by a regional project director – an officer not below the rank of a Deputy Collector. Each RPMU will also have 4-6 full-time key professional staff who will be specialists in water supply engineering, environmental engineering, social development and finance/accounts. RPMU staff will be extension staff of KRWSA's PMU and will be experienced senior professionals with leadership and management skills and a positive attitude to support decentralization and empowerment of RWSS management functions to GPs and BGs. The recruitment of staff and support services for the RPMU will be undertaken by the PMU.

9. RPMUs, with the assistance of the GPSTs, will support and monitor the implementation of Components B and C. The main functions of the RPMUs will largely be the same as those of the PMU, but will be limited to their respective geographical command areas. The additional functions of the RPMUs will include: (i) signing the different project implementation agreements with the beneficiary GPs; (ii) undertaking capacity building of KRWSA's GPSTs and ensuring that these teams effectively perform their functions; (iii) maintaining a Project bank account (a bank account linked to the PMU bank account) and releasing project funds to GPs based on recommendation of the GPSTs; and (iv) ensuring satisfactory completion of all Project activities in the GPs in a timely manner, and signing-off on GP level exit reports.

10. RPMUs will be 'lean and mean' outfits requiring a minimum of office space, establishment and administrative functions, as these will be handled by the PMU. The RPMU

teams are designed as mobile teams of experts that are extensively traveling most of the time to Project GPs and BGs, guiding and supervising the activities of GPSTs, GPAT/SO teams, and GP and BG implementation teams, and troubleshooting and proactively resolving implementation issues and problems faced by them. Most project documents and records will be maintained at the GP and GPST offices. All KRWSA approvals will also be recorded by the visiting RPMU teams in the files and registers maintained at the GP and GPST offices, and only electronic copies will be transmitted to the RPMUs and to the PMU for their records.

GP Level Institutions

11. ***GPST*** Over 70% of Project expenditure will be incurred by GPs and BGs within the administrative areas of the GPs – mainly on RWSS infrastructure development. This will imply an expenditure of about US$ 0.7 million per GP over a two year implementation period, which is 1.5-2 times a GP's normal annual expenditure on all other development programs taken together. Thus, it is necessary to provide adequate capacity support at the GP level to ensure good quality engineering designs and construction and to maintain high quality fiduciary assurance. This will be done in two ways: firstly, by locating a core field team of RPMU staff in the GP itself and, secondly, by having the GPs recruit a Support Organization (SO) or GPAT to assist in its subproject implementation over the two year period. The RPMU's GP Support Team (GPST) will consist of one senior engineer and an accountant (initially one for 2 or 3 GPs). Detailed job description for GPST team members, to ensure both the support and the monitoring functions of the GPST, have been developed by KRWSA and are included in the PIP. A GPST's main functions include: (i) providing continuous guidance to the GP and its BGs and SO/GPAT teams; (ii) providing onsite and quick approvals to the GP, BGs and SO/GPAT that are needed from KRWSA from time to time during various phases of project implementation (including concurrent valuations of completed works); (iii) concurrent monitoring and troubleshooting, and sending early warning signals to KRWSA/PMU management if something is going wrong; and (iv) facilitating various independent audits conducted by the PMU and the RPMU. The GPST will maintain hard copies of all Project documents and files and send only electronic copies to the RPMU and the PMU for their records.

12. ***GPs*** The GP will have primary responsibility for implementing all intra GP Project activities, for ensuring acceptable implementation standards, and for achieving the output and outcome targets of the Project investments in the GP area. In this context the GP President will be supported by the GP's general body, the GP Secretary and the Grama Panchayat Water and Sanitation Committee (GPWSC) set up for the project. A GP's main functions under the Project include:

(i) Applying to KRWSA for seeking Project support;
(ii) Directly implementing GP-level activities and providing implementation support to BGs;
(iii) Recruiting the SO/GPAT to provide implementation support to the GP and its BGs;
(iv) Preparing a GP-wide *RWSS Development Plan* including a *Water Security Plan* and a community empowerment plan and seeking the necessary technical and administrative approvals from District Panchayats and from KRWSA;
(v) Signing bilateral MOUs with BGs empowering them to implement their schemes;

(vi) Providing partial capital cost financing of infrastructure expenditures as per agreed Project rules;
(vii) Transferring Project funding advances to BGs in installments, and undertaking GP-wide management of Project funds including those managed by the BGs;
(viii) Accounting for expenditure on schemes, including the expenditure on project activities carried out by the BGs, and obtaining and filing the supporting documents provided by the BGs in respect thereof;
(ix) Capacity building of BGs in the O&M and management of RWSS schemes;
(x) Concurrent monitoring of BG performance both in implementation and sustainability of O&M functions, and related problem solving and conflict resolution;
(xi) Setting up and managing sustained institutional mechanisms at the GP level to provide post-implementation O&M back-up support to BGs in RWSS scheme management;
(xii) Implementation and O&M management of large water supply schemes and intra-GP facilities of multi-GP schemes, through Scheme Level Committees (SLCs) including payment of bulk water charges to KWA;
(xiii) Ensuring proper closing of all Project activities in the GP, preparing a GP-wide project completion report, including for the BG level schemes in the GP, and ensuring exit report sign-offs with BGs and KRWSA; and
(xiv) Ensuring 100% O&M financing of water supply schemes in each GP through user charges.

13. The GPs will report to the GPST in regard to implementation progress and performance of the Project investments and will provide technical, administrative, accounting and audit and other progress reports as required by GPST. The sharing of roles and responsibilities, including administrative and fiduciary arrangements, between KRWSA and the GP is stipulated in the model bilateral MOU to be signed by each project GP with KRWSA.

14. ***BGs*** The BGs will elect a representative Beneficiary Committee (BC) which will have the following main functions: (i) community mobilization and BG registration as a society; (ii) scheme and technology selection; (iii) provision of partial user financing of capital costs; (iii) procurement and construction; (iv) management of Project funds; (vi) BG level exit report sign-off; and (vii) management and full financing of O&M, including levying and collecting sufficient user charges to cover the O&M costs. The composition of a BG and its BC, their functions, methods of selecting members, bylaws, legal frameworks, accountabilities, and relationship with the GPs, have been agreed and are described in the PIP. The Project will make vigorous efforts to maximize women's representation and management roles in the BGs. BGs will be accountable to their respective GPs for all Project activities.

15. For large water supply schemes and for managing internal distribution systems of multi-GP schemes, GPs will set up SLCs as societies. Their functions will be similar to those described above for BGs and BCs for small water supply schemes. Both the BG and SLC societies have been extensively used under the predecessor project: their MOA and bylaws have been updated to reflect the lessons learned under *Jalanidhi I*.

16. ***Kerala Water Authority (KWA)*** KWA is located institutionally/administratively under WRD and is the main sector institution in Kerala managing the urban and rural water supply sectors. It is responsible for providing inputs to GOK in policy formulation and investment

decision-making, in implementing urban and rural water supply schemes, in service delivery right up to the households, and in billing and revenue collection. It is also responsible for generating sector information relating to the operational performance of the state's water supply schemes and for the quality of service provided to the end-user. Having demonstrated an alternative demand-responsive and decentralized service delivery model under *Jalanidhi-I*, KRWSA is now emerging as an important water sector player in Kerala. Given the complementarities of KRWSA and KWA, *Jalanidhi-II* has been designed such that the two actors start coming together and drawing on each other's comparative advantages, thus contributing to an improvement of RWSS sector performance across the entire State.

17. KWA will participate in the proposed *Jalanidhi-II* Project with the aim of gaining experience and strengthening its own capacity in implementing demand-responsive and decentralized service delivery approaches in the rural water sector as well as in gaining experience and knowledge in implementing multi-GP schemes in an innovative way in partnership with the participatory GPs. On doing so, KWA will also contribute to an alignment in sector reform in the state, in line with GOI's recent guidelines, as well contributing to the strengthening of GOK's own larger decentralization agenda.

18. KWA's main functions under the project are: (i) designing and building, on behalf of KRWSA, the common infrastructure for the multi-GP water supply schemes as per agreed procedures and documents for the project, providing bulk supply on a volumetric basis to the participating GPs at the GP entry points, and providing TA to the participating GPs in the design, implementation and O&M management of the intra-GP water distribution schemes, as and when requested by the GPs; (ii) providing the necessary cooperation and TA to GPs and BGs in the transfer and rehabilitation of existing single-GP water schemes by following the model developed under *Jalanidhi-I*; (iii) supporting deputation of KWA engineers to KRWSA, as requested by KRWSA; (iv) conducting studies and implementing KWA modernization programs in the existing multi-GP schemes to be rehabilitated, expanded and improved under the Project; (v) contributing to the strengthening of the existing sector management information system for the RWSS sector in Kerala; and (vi) providing other TA and capacity building support to KRWSA and GPs as requested.

19. ***Local Self Government Department (LSGD)*** As was the case under the *Jalanidhi-I* project, support and partnership with LSGD will be immensely beneficial to the implementation of *Jalanidhi-II* and to achieving its PDO. The key role that LSGD will play in supporting the Project and in the scaling up of sector reforms in Kerala includes: (i) issuing the necessary GOK orders to empower GPs and BGs as needed; (ii) providing TA and IEC support to the Project's sanitation activities through its *Suchithwa Mission* – sanitation being the mandate of LSGD in the state; (iii) resolving the issue of electricity bill arrears of single-GP schemes that are to be transferred from KWA to GPs and BGs, and helping resolve any other socio-political, policy and implementation issues (since GPs are administratively accountable to LSGD); (iv) allocating complementary funds (such as NREGS funds) to Project activities in order to implement the labor component of surface- and ground-water conservation and recharge schemes; (v) promoting a scaling-up of the *Jalanidhi* approach to other GPs in the state that do not directly benefit from the Project; (vi) contributing to strengthening a statewide M&E system for the sector since significant investments are undertaken by the local self governments (LSGs) through

devolved funds and since the LSGs are responsible for ensuring water security at the household level; and (viii) setting-up O&M back-up support arrangements in the GPs that will not receive Project support.

20. ***Support Organizations (SOs)*** NGOs, CBOs and private sector consultants will play an important role in the Project as SOs. The NGOs/SOs will be selected based on the Bank's procurement guidelines and procedures, as well as the selection criteria specified in the Project Procurement Manual.

SOs recruited by GPs

21. *NGOs* will assist the GPs, and BGs, on a day-to-day basis, in engineering, community development and fiduciary functions – during planning and implementation of the Project activities – and providing brief post-implementation support to BGs in stabilizing scheme operations. The SO can be procured by the GPs, as per agreed procedures, based on the GPs' specific requirements. Those SOs which meet the eligibility criteria and requirements for single source selection, as specified in the Bank's procurement guidelines, will require the Bank's approval prior to inclusion in the Procurement Plan.

22. *GPATs* As an alternative to the use of NGOs, the GPs may recruit individual staff (for engineering, community development, management, and accounting skills) to form a team which will provide implementation assistance to GPs and BGs during the two-year implementation period. This arrangement is suitable for those GPs having management capacity, as demonstrated through the implementation of other development programs in the GP.

23. *Technical support agencies* GPs may recruit technical service providers where higher level of technical capability is needed (for example, for the rehabilitation of multi-GP schemes, large water supply schemes, *etc*).They would be selected by GPs with procurement assistance from KRWSA as per agreed competitive selection procedures.

SOs recruited by KRWSA

24. *Private sector consulting firms* may be hired as per agreed Bank procedures as consulting firms or individual experts, to provide assistance in: engineering design, system efficiency improvement and construction supervision of large water supply schemes and multi-GP schemes; preparing GP-wide Water Security Plans; implementing computerized FM systems; audits and accounts; independent construction quality monitoring; implementing and feeding MIS and M&E systems; and conducting surveys, analyses and studies to assess the adequacy and effectiveness of Project strategies, implementation experiences, processes, results, outcomes and impacts.

25. ***Organization and staffing*** The overall organizational chart for Project institutions is presented later in this Annex. The Project staffing plan for each implementing agency to be adopted for the first batch of GPs under the Project (*ie*, for the PMU and the relevant RPMUs and GPSTs), along with the job descriptions, selection criteria and the terms of employment for the key staff, have been agreed and their details are included in the PIP and the OM.

26. ***Implementation schedule*** It is anticipated that the Project will be implemented in four batches, each covering about 25-50 GPs. The Project will be formally launched, with counterpart funds support, in November 2011. A detailed Project implementation schedule has been developed for a 5.5 year implementation period, with a closing date of June 30, 2017. An overall implementation schedule, in bar chart form, is presented later in this Annex and further detailed in the PIP).

27. ***Project Implementation Plan (PIP)*** KRWSA has prepared a comprehensive PIP which includes sector background, current sector status and issues and lessons learned over the past ten years; The PIP also includes project scope, objectives, success indicators, Project and components descriptions, cost estimates and financing plans, institutional and implementation arrangements, fiduciary policies and procedures, applicable safeguard policies and mitigation plans, detailed implementation schedules, O&M management arrangements, and the monitoring and evaluation arrangements.

28. ***Operations Manual*** KRWSA has prepared a detailed OM encompassing a range of operating manuals and guidelines. These will form the basis for Project implementation and performance monitoring. Many of the OM documents (listed below) are updated versions of the manuals that were effectively used under *Jalanidhi-I* and duly reflect proposed operational changes for the *Jalanidhi-II* project.

(i) *Administrative manuals/model agreements/MOUs* (i) updated KRWSA MOA and bylaws; (ii) model agreements to be signed between KRWSA and GPs, GPs and SOs, and GPs and BGs; (iii) MOA and bylaws for BG societies; (iv) MOA and bylaws for SLCs to be set up by GPs for large water supply schemes and for the internal distribution elements of multi-GP schemes; (v) model SO contract, and contracts for GPAT staff ; (vi) model tripartite agreement to be signed between KWA, KRWSA and participating GPs for multi-GP schemes; (vii) FM Manual; and (viii) Procurement Manual, Procurement Plan and standard bidding documents.

(ii) *Technical manuals/guidelines* These include: (i) guidelines for engineering design, construction and O&M of various technology options that will be used under the Project; (ii) guidelines for the transfer and rehabilitation of existing single-GP KWA schemes to GPs and BGs; (iii) guidelines for preparing Water Security Plans and for implementing groundwater recharge and conservation measures; (iv) guidelines for complying with safeguard policies; (v) communication plan; (vi) Tribal Development Plan; (vii) M&E manual; (viii) capacity building plan, (ix) model scheme cycles; and (x) model TOR for various consultancies such as independent technical and financial audits, process monitoring, and sustainability evaluation exercises.

(iii) *Project cost estimate and expenditure monitoring model*: A detailed cost spreadsheet model has been developed for the Project. The model provides component-wise estimates of physical quantities with projected annual achievement targets and corresponding annual base cost estimates. It also provides annual expenditure profiles by base cost, and with physical and price contingencies in local and foreign currencies. It provides component-wise breakdowns of capital cost financing shares of GoK, and of the GPs and BGs where relevant. The model also provides breakdowns of the projected expenditures on works, goods, services, training events

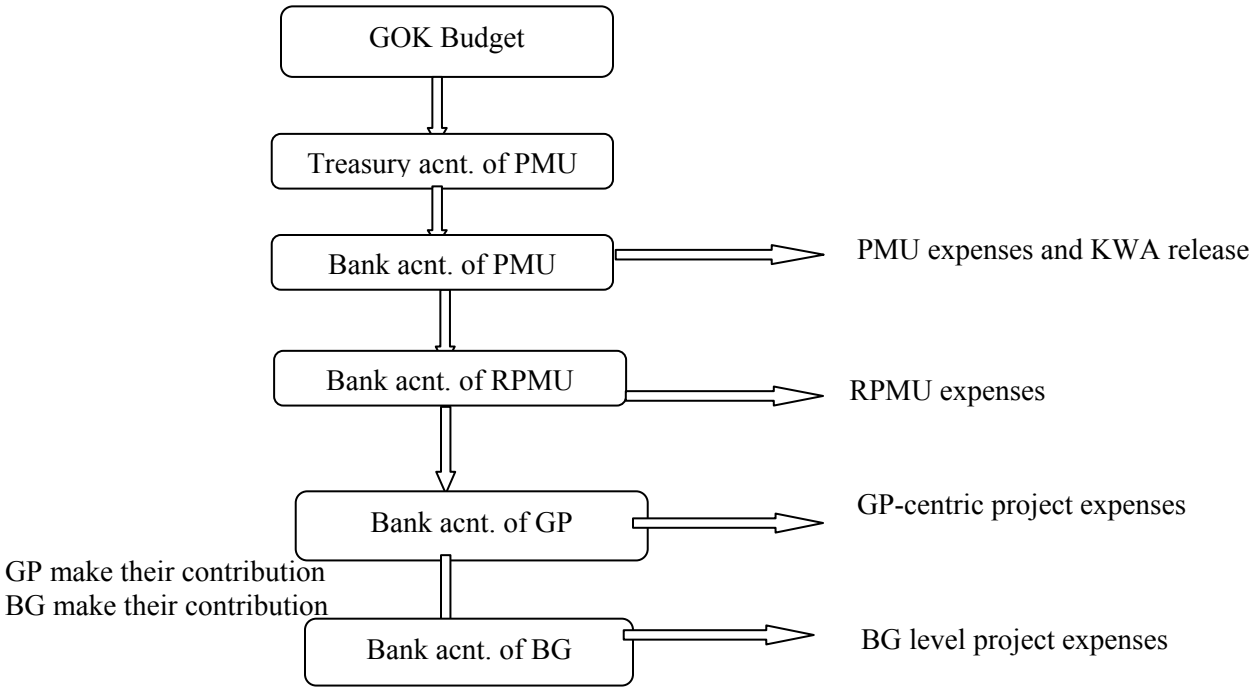
and incremental operating costs. During implementation, this model will be used to track physical and financial progress against the PAD targets. The cost table is presented in the PIP.

29. ***Powers of approval*** Powers and procedures for technical and administrative approvals of schemes, for award of contracts for works, goods and services, and for making payments, have all been well defined for each implementing agency and are documented in the procurement and FM manuals. To ensure efficiency of implementation, most of the powers have been delegated to the lowest appropriate level. Thus, once annual Project action plans are cleared by GOK, most implementation-related powers are vested with KRWSA's PMU, RPMU and GPST, and with the GPs, for their respective responsibilities. The only exceptions will be the award of high-cost consultancy and works/goods contracts, and the signing-off responsibilities – which are defined in the fiduciary manuals.

B. Financial Management, Disbursements and Procurement

30. ***GOK budget line item and fund releases*** GOK's finance department has opened a separate sub-major head under the Major Head 2215-01-80067, in WRD's '*Demand for Grants*', for the year 2011-12, for the purpose of releasing funds to KRWSA under the Bank project, and has already provided INR 1.125 billion for "*Add on project of Jalanidhi*". This budget line is distinct from WRD's budget head for their regular schemes and works. KRWSA will further release funds to the RPMUs who will release funds to the GPs/BGs. The Bank funds will be used only for specific project activities as preagreed in the PIP. During supervision missions, the Bank will review the system of verification of usage of these funds as per agreed subprojects/activities, including related internal controls, and may visit sample GPs to this end.

31. ***FM and fund flow arrangements*** The project will be pre-financed by GOK through a dedicated budget line. Funds will be transferred from the GOK consolidated fund to a treasury account (a treasury account is a public account operated by the finance department whose approval is required before funds can be withdrawn) and thereon to the KRWSA/PMU bank account. The PMU will incur expenditure from this account for the project management activities and will also release funds to KWA for implementing the common infrastructure elements of the multi-GP water supply schemes. Funds will then be transferred from the PMU account to the RPMU bank accounts, as per the annual work plan. The RPMUs will then transfer funds to the respective GPs under their jurisdiction, based on the GPs' requirements. The GPs will use part of the funds for subprojects/activities that are implemented by the GPs and will transfer funds to the BGs on the basis of a formula that will be similar to that used under *Jalanidhi-I* (*ie*, fund tranches of 40%, 40% and 20% of a BG subproject costs). The funds flow arrangements are described in the following diagram.



32. ***KRWSA and FM arrangements*** KRWSA, as the principal implementing entity, will be responsible for overall implementation and monitoring of all project components. KRWSA will receive funds in a bank account as *Grant in Aid* through a WRD budget line, and will pass these funds on to the GPs and to KWA as per the project implementation requirements and as reflected in the Annual Work Plans. The GPs will transfer funds to the BGs in tranches for small water supply schemes (less than US$ 50,000) as per their annual requirements. The GPs will also utilize funds for implementation of other project components such as the large water supply schemes. All funding to the GP/BG will be subject to audit by internal auditors (chartered accountant firms appointed by KRWSA under TOR agreed with the Bank). Release of subsequent tranches of funds to GPs/BGs will be subject to the audit certifying the actual expenditure in respect of the earlier releases. Actual expenditure incurred by these entities (as reflected from payment vouchers and not releases to lower level entities) will be captured in the quarterly Interim Financial Reports (IFRs) and will be the basis for disbursement.

33. ***KWA fund flow*** KWA, the statewide water authority, will be one of GOK's agencies responsible for handling some elements of the project. An assessment of KWA reveals that their audited financial statements are in arrears of over two years, and that the last CAG audit report is available for the 2007/8 financial year. The auditor however gives an opinion that the financial statements, read together with the notes on accounts, cannot be considered as giving a true and fair view of the state of affairs in view of the significant matters brought out in the report. The report mentions inadequacies in the internal control systems and in the coverage of internal audit, and a lack of physical verification of fixed assets. In view of these significant observations, the risk related to the involvement of KWA in the project is rated as 'high'. Given this, it was agreed that the KWA will be involved in the project only through a closely ring-fenced FM arrangement, with KRWSA releasing funds to KWA for specific activities and closely monitoring the expenditure incurred by them. This is important given that KWA will be responsible for implementing the common infrastructure elements of the multi-GP schemes to be

rehabilitated under the project as well as other smaller activities. KWA will therefore need to identify dedicated staff for managing the FM aspects of all the activities they undertake on behalf of KRWSA.

34. In order to provide KWA some start up funds to initiate project activities, KRWSA will advance up to a maximum of 10% of the estimated cost of an intervention to KWA, and it will be based on the annual funds requirement for the subprojects/activities proposed each year (and duly approved under the annual work plan). KWA will receive funds into a dedicated project bank account in the KWA head office (HO) which will transfer funds to the dedicated bank account of its field divisions executing the work. The KWA field divisions will then make payments to contractors and send the expenditure statements, along with supporting payment vouchers and fund flow statements, to KWA HO. These statements will be reviewed and certified by the KWA financial manager and chief accounting officer, and by the KWA administrative manager, and will be furnished to KRWSA to allow for the adjustment of the amount of the advance. KWA will ensure regular, monthly, reporting to KRWSA of the actual expenditure, and this figure will go into the quarterly IUFRs for claiming disbursement from the Bank. All expenditure incurred by KWA will be subject to internal and external audits by the KRWSA project auditors.

35. ***Accounting and financial reporting*** Accounting of expenditure in the earlier *Jalanidhi* project was carried out at the erstwhile DPMU level – and the GP/BG level FM information was being physically captured in the DPMU. For the current project, the GP is the accounting centre for capturing the GP and BG level data. Accounting and financial reporting will therefore continue to be on the existing financial management information system (FMIS), updated to suit the needs of the current project (to batch-capture GP and BG level actual expenditure data and include it in the quarterly IFRs). Accounting of expenditure will be done at the GP level and the supporting documents will be in the custody of the GP and be made available for audit. As the number of GPs participating in the project will be about 200, it will be easier to monitor the expenditure at the GP level rather than at the BG level (there will be some 3,900 BGs), were the BGs to be instead treated as accounting centers. The advantage of this system will be that a manageable number of GPs will need to be monitored rather than a large number of BGs. In this manner, accounting resources can be concentrated at the GP level and external audits, by chartered accountant firms, can also be undertaken at this level. The PMU, the RPMU and the GPs will be treated as accounting centers for the project. BGs will receive funds in tranches from the GPs and will execute the works. However, the BGs will not be treated as accounting centers but will maintain a simple cash/bank book and a stock register/simple measurement book. Each month, the BGs will need to submit copies of their bank books with supporting documents (bills/receipts/muster roll, *etc*) to the GP. Additional tranches will be given to the BGs only after the internal auditors have certified the actual expenditure against the earlier tranche.

36. ***Disbursement arrangements*** GOK will pre-finance its share of project expenditure (including the World Bank's share) through its own funds (through the budget line) and report the quarterly '*actual expenditure*' incurred at the BG/GP level through the Interim Financial Reports (IFRs). '*Actual expenditure*' incurred by the BGs/GPs will be verified by the internal auditors based on the expenditure vouchers available at the respective entities, and only then this amount will be included in the IFRs for reporting to the Bank. The disbursement percentage will

be applied on the total project expenditure reported in a quarter (the total expenditure already incurred through the budget release will include the Bank's share, GOK's share and the GP and beneficiary contributions). The applicable method for Bank funds disbursement will be reimbursement. KRWSA will prepare quarterly IFRs that will include the total 'actual expenditure' incurred by the project on each of the components. The Bank will approve the IFRs and KRWSA will send the disbursement claims to the Bank through the office of the Controller of Aid Accounts and Audit (CAAA). The Bank funds will be reimbursed into the account provided in the applications as designated by CAAA.

37. ***Internal audit arrangements*** The project's internal audits will be conducted by independent firms of accountants under agreed TOR. The objective of the internal audits is to strengthen the internal control framework and provide project management with timely fiduciary assurance that: (i) the financial management, the procurement systems and the internal control procedures, as applicable to the project, are being adhered to by the GPs/BGs and the support entities; and (ii) the financial information being submitted to the PMU is in agreement with the financial records and can be relied upon to support the disbursements made by the Bank. Internal audits at the GP and BG levels will be conducted by chartered accountant firms who will also be responsible for verification of actual expenditures incurred by the respective entities. Fund release installments to GPs/BGs will be based on this verification and on the receipt of the utilization certificates from the BGs/GPs. The Bank will not directly review these internal audit reports, but the PMU will prepare an extract of the key findings, and the action taken to address these, and share this with the Bank.

38. ***External audit arrangements*** The statutory audit of the project financial statements (PFS) will be conducted by a reputed firm of Chartered Accountants under TOR agreed with the Bank. The audit will comprise an audit opinion and certification of the PFS and a Management Letter containing the key observations and recommendations.

39. ***Accounts/auditing criteria for GPs to receive project funds***: In addition to the agreement that those GPs eligible for participation in the project must be willing to adopt all of the *Jalanidhi* implementation and operational principles, procedures and processes, the minimum accounts/auditing criteria for a GP to be eligible to receive project funds are the following:

- The GP accounts are up to date;
- The GP should have a clean financial audit opinion (*ie* not adverse or disclaimed) from GOK's Local Fund Auditor when considered for entry, for the most recent audit report prior to the year in which funds are to be released;
- In the case of a qualified audit opinion, the observations/qualifications should not be of the type that could affect the integrity and/or true and fair view of the financial statements (an indicative list of such qualifications is described in the FM manual). GPs with such qualifications will not eligible to receive funds for the year under consideration and until the qualifications are addressed;
- The GP project accountant has been engaged and is in place; and
- At least 50% of the GP's contribution to the subproject has been mobilized and deposited into the GP project bank account.

40. The prerequisite for funds flow to the BG are the following: (i) the BG should be registered under the Charitable Societies Act of Kerala; (ii) the BG should have opened a project bank account in a scheduled bank; and (iii) at least 50% of the BG's contribution has been mobilized and deposited into the BG project bank account.

41. *Staffing* The KRWSA PMU has an FM Manager who is a Chartered Accountant. The RPMUs, which will each be responsible for 2-3 districts, will be set up with the appropriate FM staff to allow them to collect all the necessary information from the GPs/BGs, to prepare quarterly IFRs, and to follow-up on the disbursement process. There will be an accountant at the GP level dedicated to the project and s/he will be fully responsible for the collection of expenditure information from the BGs and for coordination of other FM issues and accounting of project transactions at the GP level. The RPMUs will be set up with adequate FM staff before project effectiveness and the GPST Accountant needs to be in place prior to the signing of the Grant Agreement between the project and GP. No funds will be released to a GP until the dedicated GP Accountant for the project is in place. KWA will also need to identify dedicated finance staff for handling the FM monitoring and reporting of the Bank project.

Procurement assessment

42. ***Country/State Procurement Assessments*** A Country Procurement Assessment Report (CPAR) was prepared in 2001, which provides an understanding and overview of GOI's National Procurement System. The existing basic framework of public procurement rules and procedures in India requires open tenders to all qualified firms without discrimination, use of non-discriminatory tender documents, public bid opening, and selection of the most advantageous contractor/supplier. However, Bank assessments at the country and state levels have revealed significant weaknesses and lack of compliance with the basic framework of rules and procedures, including the absence of dedicated policy-making departments, of legal frameworks, of credible complaint/challenge/grievance procedures, and of standard bidding documents.

43. ***Procurement capacity assessment of the implementing agencies*** KRWSA, the project's state-level implementation and coordination entity, has the experience of having successfully implemented *Jalanidhi-I*, and was the obvious choice to lead project implementation of the follow-up opearation. KRWSA will collaborate with the RPMUs, the GPs and with KWA (principally for implementing the multi GP scheme rehabilitation interventions).

44. ***Assessment of KRWSA and KWA*** The procurement assessment carried out for KRWSA indicates that KRWSA is an autonomous body registered as a society and having its own MOA and bylaws as approved by GOK. KRWSA implemented the first Bank funded *Jalnidhi* project, adopting Bank guidelines, and is familiar with the Bank's procurement guidelines and procedures.. The procurement staff of the first KRWSA project are unavailable for this follow-on project so there are currently inadequate staff available to handle the large volume of procurement and contract supervision that will be involved in implementing the Project. The KWA procurement assessment suggests that, while they have been involved in large procurement for RWSS schemes for the State, they are not entirely familiar with Bank procurement procedures.

45. ***Capacity assessment of GPs*** The Bank is currently implementing the Kerala Local Government and Service Delivery Project (KLGP) in which the Local Self Government Department (LSGD) plays a central role. An extensive KLGP procurement assessment was recently undertaken for 16 GPs/municipalities in two districts, and has been used as an assessment of GP procurement capacity for the proposed *Jalanidhi-II* Project. It is important to note, however, that the procurement arrangements remain specific for each of the two projects. The KLGP report found that The Kerala Panchayati Raj Act 1994, the Kerala Municipality Act 1994, Kerala Stores Purchase Rules and Kerala Panchayati Raj (execution of Public Works) Rules 1997, provide the legal foundation for the local government system and procurement management in Kerala. Based on the KLGP assessment, the following risks were identified, *inter alia*: a lack of clarity on procurement processes; deficiency in planning, monitoring, evaluation and reporting; weakness in implementation; lack of transparency in decision making; weakness in procurement audit follow-up; inadequacy in record keeping; lack of integrated and comprehensive guidelines on procurement management; limited capacity in GPs to implement and manage procurement processes; insufficient procurement monitoring and accountability measures; and a lack of clarity on procurement processes.

46. Given the identified inadequate in-house capacity in GPs and the decentralized nature of the project, where the bulk of procurement is to be carried out through beneficiary groups (BGs) the overall project risk for procurement tends towards '*high*' However, the very positive experience of having successfully undertaken community contracting of thousands of small water schemes by the BGs under the first project, together with risk mitigation measures under this follow-up operation, will help to mitigate risk and the residual risk is therefore considered to be '*substantial*'.

47. ***Procurement arrangements*** All goods, works and consultancy services to be procured under the Project shall be carried out in accordance with the World Bank's "Guidelines: Procurement under IBRD Loans and IDA Credits" dated January 2011, and "Guidelines: Selection and Employment of Consultants by World Bank Borrowers" dated January 2011, respectively, and as per provisions of the Financing Agreement and the Project Agreement. A Procurement Manual, conforming with the above guidelines, has been developed by KRWSA for the Project and will be followed by all IAs to ensure consistency in procurement processed followed under the Project. Once cleared by the Bank, the Procurement Manual will be followed by all IAs for all procurement activities to be carried out under the Project. In the case of any inconsistencies between the Procurement Manual and the Bank's January 2011 procurement guidelines, the latter shall prevail. For each contract to be financed under the project, the procurement method, estimated cost, prior review requirements and timeframe are agreed between the Borrower and the Bank as presented in the Procurement Plan.

48. Adherence by all IAs to the agreed procurement arrangements to be undertaken under the project will be the responsibility of KRWSA, an autonomous society set up by GOK which was also responsible for implementing *Jalanidhi-I*. Since the bulk of the procurement is to be undertaken by the beneficiary communities, KRWSA will guide the GPs, the Beneficiary Committees (BCs) and the Beneficiary Groups (BGs) in their procurement activities through Regional Project Management Units (RPMUs). The project will have three RPMUs, each of which will be responsible for 2-3 districts, or some 70 GPs each on average (a total of eight

districts and about 200 GPs). The RPMUs will be staffed with a Technical Manager who will not only provide technical and professional support for procurement to the GPs/GPSTs but will also be responsible for the training of the engineers who will part of the GPSTs. The GPST engineers will provide hand-holding support and procurement guidance to GPs and BGs. KWA will be engaged on behalf of KRWSA for the the multi-GP scheme interventions, and will be involved in the associated procurement to be carried out in accordance with the procedures, processes and bidding documents agreed with the Bank and presented in the Procurement Plan.

49. ***Procurement of Works*** **Major** civil works to be procured and implemented under the project will include small water supply schemes (SWSSs), large water supply schemes (LWSSs), intra- and inter-GP schemes and sanitation works. None of the contracts for civil works is expected to exceed US$ 10 million. The procurement implementation processes of the main categories of civil works are described below:

Small water supply schemes to be executed (a) through community participation with beneficiary committees in accordance with provisions of paragraph 3.19 of the Bank procurement guidelines, or (b) through Shopping in accordance with the provisions of paragraph 3.5 of the Bank guidelines. BCs, SLCs and BGs will be involved in the planning, design and implementation of the schemes. Under community contracting, both manufactured materials, such as pipes, pipe fittings taps, cement, *etc*, and locally-produced materials, such as bricks, stone, metal and sand, will be procured by the BCs based on a standard schedule of rates. The BCs and SLCs, with technical and professional support fromj KRWSA and the RPMU, will be implementing all SWSS and LWSS interventions and all the intra-GP elements of the multi-GP schemes. The BCs and SLCs shall have the option to spilt up the works based on its skilled/unskilled elements and considering the volume of work involved. For small water supply and sanitation schemes involving low technical complexity, the BCs/SLCs shall procure all the construction materials at their level and either install them using community labor or award labor contracts to a contractor – being guided by the principles of economy, efficiency, equal opportunity and transparency. The rates for the materials and their quantities will be closely monitored both by the GPs and by KRWSA, as per the provisions of the contract agreements for the implementation of the schemes.

Large water supply schemes will be procured on a single responsibility basis including the procurement of the pipes and the basic construction materials, which will be the responsibility of the contractor. The largest of these schemes, however, is not expected to cost more than the equivalent of US$ 3 million. These schemes would be procured following NCB procedures as per paragraphs 3.3 and 3.4 of the Bank Procurement Guidelines. These schemes will be in scattered locations in different districts of the state, implemented at different times during the project implementation period and, therefore, cannot be grouped into a single package for ICB.

Intra-GP works of multi-GP schemes and of large water schemes will be executed by the SLCs who, based on the agreed procurement thresholds, will have the option to procure through community contracting or engage contractors on a single responsibility basis. In such cases the procurement of construction materials (including cement and pipes) shall be entrusted to the contractor on a single responsibility basis and the SLCs will not then procure them separately.

Common facilities of multi-GP schemes All elements of the common infrastructure facilities of the multi-GP schemes will be implemented by KWA, on behalf of KRWSA, in accordance with the relevant Bank guidelines and agreed bidding documents.

Sanitation works The different types of sanitation works are :(i) community septic tanks; (ii) demonstration latrine solutions; (iii) pay-and-use toilets; (iv) household vermi composting; (v) household ring composting; (vi) household level biogas plants; (vii) community level biogas plants; (viii) plastic processing units; (ix) stormwater drainage; and (x) a regional septage treatment plant. All the above activities, with the exception of the regional septage treatment plant, will be GP-centric activities and will be implemented by the respective GPs with technical and professional support from the KRWSA PMU and RPMUs. These activities will be procured following the community participation method. The implementing entity for the septage treatment plant will be identified by KRWSA (duly considering available capacity in the state/country) and will be contracted following NCB procedures.

50. Technical and professional support for all the above procurement will be provided to the BCs and SLCs by the KRWSA PMU, the RPMUs and the GPSTs, at all stages from the preparation of bidding documents to the implementation of the corresponding works.

51. ***Goods and equipment*** The goods and equipment to be procured for KRWSA, for its regional offices (the RPMUs) and for the GPs may include vehicles, furniture, office equipment (such as computers, copying machines, fax machines, audio visual equipment, soil investigation and survey equipment) and other miscellaneous equipment. They will be procured following thresholds and procedures as per the provisions of the procurement guidelines. Only GOI's Directorate General of Supplies and Disposal (DGS&D) rate contracts will be acceptable as a substitute for Shopping. Other items, or small groups of items, valued at less than US$100 equivalent per contract, may be procured through direct contracting.

52. ***Consultancy Services*** For the selection of individual consultants and consulting firms for providing services under the Project, the following procedures will be used, as appropriate and subject to approval by the Bank in the Procurement Plan: Quality and Cost Based Selection (QCBS), Quality Based Selection (QBS), Selection Based on Consultants' Qualifications, Fixed Budget Selection, Least Cost Selection, Single Source Selection and Selection of Individual Consultants. For service contracts, World Bank standard bidding documents will be used. The contracts with SOs for providing community development and technical support to communities will follow a rigorous prequalification process as specified in the Procurement Manual in order to ensure that only qualified SOs participate in the Project. The SO eligibility criteria detailed in the procurement manual shall be followed for SO procurement and shall include, but not be limited to: legal status, secular and nongovernment status, at least three years of proven track record, having audited accounts, being free from litigation, and staffing capacity.

53. ***Operating Costs*** The project will support project implementation costs, and other such project implementation related costs of a recurring nature, including costs of incremental staff incremental and operating costs for the hiring of vehicles, rent for incremental office spaces, purchase of consumables, *etc*, provided that such expenditures are incurred following agreed procedures.

54. ***Government owned enterprises*** The procurement of any goods and consulting services from any government owned enterprise which does not fulfill provisions of paragraph 1.10 (b) of the Bank's Guidelines: Procurement of Goods, Works, and Non-Consulting Services and of paragraph 1.13 (b) of the Bank's Guidelines: Selection and Employment of Consultants, will not be eligible for Bank financing but will, instead, have to be funded from GOK's own resources. Institutions such as the Kerala Institute for Local Administration,(KILA), the Suchitwa Mission, the Centre for Water Resources Development and Management (CWRDM), the Centre for Earth Science Studies (CESS), may only be involved as implementing agencies under the project through an MOU with KRWSA.

55. ***Prior-review and procurement method thresholds*** The prior-review and procurement method thresholds for the Project are presented in the Procurement Plan. All IAs shall adhere to these thresholds and KRWSA will proactively monitor that all procurement is being carried out as per the agreed processes, procedures and thresholds. KRWSA will be the nodal agency for processing and coordinating with Bank for review and clearance of all prior review cases. The prior review thresholds will be periodically reviewed and revised as needed during the project implementation period, with these reviews being based on the implementation of risk mitigation measures, reports from procurement post-review exercises, and from the demonstrated improved capacity of the IAs to undertake project procurement.

56. ***Short lists comprising entirely of national consultants*** Short-lists of consultants for consultancy services estimated to cost less than US$ 500,000 equivalent per contract may comprise entirely national consultants in accordance with the provisions of paragraph 2.7 of the Bank's Consultant Guidelines.

57. ***Procurement Plan*** The project's Procurement Plan for the first 18 months of implementation has been prepared and cleared by the Bank. The Procurement Plan defines the thresholds for the procurement methods and the Bank review requirements, and it will be updated, in agreement with the Bank, annually or as required, to reflect actual project implementation needs and improvements in institutional capacity. The Procurement Plan will be made available on KRWSA's website as well as on the Bank's external website.

58. For ICB contracts for goods and works, the World Bank's latest standard bidding documents will be used. National Competitive Bidding (NCB) for goods and works will be conducted in accordance with the standard bidding documents of the Bank, as agreed with the GOI task force (and as amended from time to time). All NCB procurement of goods and works shall comply with paragraphs 3.3 and 3.4 of the Procurement Guidelines and the following additional provisions:

- Only the model bidding documents for NCB agreed with the GOI Task Force (and as amended for time to time) shall be used for bidding;
- Invitations to bid shall be advertised in at least one widely circulated national daily newspaper, at least 30 days prior to the deadline for the submission of bids;
- No special preference will be accorded to any bidder either for price or for other terms and conditions when competing with foreign bidders, state-owned enterprises, small scale enterprises or enterprises from any given State;

- Except with the prior concurrence of the Bank, there shall be no negotiations of price with the bidders, not even with the lowest evaluated bidder;
- 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 four weeks; and (ii) for all subsequent requests for extension irrespective of the period (such concurrence will be considered by the Bank only in cases of Force Majeure and circumstances beyond the control of the Purchaser/Employer);
- Re-bidding shall not be carried out without the prior concurrence of the Bank. The system of rejecting bids falling outside a pre-determined margin or "bracket" of prices shall not be used under the Project;
- Rate contracts entered into by Directorate General of Supplies and Disposals will not be acceptable as a substitute for NCB procedures. Such contracts will be acceptable however for any procurement under the Shopping procedures; and
- Two or three envelope system will not be used.

Procurement Methods and Thresholds – Goods, Works and Non-Consulting Services

Method of Procurement	**Threshold for Goods (US$ equivalent)**	**Threshold for Works (US$ equivalent)**
International Competitive Bidding	> 300,000	> 10 million
National Competitive Bidding (as per paragraphs 3.3 and 3.4 of Bank Guidelines and NCB conditions specified in the Procurement Plan)	> 50,000 and < 300,000.	> 50,000 and > 10 million
Shopping (as per paragraph 3.5 of Bank Guidelines)	Up to 50,000	Up to 50,000
Direct Contracting	Following procurement procedures meeting the provisions of paragraphs 3.7 and 3.8 of Bank Guidelines and with Bank prior approval	Following procurement procedures meeting the provisions of paragraphs 3.7 and 3.8 of Bank Guidelines and with Bank prior approval
Community Participation in procurement (as per paragraph 3.19 of Bank Guidelines)	Up to 50,000	50,000
Force Account	Not applicable	Following procurement procedures meeting the provisions of paragraph 3.9 of Bank Guidelines and with Bank prior approval

Procurement Methods and Thresholds for Consultancy Services

Selection Method	**Threshold (US$ equivalent)**
Competitive methods (firms) a) QCBS b) QBS c) Consultants Qualifications d) Least Cost Selection e) Fixed Budget Selection	No thresholds, except for Consultant Qualifications which may be used for contracts below 100,000
Single Source (firms/individual consutlants)	As per paragraphs 3.8 to 3.11 of the Guidelines and with Bank prior approval
Competitive methods (individual consultants)	In accordance with Section V of the Guidelines

59. ***Procurement risks mitigation measures*** An action plan developed to mitigate the procurement specific risks under the Project includes the following activities:

- ***Procurement Manual*** A Procurement Manual for the Project containing the methods and procedures has been prepared by KRWSA and cleared by the Bank, which is to be followed by all IAs for any procurement under the Project and which will help address any Project deficiencies regarding inconsistency in use of procurement procedures.
- ***Staffing*** Adequate staff who will be responsible for procurement under the project shall be provided at the KRWSA, RPMU and GPST levels. Capacity building of all such procurement staff in KRWSA, the RPMUs and the GPSTs shall be carried out through appropriate training courses, which will ensure procurement is carried out in accordance with agreed procedures.
- ***Enhancing Competition*** To address the issue of insufficient competition in procurement, KRWSA will publish procurement notices on its website, in addition to the publication in national newspapers. The publishing of information/documents, as specified below as part of the project's approach to disclosure of information, will further help enhance transparency and competition.
- ***Bidding documents*** Based on the Bank's SBDs, KRWSA will prepare draft bidding documents for the procurement of goods, works and consultancy services under the project. Once specific scheme documents are cleared by the Bank[2] these shall be used as model documents for all procurement under the project. This will also help in addressing any deficiencies regarding inconsistencies in the use of procurement procedures. The project will use of hardcopy bidding documents and bidding procedures, through which bidding documents may be purchased directly from the IA, may be requested by mail (and dispatched by the IA by courier/registered post), or may be procured by downloading electronic versions of the bidding documents from the project website. Bids may be submitted by remitting the requisite cost of the bidding documents in the form of a direct debit or payment order. Wherever e-procurement can be carried out, the Bank's prior clearance would first be sought for the e-procurement procedures being proposed.
- ***Internal controls*** KRWSA will provide necessary oversight, and will coordinate with all IAs for the provision of the necessary procurement information and to ensure adherence with the agreed procurement procedures under the project. Preparation and regular updating of the project's MIS in regard to contracts will help address any systemic procurement issues that might arise which, in turn, will assist in ensuring better internal controls of procurement procedures.
- ***Social oversight*** Social oversight will be provided through the requirement of the approval of all schemes by the GPs, of access by the community to all documents relating to procurement, and *suo-motu* disclosure by KRWSA of the contract award data.
- ***Social audit*** A strong monitoring mechanism, including social audits, will improve transparency and inclusion.
- ***Disclosure*** To ensure transparency, KRWSA will ensure *suo-motu* disclosure of all relevant information related to procurement activities under the Project on KRWSA's and the WRM Department's websites. This will include disclosure of: (i) the Procurement Plan and its updates; (ii) specification for goods and equipments as soon as these are

[2]KRWSA will forward the first three NCB documents, irrespective of their values, for prior review by Bank

prepared; (iii) IFBs and EOIs for goods and works and for the selection of consulting services; (iv) contract awards of all procurement processes; and (v) 'action taken' reports on any complaints received, on a half-yearly basis.

- ***Record keeping and documentation*** The RPMUs, the GPs and the BCs will maintain all procurement records duly catalogued and indexed in a manner and form which facilitates complete and timely information availability.
- ***Complaint redressal mechanism*** To deal with complaints effectively, a robust complaints redressal mechanism will be put in place, as described in the PIP, to ensure all complaints are received, and promptly and appropriately addressed.
- ***Third party review of decentralized procurement*** This may be done by a standalone procurement consultant or independent external auditor. The TOR of the auditor/consultant will include the carrying out post procurement reviews (PPRs) of the contracts awarded by KRWSA and by the RPMUs, GPs ,SLCs and BCs.
- ***Bank Review*** Other than carrying out the routine prior- and post-reviews, as per paragraph 1.14(e) of the Bank's procurement guidelines, the Bank's right to inspect the accounts and records of bidders, suppliers and contractors will be included in the bidding documents.

ii. Environmental and Social (including safeguards)

60. ***Environmental aspects*** The *Jalanidhi-II* Project falls in the environmental screening category B as per OP 4.01. An Environmental Assessment (EA) study was undertaken by KRWSA. The project will support investments in small water supply schemes, in sanitation schemes focusing primarily on solid and liquid waste management activities on a pilot basis and on individual household latrines in difficult areas (with high groundwater levels and other difficult ground conditions), and on the construction, rehabilitation and service optimization of some larger single-GP water supply schemes and a small number of multi-GP schemes (some five systems) with a view to providing better service provision, having water used more rationally, and thus creating less wastewater. The associated environmental issues are mostly related to water source sustainability, water contamination, water quality and improper waste disposal. No severe or long-term impacts are expected as a result of *Jalanidhi-II* activities. Accordingly, the Project triggers the following Bank safeguard policies: Environmental Assessment (OP 4.01), Forests (OP 4.36) and Natural Habitats (OP 4.04).

61. Kerala has about 32 designated natural habitats and they are protected by National and State regulations. These include two biosphere reserves, six national parks, 14 wildlife/bird sanctuaries, one reserve forest, one tiger reserve and eight mangrove sites. Activities/subprojects taken up as part of the proposed project are not allowed, by regulation, to affect any of these areas. However, given the high concentration of natural habitats of strategic importance located within a relatively small geographical area in Kerala, the relatively high-pace of development in the state, and the possibility of these areas being impacted by villages or habitations of indigenous people located in the proximity of these areas, the Natural Habitats Policy is triggered. The forest cover in Kerala is mainly confined to about five districts located away from the coast. By regulation, KRWSA has no jurisdiction over forests areas. However, since almost 29% of the state is under forest cover, it is felt that the activities taken up under this project

might adversely impact any forest ecosystem in the state unless carefully planned. Hence the Forests Policy is triggered.

62. As a consequence, an Environmental Assessment (EA) of the proposed project was undertaken, and an Environmental Management Framework (EMF) was prepared, to ensure compliance with the applicable regulations and triggered safeguards policies. The EMF sets out the procedures that will be applied to the schemes to be implemented by GPs making use of funds provided to them under Component C of the project. The EMF comprises a set of procedures for granting environmental approval including: (i) screening through a regulatory requirements list in order to approve those activities that do not contravene the relevant national and state regulations and the triggered Bank safeguard policies; (ii) classification criteria for categorization of schemes on the basis of the perceived intensity of risk/impact of the schemes being low, medium or high; (iii) Environmental Data Sheets (EDSs) to record the relevant baseline information for water supply, sanitation, and solid and liquid waste management schemes; and (iv) environmental codes of practice and technical guidelines for the various types of scheme. The EMF also includes a provision for undertaking Limited Environmental Assessments (LEAs) for the medium impact schemes and Environmental Impact Assessments (EIAs) for the high impact schemes. An Environmental Management Plan (EMP) will be developed for each scheme as a result of applying the above procedures. The EMP will include the environmental protection measures for the implementation of the scheme, as well as administrative and monitoring arrangements to ensure the EMP's implementation. The EMP will be incorporated as part of the scheme-specific engineering designs and will become a binding provision in the contract documents, where applicable.

63. The EMF contains institutional arrangements, capacity building plans and monitoring mechanisms to enable effective implementation of the safeguard measures. It has been agreed with KRWSA that personnel with the responsibility for environmental management will be located as follows in the project institutional structure: (i) the PMU Director (Technical) will hold co-charge for environment aspects and will be responsible for (a) the monitoring, supervision and audits linked to EMF compliance, (b) the selection of experts for undertaking the EIAs of high-impact schemes and (c) the provision of overall guidance and technical support to the RPMU engineers; (ii) each of the RPMUs will be staffed with a senior engineer designated as Manager (Technical) who will conduct technical reviews and approvals of scheme-specific environmental appraisal reports as well as the monitoring and supervision linked to EMF implementation at the regional level; (iii) the engineers appointed to each of the GPs will assist the support organizations and beneficiary communities to prepare the environmental appraisal documentation as part of the engineering designs; and (iv) a panel of technical experts at the state and regional level will be constituted, as needed, to provide technical support to the PMU and the RPMUs. Monitoring and supervision of the EMF will be undertaken twice a year by the senior engineer in the RPMUs and by engineers in the GPs, and environmental audits will be undertaken as part of the Sustainability Evaluation Exercises (SEEs) and the Independent Construction Quality and Surveillance (ICQS) audits, each to be conducted annually during the course of the project by independent specialized agencies hired by KRWSA. While the SEE audits will cover the environmental management issues of small schemes, the ICQS audits will address the environmental management issues of the medium and large schemes.

64. Stakeholder feedback and suggestions were sought on the EMF through stakeholder consultations during its preparation. Field visits and focus group discussions were undertaken in 14 GPs in nine districts. Further disclosure of the EMF was done through a state level disclosure workshop on June 14, 2011, and through the hosting of the final report on the websites of KRWSA and LSGD, Government of Kerala, on July 19, 2011. Furthermore, the EA's executive summary was translated into the local language and distributed to all district libraries located in the 14 districts covered by the project as well as to the district collectors on August 10, 2011.

65. ***Social aspects*** Good tools were developed under the first project for process, progress and outcome monitoring. Comprehensive sustainability assessment tools and methods were developed to independently monitor overall outcomes and sustainability. The follow-on project will mainly implement a large number of new small schemes for clusters of about 40 households (HHs). In addition, the existing schemes in the project GPs (currently run either by the GP or KWA) will be rehabilitated to make them more inclusive and to provide improved services. A handful of larger schemes, covering about 500-1000 HHs each, but located entirely within a single GP, will also be implemented. The Project will not implement new multi-GP schemes but will, instead, assist in the rehabilitation and modernization of a small number of existing multi-GP schemes.

66. The Project design incorporates the main findings of the social assessment that emphasizes that *vulnerable groups normally tend to be left out of coverage from mainstream schemes due to topographical, technical and socio-economic factors*. Given the nature of GPs in Kerala, as well as the state's hydro geological/topographical considerations, there is a need to provide RWSS coverage to vulnerable groups – who normally live in the elevated areas– through small water supply schemes that cater to small clusters of excluded households. In the hydro geological context of Kerala, this makes sense as it ensures that the amount of water pumped from the local source is small and, with appropriate groundwater recharge measures, source sustainability can be assured[3].

67. ***Social assessment and baseline survey*** A social assessment and baseline survey were undertaken to assess demand for the Project, willingness of potential beneficiaries to participate in the Project (including cost sharing in capital costs and taking full responsibility for O&M costs), and to review other social issues of relevance to the Project. A separate study was undertaken to focus on these issues in tribal settlements. Broad-based and specific consultations were undertaken in nine GPs, selected from across the State of Kerala (covering northern, central and southern areas longitudinally, and coastal, midland and highland areas laterally). The study included a survey of 800 households, focus group discussions with key stakeholders, and secondary data surveys. The study reports can be found in the Project Files. The social assessment exercises helped confirm that: (i) there is strong demand for the Project; (ii) communities are willing to pay part of the capital costs of a water scheme intervention; and (iii) vulnerable groups will benefit significantly from the way the Project is designed. The assessment also helped identify key factors that should be incorporated in the Project design, including the need for: (i) improving GP accountability and responsibilities for long-term support to the services provided once the Project has exited a GP; (ii) linking the structure of BG federations within the corresponding local government structures; (iii) providing post-implementation back-

[3] *Jalanidhi-I* sustainability studies indicate source sustainability in the peak summer months of the order of 95 percent

up arrangements for RWSS service provision; (iv) providing additional capacity building in specific areas; (v) designing simpler and more appropriate technologies in tribal areas; and (vi) providing prolonged community 'hand-holding', particularly in the case of schemes in tribal areas. These findings have been incorporated in the overall Project design and its specific *Tribal Development Plan*, generally, and the cycle implementation period for tribal water schemes has been readjusted to provide for longer O&M support, more specifically.

68. ***Involuntary resettlement*** **(OP 4.12):** The project will not resort to involuntary land acquisition, and hence OP 4.12 is not triggered. Over 85% of the water supply schemes will require very small amounts of land, and the multi-GP schemes will not require any land as they will involve only rehabilitation/modernization. All facilities will be located either on public land or on lands procured at market rates from willing sellers, as was successfully done under the predecessor project. The water supply schemes are mostly very small in size catering to a small group of households (30-40) – the land requirement for the construction of the corresponding water source and the overhead tank is very small[4]. GoK does not intend to resort to involuntary land acquisition under the Project. All facilities will be located either on public land or will be procured at market rates from willing sellers. In rare cases, a voluntary land donation may be resorted to, provided that it meets the guidelines[5]. All land transactions will meet the following criteria: (i) the land in question will be free of squatters, encroachers or other claims of encumbrance; (ii) lands will be chosen (by the community) after ensuring that water is available on the particular piece of land; (iii) in each case, the voluntary nature of the land sale/donations will be verified; (iv) land transfers will be completed and the title will be vested in the name of the BG/GP through a registered sale deed or MOU; and (v) a provision will be made for redressing grievances. Land donation will be discouraged, particularly from small land holders. The GPSTs will independently verify all land transactions as part of scheme appraisal and ensure that there are no significant adverse impacts on incomes or access as a result of these transactions.

69. ***Indigenous Peoples (OP 4.10)*** Kerala has an overall tribal population of just over 1%. These populations are mainly concentrated in the districts of Palakkad, Wayanad and Idukki. Due to presence of tribal populations in the project areas, this policy (OP 4.10) is triggered. Considering that the tribal areas of Palakkad district have already been covered under Jalanidhi I, Jalanidhi will focus on the districts of Wayanad and Idukki. It has been decided to implement a fully-fledged tribal plan for all GPs with significant tribal population in these two districts and an overarching framework for other GPs where tribal populations may reside, but in a less concentrated manner.

[4]The land requirement can arise from implementation of the following interventions: water source/intake structures; the construction of overhead tanks (OHT); and community sanitation interventions (septic tanks, septage management pilot). These facilities are normally located on public land or on private land purchased outright at market rates. For the 4,000-plus water schemes to be constructed, for example, the total land requirement will be less than 43 hectares; after considering availability of public land for locating the water supply facilities, the net requirement to be procured from the open market would be less than 25 Ha.

[5]Voluntary land donations: the Project will discourage land donations by poor families and vulnerable groups. The guidelines to be followed for voluntary land donations would include the following principles: (i) impacts are minor (loss of land less than 10% of holdings), (ii) no physical re-location; (iii) the subproject is not site specific; (iv) the land required to meet technical project criteria must be identified by the affected community, not by line agencies or project authorities (nonetheless, technical authorities can help ensure that the land is appropriate for subproject purposes and that the subproject will produce no health or environmental safety hazards); (v) the land in question must be free of claims or encumbrances; (vi) grievance mechanisms must be available; and (vii) verification (*eg* witnessed statements) of the voluntary nature of land donations must be obtained from each person donating land.

70. ***Other key design measures for enhanced social development outcomes:*** Some of the key design features built into the Project's design to ensure enhanced social development outcomes include the following:

- *GP selection criteria* The GP selection criteria includes *vulnerability and poverty considerations* in addition to the water scarcity and water quality parameters;
- *Addressing gender issues* The Project design integrates measures to enhance voice and choice of women who are truly the household managers of water and sanitation. Some of the related measures include: (i) *mandatory representation* for women in key positions in the beneficiary committees; (ii) *participation and inclusion of women* institutionalized in the planning process; and (iii) *collaboration and networking with existing women's networks* – Support Organizations will be required to integrate women's networks (such as *Kudumbashree*) within the planning, implementation and post-implementation phases of subprojects such that empowered and well capacitated local women are available to provide ongoing support after following subproject exit
- *Process monitoring* Independent consultants will monitor the planning and implementation processes in sample villages so that continuous feedback will be provided to the implementation teams;
- *Initial capacity building fund and exposure visits* Based on lessons learnt from other CDD projects, exposure visits will be planned ahead of implementation once a GP is selected, with the formation of the local beneficiary committees following (instead of the reverse which is the normal practice);
- *Concessional capital cost sharing arrangements for vulnerable groups* Based on feedback from *Jalanidhi-I*, concessional capital cost sharing rules will be applied to vulnerable groups such as scheduled castes and coastal fisher families (before, such concessions were in place only for tribal communities);
- *Sustainability monitoring* The Project will have an ongoing system for sustainability and outcome monitoring. Under this arrangement all completed schemes will be covered by one round of sustainability monitoring by an independent team and, in subsequent years, a sample of schemes would be picked for additional monitoring each year (in addition to 100% of schemes monitored in the year they are completed); and
- *Peer-to-peer monitoring* The Project will facilitate monitoring among peers (GP to GP; BG to BG) on a pilot basis and later scale this approach up. Experience from other projects has shown that such approaches are of immense value, not just for monitoring, but for capacity building as well. Once developed, such an approach can be used by the government for other sectors as well.

71. ***Consultations and Disclosure*** The social assessment process involved consultations with all key stakeholders. During the preparation of tribal development framework and TDP, free, prior and informed consultations were held. The demand responsive design of the project will ensure that free, prior and informed consent is obtained for all tribal beneficiary groups before any work is commenced. In other schemes where tribal communities form a small subgroup of beneficiaries, their broad consent will be obtained before commencement of works. The draft TDP was disclosed and discussed in a state level workshop on June 14, 2011. The revised version, based on the feedback received during these consultations, was uploaded to the KRWSA and LSGD websites on July 19, 2011. A local language summary of the TDP was distributed to

the offices of all district collectors and district libraries on August 10, 2011. A final version was disclosed on September 23, 2011, following the project appraisal mission.

C. Monitoring and evaluation

72. A comprehensive monitoring and evaluation system was developed under *Jalanidhi-I*, which adopted a learning approach that allowed refinement of the *Jalanidhi* model through its batched implementation process. An extensive and innovative set of monitoring and evaluation tools were developed under the predecessor project:

- *Baseline surveys* at GP and BG levels for collecting demographic data, water supply and sanitation coverage data, socio-economic data for all project intervention areas, using transect walks, resource mapping, surveys and secondary data collection.
- *Time use analyses* to determine the time spent for water collection, conducted as a baseline before implementation, and after completion of project interventions, using focus group discussions.
- *Healthy home surveys* conducted every six months to track a range of sanitation and hygiene related indicators, using focus group discussions, pocket charts and participatory rural appraisal methods. These surveys were used for planning purposes and to assess the impact of project interventions.
- *Management Information System (MIS)* developed for storing baseline community survey data at the BG and GP levels and a wide range of progress monitoring indicators.
- *Financial Management Information System (FMIS)* for monitoring financial flows at all project levels.
- *Process Assessment* conducted using extensive fieldwork to observe and document the methods adopted by the SOs for various aspects of project implementation, including entry management, community mobilization and community participation. The effectiveness of these processes was assessed and lessons were used to improve implementation processes in subsequent batches.
- *Sustainability evaluation exercise* to assess sustainability of schemes by source (quantity of supply), system (mechanical and operational system), quality (water quality), financial (tariff collection) and institutional (collective responsibility of BGs) sustainability. This was done through a three-stage analysis methodology, where outcomes at user and BG levels were quantitatively assessed, and qualitative assessment was done of community knowledge building and perceptions of threats to sustainability.

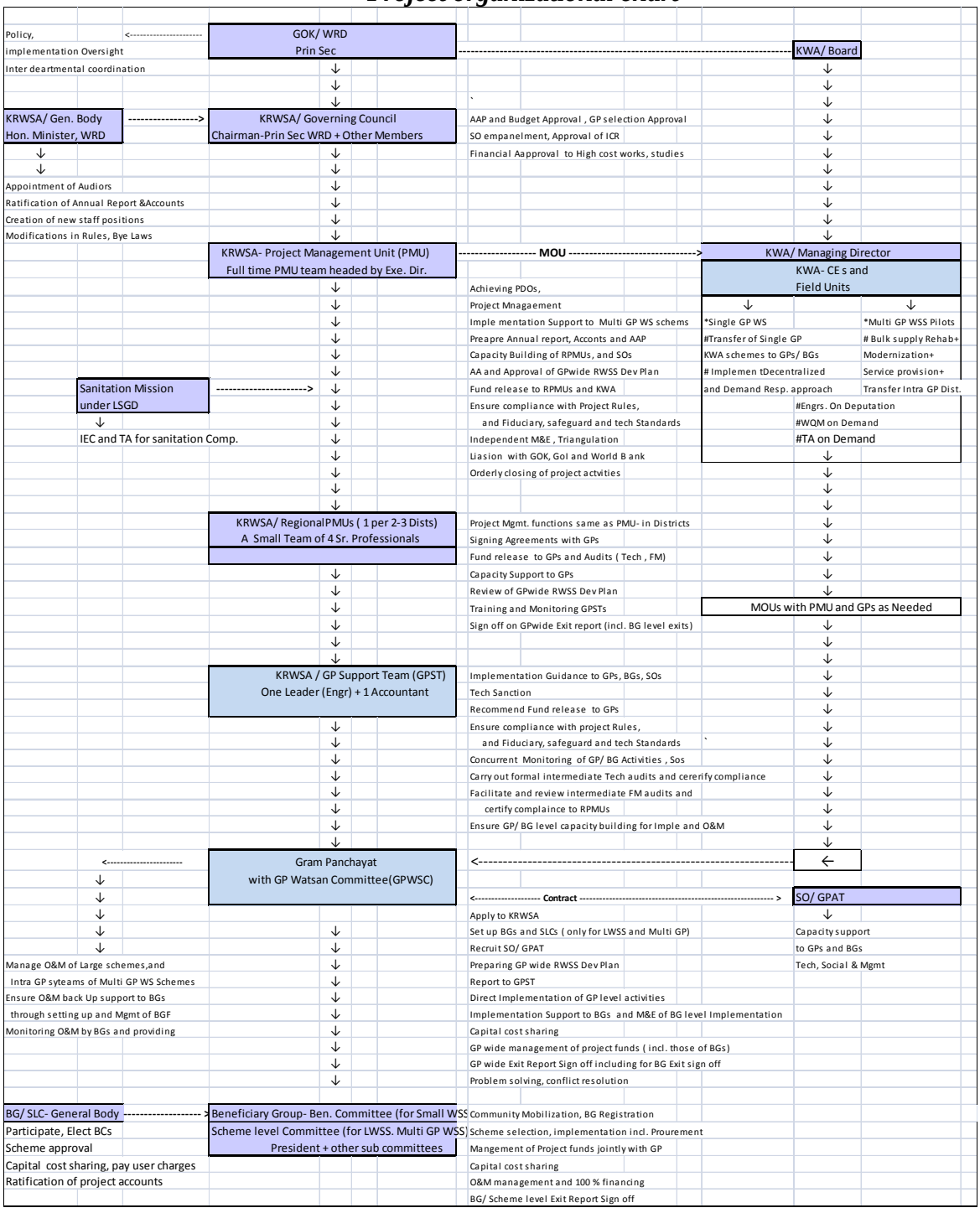
73. Monthly district level review meetings of SOs and GP representatives and the district PMU were effective platforms for reporting, reviewing, problem-solving and sharing best practices. Similarly, quarterly state level review meetings with SO and GP representatives and the PMU were effective feedback mechanisms between field and state level managers, facilitating knowledge exchange and effective communication. This institutional reporting structure was highly effective and will be adapted for the larger scale roll out under *Jalanidhi-II*. The monitoring tools discussed above will continue to be used and developed in *Jalanidhi-II*. The financial and management information systems will eventually be combined, and a procurement contract management functionality will be introduced, into one web-based system to ensure the better integration of the monitoring of project implementation and financial inputs,

outputs and outcomes. Monitoring activities will be fully computerized to the lowest possible level of data input. A comprehensive data quality control and assurance systems will be developed to assure data integrity. All routine reporting will be system generated and management dashboards will be developed.

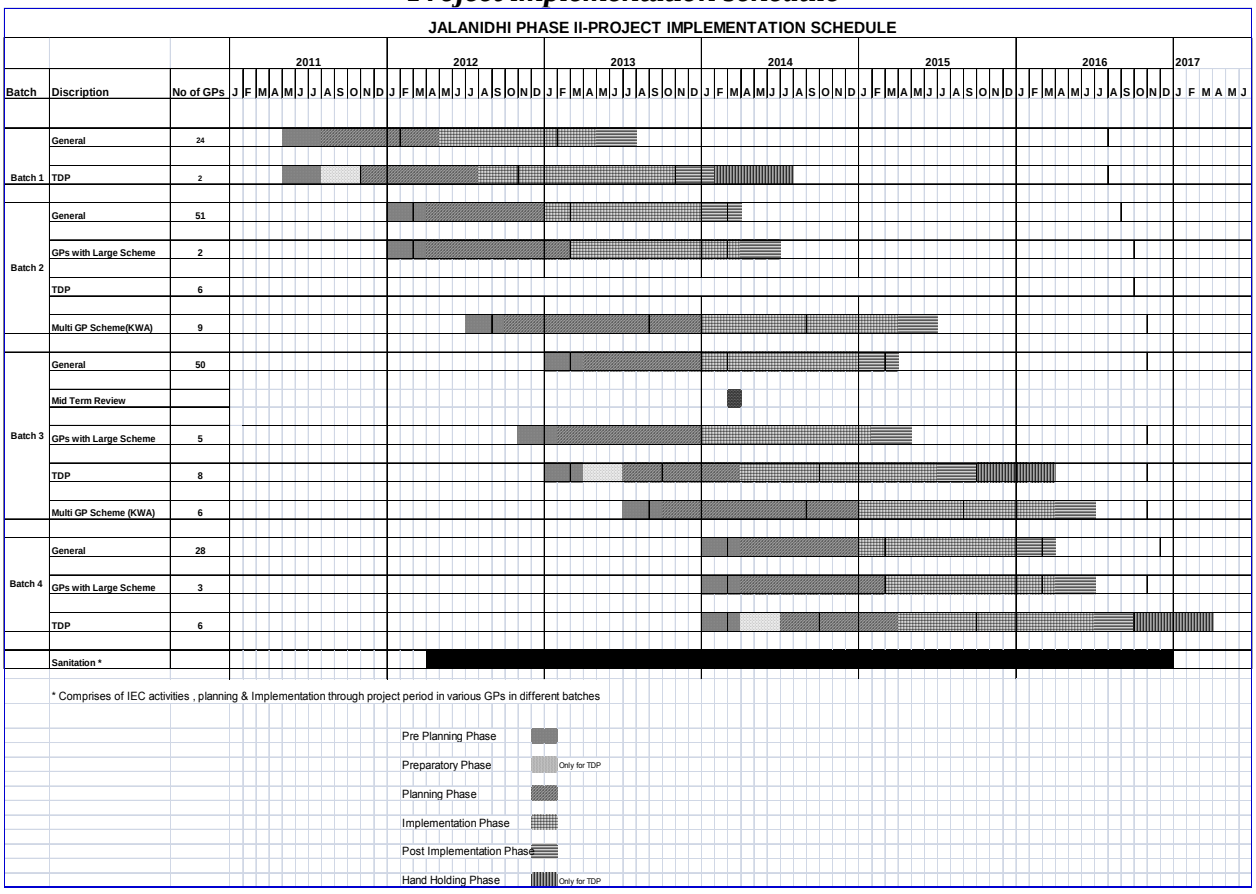
74. ***Impact Evaluation*** A rigorous impact evaluation will be designed to assess Project impacts on beneficiary households and communities over time. A specially designed baseline survey will be carried out for a sample of households in the selected project communities. In addition, the household survey will be conducted for a sample of control communities with similar characteristics to the Project communities. Follow-up surveys will be carried out for households in the control and for sample communities at the MTR, and at the end of Project implementation. This impact evaluation will enable the assessment of Project impacts on beneficiary households and communities and their sustainability over time. The impact evaluation can inform future government policy in RWSS service provision.

75. ***Management of the M&E system*** will be carried out by KRWSA, who will be responsible for upgrading the systems, daily oversight, operation and maintenance of the databases, and the generation of periodic reports that will provide information on the effectiveness of Project implementation and the progress in achieving the PDO. In addition, the Project will support the development of GIS capacity in the PMU and GPs for planning and analysis purposes. The GIS will support activities like GP selection, water security mapping, mapping project progress on new infrastructure development, and mapping vulnerable areas.

Project organizational chart



Project implementation schedule



Annex 4. Operational Risk Assessment Framework (ORAF)

INDIA: SECOND KERALA RURAL WATER SUPPLY AND SANITATION PROJECT

Project Development Objective(s)

To increase the access of rural communities to improved and sustainable water supply and sanitation services in Kerala, using a decentralized, demand-responsive approach.

PDO Level Results Indicators:	1. Direct project beneficiaries (number), of which female (percentage)
	2. Number of people provided with access to improved water sources under the project
	3. Number of people with access to improved facilities for safe disposal of solid and liquid waste
	4. Number of GPs in the State implementing decentralized, demand-responsive projects in RWSS
	5. Number of operational water schemes for which KRWSA's sustainability index is >80%

Risk Category	Risk Rating	Risk Rating Explanation	Risk Description	Proposed Mitigation Measure	Status C= completed O = ongoing NYD = Not yet Due N/A = Not Applicable
1. Project Stakeholder Risks					
1.1 Stakeholder • Donor Relations • Borrower relations • Other Key relations • Bank image and brand	1 (low impact and low likelihood)	The Bank, GOI and GOK have a long standing successful partnership in implementing GOI sector reform agenda guidelines over the past 20 years in the rural water supply and sanitation (RWSS) sector. Within Kerala, both ruling and opposition parties have welcomed the Bank partnership and its continuation in the sector. The presence of JICA, the only other major donor supporting the RWSS sector in Kerala, is in a sunset mode.	The only major stakeholder risk is that the main sector agency, the Kerala Water Authority (KWA), may not fully embrace some of the innovative approaches embodied in the project.	Mitigation measures include focus on building a partnership between KWA and the Bank/KRWSA during the closing period of the *Jaladhini* I project and further developed during project preparation, with incentives and opportunities in the project to foster collaboration with KWA. In addition, the pressure from new GOI guidelines and GOK policy, inclined more towards decentralization and a bottom-up approach, also supports alignment of KWA with the *Jalanidhi* principles.	**Ongoing** **Ongoing**

Risk Category	Risk Rating	Risk Rating Explanation	Risk Description	Proposed Mitigation Measure	Status C= completed O = ongoing NYD = Not yet Due N/A = Not Applicable
3. Implementing Agency Risks (including FM & PR Risks)					
3.1 Capacity • Resources • Processes and Systems	1 (low impact and low likelihood)	Experience with the KRWSA under *Jaladhini-I* demonstrated: - Resources were provided in a timely fashion - Good processes and systems were developed, tested and successfully implemented - KRWSA became fully conversant with the Bank's safeguard and fiduciary policies - Accountability and oversight rules were clear and well understood by staff - A pool of trained staff/NGOs/consultants was created - A good mix of public and private sector staff was available for project implementation - Good internal controls, third party inspections and external audits were regularly conducted and resulting issues addressed - No significant issues of fraud and corruption were identified, this	While past experience with KRWSA as the implementing agency for *Jalanidhi-I* was successful, potential capacity problems include: - Significant and frequent top leadership changes in KRWSA (even though other key staff turnover was routine and of an acceptable level under *Jalanidhi-I*) - Insufficient number of NGOs in Kerala and their capacity to support extending the *Jalanidhi* model to more GPs due to limited jurisdiction of their operations and lack availability of personnel to take on additional works. -Weak procurement and contract management capacities of IAs - Lack of provision of adequate capacity support to GPs and BGs -Poor maintenance of books of accounts, internal audits and	Implementation arrangements will include: - An upfront agreement on minimum tenure for top leadership positions in KRWSA - Inadequate NGO capacity will be addressed by allowing other external support agencies (private sector firms/consultants, GP level Action Teams consisting of few local persons trained in project implementation, *etc*) to assist GPs and BGs - Accelerated recruitment and training of PMU and other implementing agency staff during late preparation and early implementation phases - The strong capacity building plan developed and implemented under *Jalanidhi I* will be broadened and strengthened - Capacity building program will be expanded by creating specific modules to increase the scope of training *Kudumbashree*[20] and *Akshaya*[21] members to enhance local capacities to facilitate project management, O&M of assets, billing, collection of user	**NYD** **NYD** **Ongoing** **Ongoing** **Ongoing**

[20]A large successful network of women Self Help Groups (SHGs) in the State covered under the State program titled "Kudumbashree" meaning family women.
[21]A Special Education program in rural areas wherein one person among every 8 neighborhood households are being trained to be proficient in basic IT operations to enhance the skills of local youth thereby increasing the scope for self – employment and employment in private/public sector. This program has led to 100% coverage of filing of individual Income Tax online in the State.

Risk Category	Risk Rating	Risk Rating Explanation	Risk Description	Proposed Mitigation Measure	Status C= completed O = ongoing NYD = Not yet Due N/A = Not Applicable
		being attributed to the high degree of community participation in implementation	delayed external audits Potential accountability weaknesses in project implementation	charges, *etc*. A separate Management Information System (MIS) for the project will be developed and established to monitor the book of accounts and the project's physical and financial progress. Certification audits up to FY 2009-10 have been completed and FY 2010-11 audits are in progress, and will be a mandatory condition for access of funds from *Jalanidhi-II.* Establishment of satisfactory fiduciary and procurement systems during project preparation including robust oversight and supervision during implementation	**Ongoing** **Ongoing** **Ongoing**
3.2 Governance • Decision Making • Accountability & Oversight • Behavior and Norms • Ownership	3 (high impact, low likelihood)	KRWSA and GPs have wide-ranging decision-making powers and authority under the *Jalanidhi* approach KRWSA's main functions are facilitating and funding the *Jalanidhi* approach and carrying out M&E *Jalanidhi-I* demonstrated that the governance risk is low given the approach is based on: - Full project ownership at the community/GP levels - Clear and written rules on roles &	The main governance risks are: - GOK may undermine KRWSA autonomy, resulting in implementation delays (this risk only partially occurred during *Jalanidhi-I*) - KRWSA may abdicate its powers and defer decision making to its General Council, resulting in possible implementation delays and occasional cost overruns - GPs may not accept proposed accountability and oversight responsibilities under the new	The upfront agreement with KRWSA will include a provision on its functions, powers, accountability and will allow operational flexibility in the day-to-day management of the agreed project design. KRWSA will be a signatory to the project agreement confirming its role and powers. The bylaws of KRWSA and its powers have been revised and enhanced to increase their role in activities relating to water supply and sanitation sector. The revisions have been approved by the Governing Council Only those GPs that accept accountability and oversight	**NYD** **Completed** **NYD**

Risk Category	Risk Rating	Risk Rating Explanation	Risk Description	Proposed Mitigation Measure	Status C= completed O = ongoing NYD = Not yet Due N/A = Not Applicable
		responsibilities for all project actors, and corresponding job descriptions - Annual assessments of implementation progress and performance of the different actors KWA's audited financial statements are in arrears by 2-3 years, however, and the latest available audit report (2007-08) is adverse (financial statements do not show a true and fair view) and reports on serious inadequacies in internal controls Establishment of State-level Task Force for sector development	project, including sharing procurement and financial management responsibilities with the BGs for schemes implemented by BGs - GPs may not provide the necessary operation and maintenance back up support to BGs - The general risks associated with the management of a decentralized structure with procurement at the BG/BC level\ - General weaknesses in KWA's oversight and internal controls - Non review and/or inaction on the findings and recommendations for Statewide sector development activities intended for initiation during project implementation period	responsibility for all project activities, including those by BGs in implementation and management of fiduciary aspects, will be selected as project beneficiaries. The GP selection criteria will include project rules, obligations to implement capacity building programs and support to showcase local success stories. GPs which meet and accept the project eligibility criteria shall sign a Memorandum of Understanding (MoU) agreement with KRWSA adhering to the terms and conditions for accessing funds under the project. Similar MoUs will be signed between GPs and BGs to ensure commitment in their partnership. KWA will be under a ring-fenced project implementation arrangement and its project activities will be monitored by KRWSA through regular reporting. Start up funds of up to 10% of annual requirements will be provided to KWA in a dedicated bank account. KWA will identify dedicated staff for key areas of project implementation. Project expenditure will be subject to internal/external audit by auditors appointed by KRWSA. Development and roll out of web-based MIS.	**NYD** **NYD** **Ongoing**

Risk Category	Risk Rating	Risk Rating Explanation	Risk Description	Proposed Mitigation Measure	Status C= completed O = ongoing NYD = Not yet Due N/A = Not Applicable
				Development of a robust complaint handling mechanism.	**Ongoing**
				Providing the public easy access to documents relating to the project through KRWSA project website.	**Ongoing**
				Project design incorporates adequate third party review of procurement and financial management at all levels.	**Ongoing**
				The Statewide sector development mitigation measures include:	
				- Issue of Government Order before effectiveness for establishment of Task Force with key sectoral representatives and related agencies in the state	**NYD**
				- Establishment of the Task Force with three months of effectiveness	**NYD**
				- Direct submission of sector development reports to Task Force chair	**NYD**
				- Regular submission of progress reports to the Task Force by KRWSA	**NYD**
				- Providing data on current market prices and supply chains	**NYD**
				- Implementing independent and concurrent monitoring on technical and fiduciary aspects of project design	**Ongoing**
				- Designing and implementing	**Ongoing**

Risk Category	Risk Rating	Risk Rating Explanation	Risk Description	Proposed Mitigation Measure	Status C= completed O = ongoing NYD = Not yet Due N/A = Not Applicable
				Generally Accepted Accounting Principles and continuing to use existing *Jalanidhi* website for disclosures. Ensure compliance with compulsory public disclosure of GP's annually approved activities, including budget, expenditure, progress, *etc*, (irrespective of the source of funds) with support of the Bank-financed KLGSD project (Credit 4872-IN)	**Ongoing**
4. Project Risks					
4.1 Design • Technical complexity • Geographic Dispersion • Arrangement complexity • Design flexibility	1 (low impact and low likelihood)	Although some 200 GPs will be targeted under the project, spread over 30,000 km^2, the success of *Jalanidhi- I* means that little mitigation is required in terms of technical complexity and design flexibility challenges, especially as the predecessor project supported design changes as and when they were needed Moreover, the fact that there is a single main implementation agency reduces complexity	The main design risks include the following: - Technical/scientific inputs and models for mapping GP-wide water resources and for developing household level water security plans may not be available, thus adversely affecting the sustainability of the selected water sources - The O&M and management of iron removal and fluoridization plants will remain problematic, requiring alternative management models to be explored - M&E arrangements could be complex as implementation is spread out over large geographic areas	The Bank will take advantage of national and international expertise to develop models (for water security planning, for treatment plant O&M and technical back up arrangements, for M&E arrangements, *etc*) which are suitable for replication under Kerala's local conditions. –The project design will also: - Explore the use of private sector service providers and/or agglomeration of scale management models for groups of schemes/GPs - Permit transparent subsidies when deemed necessary by increased system O&M costs Regarding the geographic dispersion, Regional Project Management Units (RPMUs) will be strategically located	**Ongoing** **NYD** **NYD** **NYD**

Risk Category	Risk Rating	Risk Rating Explanation	Risk Description	Proposed Mitigation Measure	Status C= completed O = ongoing NYD = Not yet Due N/A = Not Applicable
			- KWA may not fulfill its role under the agreed institutional/implementation arrangements for multi-GP schemes. - Community sanitation schemes may pose environmental hazards if not properly designed, implemented and managed - KWA may not fulfill its role under the agreed institutional/implementation arrangements for multi-GP schemes	in areas of concentration of the target GPs to facilitate project implementation. In addition to the PMU and RMPUs, the services of Support Organizations and GPATs will be extensively used to augment day-to-day monitoring of the GPs and BGs. Simultaneously, the above project management and monitoring units will provide hands-on training for project management, monitoring, O&M and supervision to supervisory staff of GPs and BGs, to allow for regular and proactive performance management for long term sustainability. GOs will be issued; GPs will be partnered by KRWSA to simulate their willingness to takeover implementation of multi-GP schemes with technical support from KWA. The mid-term review will provide an opportunity to review the scope of the KWA partnership and to carry out any course corrections for the project as required.	**NYD** **NYD**
4.2 Social & Environmental • Environmental • Social • Other	1(low impact and low likelihood)	*Jalanidhi I* proved a successful experience in effectively managing the environmental and social safeguard risks of RWSS scheme implementation	If not planned, designed, implemented and managed properly, the potable water quality, water resources management and community sanitation schemes may have an adverse impact on the sustainability of the schemes. On the social side, the project	An Environmental Management Framework (EMF) (i) has been prepared and (ii) will be implemented and monitored during project execution. The successful implementation of the EMF and the Tribal Development Plan will be monitored and adjusted as necessary throughout implementation.	**(i) Completed** **(ii) NYD** **NYD**

Risk Category	Risk Rating	Risk Rating Explanation	Risk Description	Proposed Mitigation Measure	Status C= completed O = ongoing NYD = Not yet Due N/A = Not Applicable
			rules and benefits may not be adequately disseminated across the state, meaning that impoverished/vulnerable communities may be left out of the project. Women may not be given adequate opportunity to participate in the decision making, implementation and management of RWSS services. The project may not properly implement targeted interventions to ensure that the state's tribal population has the necessary priority access to project benefits.	A comprehensive information, education and communication campaign has been designed and will commence soon after project effectiveness. GP selection criteria will be adopted that favor the inclusion of poor and SC/ST/fisher populations. A separate and targeted Tribal Development Plan has been developed and will be implemented. The participation of women throughout the subproject cycle will be aggressively promoted through empowerment rules in the design and composition of BG and GP level RWSS committees.	**Ongoing** **Ongoing** **Ongoing** **Ongoing**
4.3 Program & Donor • Program dependencies • Donor Collaboration • Donor Delivery	1 (low impact and low likelihood)	The program dependency is limited to effective functioning of KRWSA as the participation of other donors is not foreseen	It is possible that assistance to BGs may be compromised, especially if the staff and their respective competencies are inadequate at the RPMU and GP support levels and/or if KRWSA becomes overly bureaucratic in its functioning	The upfront agreement on KRWSA autonomy and improved staff selection and recruitment processes will help mitigate this risk. The project will support decision-making at the lowest appropriate level, retreats, team building workshops, national and international study tours and exposure visits as appropriate to motivate commitment and improve technical competency.	**NYD** **NYD**

Risk Category	Risk Rating	Risk Rating Explanation	Risk Description	Proposed Mitigation Measure	Status C= completed O = ongoing NYD = Not yet Due N/A = Not Applicable
4.4 Delivery Quality • Sustainability • Measurability • Contract management	3 (high impact and low likelihood)	Based on the previous experience of *Jaladinhi-I*: - Sustainability requirements are well understood and appropriately implemented by KRWSA. The whole premise of the project is to design and implement planning, execution and management models which promote the long-term sustainability of the RWSS services - The project indicators are clear, relevant and measureable - GPs and BGs demonstrated interest and capacity, with appropriate TA as necessary, to prepare contract documents and supervise contract implementation.	Water sources may dry up or source yields may be reduced, thus affecting the ultimate sustainability of the water services. GPs and BGs may lack interest or capacity to undertake appropriate O&M of the systems/assets established under the project GPs and BGs may not have adequate capacity to prepare contract documents or supervise contract implementation Inefficiently implemented contracts could disrupt the implementation cycle	The tools included in the project design to mitigate these delivery quality risks are: - Effective implementation of the approved EMF - Upfront preparation of GP-wide Water Security Plans and groundwater recharge interventions to allow proper planning of RWSS services and minimize water scarcity and water quality risks. - Implementation of capacity building programs - Provision of external capacity/TA support to the BGs and GPs in different aspects and tailor training modules and programs to suit their needs - Adhering to the procurement plan timeline. Enhancing procurement and contract management capacity in PMU by hiring the required skill set	**NYD** **NYD** **NYD** **NYD** **Partially completed**

Risk Category	Risk Rating	Risk Rating Explanation	Risk Description	Proposed Mitigation Measure	Status C= completed O = ongoing NYD = Not yet Due N/A = Not Applicable
4.5 Other (max 2) • Lack of alignment by KWA with the project	2 (low impact and high likelihood)	Although KWA did not always fully support the principles of the *Jalanidhi-1* project, acceptance of the policies of GOI and GOK, and hence t *Jalanidhi* principles, is on the increase. This change in approach has opened avenues for increased partnership and cooperation between KRWSA and KWA for implementation of *Jalanidhi -II* Nevertheless, KWA was successful in implementing one multi-GP water supply scheme towards the end of the *Jalanidhi-I* execution period. There is a need to broaden and deepen KRWSA's partnership with KWA KWA tariff policy allows for KWA schemes to provide subsidized water to BPL populations. This may cause opposition within GPs for KWA systems to be transferred to the GP and then rehabilitated following *Jalanidhi* project principles of full cost recovery.	Based on the experience of *Jaladinhi-I* it is possible that KWA may not fully participate in supporting the consolidation of the *Jalanidhi* model, and related policy/strategy aspects, in the state, GOK's decentralization initiative promotes GPs taking over responsibility for RWS, with transfer of all single-GP schemes from KWA to the GP. KWA's approach to subsidies may cause opposition within GPs for KWA systems to be transferred to the GP and then rehabilitated following *Jalanidhi* project principles of full cost recovery.	This risk will be mitigated by that fact that: - KWA will increasingly follow GOI and GOK guidelines that call for scaling up the principles of *Jalanidhi-I* through *Jalanidhi-II* KRWSA will continue to build on the working partnership established and consolidate it through KWA's engagement in the project, principally through the rehabilitation and modernization of multi–GP schemes interventions, as well as through other activities. The project will work to bring cutting-edge technical assistance to KWA to help it increase its coverage and efficiency generally, and through multi-GP schemes particularly. KRWSA outreach, mobilization and education of GPs, demonstrating the advantages and sustainability of those schemes running following *Jalanidhi* principles for all in the community, including BPL and marginalized households. KWA schemes targeted for transfer to GPs and rehabilitation represent small percentage of overall project interventions.	**Ongoing** **Ongoing** **NYD** **NYD**

Annex 5: Implementation Support Plan

INDIA: SECOND KERALA RURAL WATER SUPPLY AND SANITATION PROJECT

1. The Project's Implementation Support Plan will build on the project supervision support successfully followed by the Bank during the implementation of the predecessor *Jalanidhi-I* project. To this end, the ISP will reflect the decentralized, bottom-up nature of the project interventions, the reform agenda and policy issues supported by it, the technical and service sustainability issues that the project will confront, and the fiduciary and related implementation risks related to working with a project partner, KWA, in a more substantial way than under the predecessor project. In addition, the project implementation team will seek synergies with the implementation of the Bank's recently-approved Kerala Local Government and Service Delivery Project (KLGP) – especially, but not only, related to the two projects' fiduciary and safeguards aspects. The Bank will also partner with the Water and Sanitation Program (WSP) during project supervision, especially regarding the implementation of the project's sanitation activities and their links to WSP's technical assistance to GOK, generally, and, more specifically, related to WSP's funding of the preparation of a statewide strategy and plan for the management of septage in Kerala, which WSP will be supporting and which will have important links to the septage management pilot to be implemented under *Jalanidhi-II*.

2. The ISP will thus ensure that full Bank supervision missions are undertaken at least twice yearly and that during each mission the Bank team visits BGs and GPs where subproject interventions are underway – verifying the roles and responsibilities of all the different actors under the project implementation arrangements (the BGs, BCs, GPs, GPSTs, SOs, RPMUs, KWA, KRWSA and external support consultancies and other state agencies as appropriate), and correcting the same as deemed necessary. This twice yearly supervision missions will include the TTL, co-TTL, procurement and financial management staff, environmental and social safeguards staff, and technical and instituitional specialists and consultants as appropriate. In addition, interim implementation review missions will be undertaken on an *ad hoc* basis by those members of the project team based in the Bank's New Delhi office or elsewhere in India.

3. ***Safeguards*** The supervision of the safeguard aspects of the project by the Bank team will entail verification that the Environmental Management Plan is being appropriately implemented, and adjusted as deemed necessary, and that the Tribal Development Plan, and the project's other features designed to enhance its social development outcomes, are similarly being adequately implemented and adjusted as appropriate to reflect reality on the ground during project execution.

4. ***Procurement*** Implementation support will include: (i) *ex-ante* and *ex-post* reviews of Project procurement; (ii) review of the Procurement Plan and procurement performance; and (iii) providing information on training resources, preparation of training material and modules and needs-based training on the Bank's procurement guidelines to the implementing agencies. In addition, guidance on the any necessary revisions to the Procurement Manual, the Procurement Plan and the bidding documents will be provided by the Bank's procurement specialist as deemed necessary based on actual implementation experience. The Bank implementation team will assist KRWSA in identifying capacity building needs, and the Bank's procurement specialist

will provide timely support on procurement issues. Procurement supervision mission to Kerala will be carried out at least semi annually and will include visits to BGs and GPs to verify the implementation arrangements *in situ* and make recommendations for their refinement as judged necessary.

5. ***Financial Management*** The project would require an in-depth and intensive supervision in the initial years, especially to ensure successful implementation of the agreed FM arrangements. This will include field visits to GPs at least every six months basis to review the FM arrangements. Implementation support will also include the review of the periodic IFRs as the basis for disbursements and reporting expenditures, and review of the audit reports including verifying the adequacy of the resolution of major audit observations.

6. A comprehensive mid-term review would be conducted to review the implementation performance of all aspects of the project and to discuss, agree and take any mid-term course corrections deemed necessary.

7. ***Supervision synergies with KLGP*** The Jalanidhi-II project aims to deepen synergies with the Bank's KLGP project during implementation. To the greatest extent possible, the two projects will share the same safeguards and fiduciary staff (this was almost fully the case during project preparation) in order to bring economies of scale to implementation but, more importantly, to ensure consistency of implementation methodology and advice provided by the Bank team to our different GOK counterparts. During project supervision missions, the TTLs of the two projects, and other key team members, will capitalize upon their presence in Kerala to undertake quick reviews of the other project's implementation status in order to alert the other TTL and team to any pressing implementation issues.

8. ***Collaboration with WSP-South Asia*** The Bank and WSP teams will build on the collaboration established during project preparation by drawing on WSP's expertise to supervise the sanitation aspects of the project – which the WSP staff were central in designing. In addition, WSP will collaborate with *Jalanidhi-II* by providing technical support to GOK to prepare a strategy and plan for septage management across the state. WSP will bring technical assistance consultant services to the Suchithwa Mission and to KRWSA for the development of this statewide strategy and plan. This TA support will, *inter alia*, provide necessary guidance and support to KRWSA to pilot the implementation of a regional septage treatment facility in the state under *Jalanidhi-II*, thus preparing the ground for the proposed piloting of a septage treatment facility under *Jalanidhi-II*.

9. The main focus of support to implementation during the project's different major timeframes is presented below.

Time	Focus	Skills Needed	Resource Estimate	Partner Role
First twelve months	• Project launch workshop focused on: project implementation arrangements, subproject scheme cycles, staffing up at the different levels (state, regional, district, GP, community), procurement, FM, EMF, TDP and social safeguards. • Fine tuning implementation arrangements based on learning from Batch I implementation lessons. • Procurement review of Procurement Plan and the bidding documents • FM review of FM arrangements • Reviews of EMF • Reviews of TDP and other social safeguards • Reviews of technical/engineering aspects of subproject implementation – water supply and sanitation • Reviews of implementation arrangements and socio-politico implications of implementation of first multi-GP schemes • Reviews of Statewide Development Program generally and the workd of the change task force specifically • Design and initiate impact evaluation studies	TTL Co-TTL/social specialist Institutional Specialist Engineering Specialist Environmental Specialist Sanitation Specialist Procurement Specialist FM Specialist M&E Specialist	10 staff weeks (SWs) 6 SWs 5 SWs 5 SWs 4 SWs 5 SWs 4 SWs 4 SWs 4 SWs	N/A
12-48 months	• Fine tuning implementation arrangements based on learning from ongoing batches • Procurement review including development of procurement training modules • FM review of FM arrangements • Reviews of EMF • Reviews of TDP and other social safeguards • Reviews of technical/engineering aspects of subproject implementation – water supply and sanitation • Reviews of implementation progress and socio-politico implications of implementation of multi-GP schemes • Support to implementation of task force recommendations • Support to implementation of other key aspects of Statewide Development Program and related issues, such as septage management plan, WRM-WSS linkages, sector M&E system, *etc* • Continue impact evaluation studies	TTL Co-TTL/social specialist Institutional Specialist Engineering Specialist Environmental Specialist Sanitation Specialist Procurement Specialist FM Specialist M&E Specialist	30 staff weeks (SWs) 15 SWs 15 SWs 15 SWs 10 SWs 15 SWs 10 SWs 10 SWs 3 SWs	N/A
Other	• Ongoing implementation review including: procurement, FM, EMF, TDP, social safeguards, technical/engineering, management models of large WS and multi-GP schemes	TTL Co-TTL/social specialist Institutional Specialist Engineering Specialist	20 staff weeks (SWs) 10 SWs 10 SWs	N/A

	• Continued support to implementation of task force recommendations and other key aspects of Statewide Development Program • Finalized impact evaluation studies • Implementation Completion Report preparation	Environmental Specialist Sanitation Specialist Procurement Specialist FM Specialist M&E Specialist	10 SWs 5 SWs 10 SWs 5 SWs 5 SWs 3 SWs	

II. Skills Mix Required – see above

Skills Needed	Number of Staff Weeks	Number of Trips	Comments

III. Partners

Name	Institution/Country	Role
Water and Sanitation Program	WSP-South Asia	Supervision of sanitation aspects of project generally and statewide septage management strategy and play synergies specifically.

Annex 6: Team Composition

INDIA: SECOND KERALA RURAL WATER SUPPLY AND SANITATION PROJECT

World Bank staff and consultants who worked on the project:

Name	Title	Unit
Martin Gambrill	Senior Water Engineer and Task Team Leader	SASDU
R.R. Mohan	Co-TTL, Senior Social Development Specialist	SASDS
G.V. Abhyankar	Senior WSS Specialist, consultant	SASDU
Kishor Uprety	Senior Counsel	LEGES
Priti Kumar	Senior Environment Specialist	SASDI
Priti Jain	Senior Procurement Specialist	SARPS
Atul Deshpande	Senior Financial Management Specialist	SARFM
Abdu Muwonge	Economist	SASDU
D.M. Mohan	Senior WSS Engineer, consultant	SASDU
Pratibha Mistry	Water Resources Specialist	SASDI
Suseel Samuel	WSS Specialist	TWISA
Junxue Chu	Senior Finance Officer	CTRLN
Oscar Alvarado	Senior WSS Specialist	LCSUW
Mamata Baruah	Program Assistant	SASDO
Michele Lisa Chen	Program Assistant	SASDO
Parimal Sadaphal	Environmental Specialist, consultant	SASDI
Anil Das	PIP, ORAF and GAAP consultant	SASDU
Maria Angelica Sotomayor	Senior Economist, peer reviewer	ECSS6
Elizabeth Kleemeier	Senior WSS Specialist, peer reviewer	TWIWA
Ventura Bengochea	Lead WSS Specialist, peer reviewer	AFTUW
Parameswaran Iyer	Senior WSS Specialist, peer reviewer	MNSWA

Annex 7: Governance and Accountability Action Plan

INDIA: SECOND KERALA RURAL WATER SUPPLY AND SANITATION PROJECT

1. The proposed project will strengthen and accelerate the ongoing process of decentralization and devolvement of governance to Gram Panchayats (GPs) in Kerala through supporting decentralized service delivery systems with well-defined roles and responsibilities for the GPs and the beneficiary groups (BGs) for development, planning, design, implementation, operation and maintenance of water supply and sanitation schemes to meet their needs.

2. The objective of the Governance and Accountability Action Plan (GAAP) is to strengthen overall governance of the project in order to minimize the risks related to deviation from agreed processes and to the wrong utilization of project funds. The GAAP arrangements under the project build on its demand responsive approach in which participation by GPs and BGs in the project, and access to project funds, is based on a fully participatory and bottom-up approach in order to ensure that: (i) the project stakeholders are actively engaged in the development of the subprojects; (ii) implementation, operation and maintenance of subprojects is lead by the BGs; (iii) the stakeholders can provide feedback and air grievances (if any) on the project's *modus operandi*, generally, or on subproject implementation issues, more specifically; (iv) redressal mechanisms are satisfactory to the stakeholders. These measures will contribute to maximizing the effective and efficient utilization of project funds. The project's GAAP initiatives are centered on the following project design aspects and are designed to mitigate against potential governance risks that may impede the project from achieving its objectives:

a) The bottom-up selection of the GPs and the BGs through transparent GP ranking criteria and through adopting the Jalanidhi principles and 'rules of the game' for accessing funds;
b) A two-tier decentralized subproject implementation and service delivery approach which is integrated from the bottom-up, from the BGs to the GPs
c) Well-defined roles and responsibilities of all stakeholders for scheme planning, design, implementation, operation and maintenance;
d) Capacity support from external agencies to the different stakeholders at the various levels to help them in implementing the project;
e) Community-based procurement processes adopted for smaller works (which are the majority under the project) resulting in efficient contracting and lowered capital investment costs;Independent construction quality surveillance;
f) Social audits and society oversight;
g) Performance assessments of works implemented under the project;
h) Statewide beneficiary assessments through annual stratified household consumer satisfaction surveys;
i) Grievance redressal measures, and public disclosures of the subprojects that are proposed to be funded under the project, or are already being implemented, and the benefits of the subprojects;
j) Regular technical, procurement and financial audits;
k) Establishment of MIS, financial management and monitoring and evaluation (M&E) systems;
l) Submission of reports by the respective stakeholder at various stages of planning and implementation; and

m) Development of policy and legal frameworks to facilitate ownership and O&M of assets by the respective stakeholders.

3. For every stage in the implementation cycle for the subprojects funded under the project, potential risks have been identified and corresponding mitigation measures developed within the project, such that they are aligned with the project's existing institutional and implementation arrangements, which themselves build on the successful implementation experience from the predecessor project. These measures also include taking into account the fact that all agencies involved in the project are governed by GOI's Right to Information (RTI) Act. GOK has agreed to the management and reporting arrangements in the project which will enhance and ensure good governance of the community-based institutions (the BGs and the federations of BGs) partnering the project. Contracts under the project's components B and C, including the recruitment of support organizations and consultants to undertake the project's social and technical support for mobilization, planning, preparing engineering designs, procuring, supervising works, *etc*, are procured by the KRWSA PMU/RPMU together with the GP, the support organization, the BG, the Scheme Level Committee or other entity as indicated in the following table – but always with the oversight and guidance of the KRWSA PMU. All activities under Component A, including sector studies and strengthening initiatives, project management and service delivery improvement proposals, will be procured directly by the KRWSA PMU.

Component B: Technical Assistance to Implementing Agencies	B1: Intra-GP Rural Water Supply Schemes B2: Pilot Multi-GP Water Supply Schemes B3: Sanitation Schemes	• KRWSA and GPs through SOs • KRWSA, KWA and GPs with SOs • KRWSA and GPs through SOs
Component C: Infrastructure Development	C1: Intra-GP Rural Water Supply Schemes C2: Pilot Multi GP Water Supply Schemes C4: Sanitation Schemes	• GPs with BGs and SOs • KWA and GPs with SLCs and SOs • GPs and BGs with SOs

4. The GPs, RMPUs and KWA will have the responsibility of reporting to the KRWSA PMU on the respective contracts they are undertaking under the Project. The PMU will have significant governance responsibilities, including overseeing the implementation of project activities carried out by other project implementing agencies and ensuring that the correct procurement procedures are followed.\

5. A detailed Project Implementation Plan (PIP) and separate operational manuals for each sub-activity under the project have been prepared, describing the project's *modus operandi* for implementation and for monitoring of outputs/outcomes.

6. Independent agencies will be appointed to assess impact evaluation of the various key activities and processes implemented under the project, through consumer household surveys and other M&E mechanisms. Reviews to evaluate the institutional response efficiency for grievances will also be undertaken. A annual review of the implementation of subprojects, based on pre-decided parameters and methodologies, will be carried out which should also include the following:

- Assessments of BG subproject requests *vis-à-vis* the actual approved subprojects to ensure proposals aren't materially modified as the requests proceed up the ladder of approval (from BG to GP to RPMU to PMU);
- Timely evaluation and approval of the BG subproject investment requests, by the GPWSC/SLC, RPMU and KRWSA;
- Timely transfer of funds down the chain from KRWSA, to the RMPUs and thence to the GPs and BGs;
- Utilization of funds for the intended/approved purpose;
- Time and quality of responses regarding grievances/complaints and or RTI applications;
- Quality of record keeping;
- Implementation progress in line with the project's subproject cycles; and
- State of access to all project related documentation.

7. The matrix below summarizes the risks and mitigating measures which comprise the GAAP.

Governance and Accountability Action Plan

Transaction	Risk	Mitigation Measures and Indicators	Responsibility	Cost (US$ million)
a) Select universe of participating GPs	Decision on selection of GPs might be influenced by vested interests.	GPs for *Jalanidhi-II* have been selected based on the following criteria: *Indicators:* ***GPs*** *- willingness of the GPs to participate in the project;* *- extent of water supply coverage in the GPs including coverage of BPL households;* *- quality of the water or ground water source;* *- poverty levels based on the total number of BPL households vis-à-vis total households in the GP;* *- population of scheduled caste and or scheduled tribes;* *- efficiency in implementing development projects;* *- GPs with clean audit certification without;* *- any qualified opinion as required under KLGSDP project.* ***For tTribal GPs*** In addition to the above indicators, the following have also been taken into account: *- total tribal population in the district* *- % of tribal concentration in the GP vis-à-vis the total population of GP*	Managed by PMU	Annual pro-rated share of following: Documentation costs – nil (already completed)
b) Determine amount of grant allocation to each qualifying GP	Subproject funding allocation (both amount and timeliness) to each GP could be manipulated.	Subproject funding amounts will be determined based on the subprojects developed by beneficiaries for implementation in their local areas. As regards multi-GP schemes the allocation will be based on the cost of rehabilitation/reconstruction of the supply source and the number of villages/beneficiaries covered in the GPs and their requirement levels.	Undertaken by GPs and approved by KRWSA. World Bank supervision and prior review based on thresholds. Prepared by GP with assistance of RPMU and reviewed by KWA	- Bank supervision budget; - project management overhead (PMU) - Project management overhead (PMU)
c) Local GP control/management of funds	Misappropriation of project funds at GP/BG levels.	Strengthened accounting practices in GPs/BGs, fostered by: - Systems strengthening through introduction of MIS, - Timely internal and external audits by RPMUs and random audits by PMU; external audits by chartered accountancy firms engaged under the project; - Random checking of books of accounts by RPMUs; - Greater transparency and accountability of budget/expenditure to community; - Capacity building of accounts staff in BG and GPs.	PMU/RMPUs	Annual pro-rated share of following: - Systems improvements: (US$ 0.7) - Financial audits: (US$ 0.2) - Communication strategy: (US$ 0.8)

Transaction	Risk	Mitigation Measures and Indicators	Responsibility	Cost (US$ million)
				- Project management and supervision (PMU) (US$ 18.0)
d) Effective use of grant resources by GPs/BGs	Elite capture resulting in funds being prioritized for works in their areas to, for example, augment supply to meet higher consumption requirements; use of funds for purposes not in line with local needs or with project objective, or for reasons other than those prioritized under the community planning process.	Increased transparency of resource utilization through engagement of beneficiary groups in planning, implementation, operation and maintenance of assets/systems; public reporting by GPs Review of beneficiary data and other reports of discussion, review of planning and subproject designs by beneficiary groups, and support organizations. *Indicators:* *- Successful agreements between GPs and BGs* *- Correct implementation and operation of assets by BGs,* *- Numbers of GPs producing and disseminating local public reports.*	PMU, RPMUs and GPs. This is verified through performance assessment process.	Annual pro-rated share of following: - Technical audits: (US$ 0.8) - GPs and BGs performance impact analyses (US$ 2.5) in 2nd, 3rd and 4th years - Project Management Unit (PMU) - GP/BG service delivery assessments
e) Procurement of goods, works and services by the GP/BGs level	Corrupt or fraudulent practices at GP/BGs level in the award and execution of contracts.	(i) Improved procurement processes; (ii) Ongoing internal performance audit process; (iii) Capacity building program focused on strengthening procurement capacity. *Indicators:* *- Independent procurement and safeguards performance assessment of about 10 % random sample GPs/BGs 18 months after project effectiveness;* *- Annual independent audits of GPs/BGs*	PMU, , RPMUs and SOs	Annual pro-rated share of following: - Capacity building: (US$ 1.0) - Internal auditing process (part of financial audit costs) - Interim safeguard and procurement reviews (US$ 0.8) (end of each year; part of technical and safeguard costs) - GP and BG performance impact analyses (already costed above)
f) Procurement of goods and services at State level and	Corrupt or fraudulent practices in the award and execution of contracts.	(i) Acceptable procurement procedures adopted and implemented; (ii) Prior and post-procurement reviews to be conducted;	GPs, SOs, RPMUs, oversight by KRWSA, World Bank supervision missions	Pro-rated share of Bank supervision.

Transaction	Risk	Mitigation Measures and Indicators	Responsibility	Cost (US$ million)
RPMUs, GPs and BGs.		(iii) Project audits; and (iv) processing and approval by GPWSC/SLCs as applicable *Indicators:* *Results of the review processes.*		
g) Use of funds by RPMUs, GPs, BGs, KRWSA, KWA *etc*.	Funds not used for agreed/intended purposes	(i) Approval of expenditure; (ii) Submission of utilization certificates to PMU; (iii) End of year audits; and (iv) Project supervision *Indicators*: *Utilization certificates and audit reports*	KRWSA, RPMUs, GPs, KWA oversight by KRWSA, World Bank supervision missions	Pro-rated share of supervision by World Bank