PROJECT IMPLEMENTATION PLAN

JALANIDHI–II

TABLE OF CONTENTS

DETAILED TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

LIST OF ANNEXES

LIST OF ABBREVIATIONS

AWRSP	Accelerated Rural Water Supply Programme
AS	Administrative Sanction
BC	Beneficiary Committee
BG	Beneficiary Group
BPL	Below Poverty Line
CAAA	Controller of Aid Accounts and Audit
CCDU	Communication and Capacity Development Unit
CAP	Community Action Plan
CEP	Community Empowerment Plan
CESS	Centre for Earth Science Studies
CSIR	Council of Industrial and Scientific Research
DPR	Detailed Project Report
DSR	Detailed Scheme Report
EA	Environmental Assessment
EDS	Environmental Data Sheet
EIA	Environmental Impact Assessment
EIRR	Economic Internal Rate of Return
EMF	Environment Management Framework
FMIS	Financial Management Information System
GAAP	Governance and Accountability Action Plan
GOI	Government of India
GOK	Government of Kerala
GP	Grama Panchayat
GPAT	Grama Panchayat Action Team
GPST	Grama Panchayat Support Team
GPWSC	Grama Panchayat-level Water Supply Committee
GSI	Geological Survey of India
HH	household
ICQS	Independent Construction quality Surveillance
IEC	Information, Education, Communication
INR	Indian Rupee(s)
IT	Information Technology

IUFR	Interim Un-audited Financial Report
KL	Kilo litre
KRWSA	Kerala Rural Water Supply and Sanitation Agency
KWA	Kerala Water Authority
lpcd	litres per capita per day
LSG	Local Self Government
LSGD	Local Self Government Department (Government of Kerala)
mcm	million cubic metres
MIS	Management Information System
MLD	Million Litres per Day
NCB	National Competitive Bidding
NGO	Non-governmental Organisation
NGRI	National Geophysical Research Institute
NICD	National Institute of Communicable Diseases
NRDWP	National Rural Drinking Water Programme
NRDWQM&S	National Rural Drinking Water Quality Monitoring & Surveillance
NREGS	National Rural Employment Guarantee Scheme
NRSC	National Remote Sensing Centre
NRW	non-revenue water
O&M	Operations and Maintenance
OHSR	Over Head Storage Reservoir
PAD	Project Appraisal Document
PMU	Project Management Unit
PRI	Panchayati Raj Institution
RGNDWM	Rajiv Gandhi National Drinking Water Mission
RPMU	Regional Project Management Unit
RWSS	rural water supply and sanitation
SBT	State Bank of Travancore
SC	Scheduled Caste
SEE	Sustainability Evaluation Exercise
SHP	sanitation hygiene promotion
SLC	Scheme-level Committee
SO	Support Organisation

ST	Scheduled Tribe
SWSM	State Water and Sanitation Mission
TA	Technical Assistance
TDP	Tribal Development Plan
TOT	Training of Trainers
TS	Technical Sanction
TSC	Total Sanitation Campaign
TSM	Total Sanitation Mission (Suchitwa Mission, Government of Kerala)
USD	United States Dollar(s)
watsan	water and sanitation
WLC	Ward-level Committee
WSS	water supply scheme

CHAPTER 1: PROJECT CONTEXT

A. KERALA: A BRIEF PROFILE

1.1 Kerala is a state in southwestern India, between North latitudes 8°18' and 12°48' and East Longitudes 74°52' and 77°22'. Covering an area of 38,863 square kilometres (sq. km), it is a narrow stretch of land—with an average width of 70 km, a maximum width of 120 km, and a coastline of 590 km. About 48 per cent of the area is highland (more than 76 m above mean sea level), 40 per cent is midland (6-76 m above mean sea level), and the remaining 12 per cent lowland.

1.2 According to the 2001 census, the total population of the state is 31.84 million of which 23.57 million (74 per cent) are rural. The Scheduled Castes (SCs) form 9.81 per cent of the population, and the Scheduled Tribes (STs) 1.14 per cent. The state is densely populated (among the highest in India) with 819 persons per sq km. The sex ratio (1058 females per 1000 males) is favourable towards women. In the rural areas, 13.28 per cent live below poverty line, as per the National Sample Survey (61st round; 2004-05).

1.3 The state is administratively organised into 14 revenue districts. (For map, see Appendix 1). The three-tier panchayat system has 14 district panchayats, 152 block panchayats, and 978 grama panchayats (GPs). There are 16,680 wards in the GPs.

B. WATER RESOURCES OF KERALA

1.4 Kerala is blessed with an average rainfall of 3,000 mm per year. There are 44 rivers and the discharge through these rivers is 77,910 mcm. The net ground water availability is 6,229.55 mcm according to the Ground Water Estimation Committee (GEC–2004) report.

1.5 The projected scenario of water resources in Kerala for 2021 indicates a demand-supply gap of 5,800 mcm. The state has sufficient water resources to meet present needs, but would face scarcity in 2025, unless storage, conveyance and regulation systems are enhanced by at least 25 per cent (over 1995 levels). This requires substantial investments and improved management practices.

C. RURAL WATER SUPPLY SECTOR STATUS IN KERALA

Water Sector Policies and Strategies

1.6 Learning from the state-led Accelerated Rural Water Supply Programme (ARWSP), and the Technology Mission (renamed Rajiv Gandhi National Drinking Water

Mission), GOI initiated Sector Reform projects in 1999-2000. The highlights of this third generation programme—Swajaldhara—have been the emphasis on community demand-driven approach with partial capital cost recovery, and 100 per cent O&M financing by users. GOI further consolidated the reforms agenda under a National Rural Drinking Water Programme (NRDWP), and revised the guidelines in 2010.

1.7 Government of Kerala (GOK) has not formulated a drinking water supply policy, but has largely followed the GOI's guidelines and priorities in rural water supply and sanitation. In 2008, GOK adopted a water policy identifying micro-watersheds as the basic units for conserving and managing water. The guiding principles of the policy were:

- Access to water is a human right.
- Ownership of water is with the State.
- Micro-watersheds are the basic units for management and conservation.
- River basins shall define water rights and regulate water use.

1.8 Accordingly, the policy encourages:

- a resource-based approach for sustainable and equitable water management;
- user participation in planning, development and management of water resources;
- rain water harvesting;
- restructuring of roles and relationships of the State and water users; and
- strengthening the capacity of panchayati raj institutions for fulfilling their responsibilities in water and sanitation, as envisaged in the Constitution.

1.9 The Policy identified sector issues and priorities. Domestic use of water was to get highest priority, followed by agriculture, power generation, agro-based industry, industrial and commercial, and others. In the management of water projects, the Policy favoured: priority for completion of pending projects; compulsory water audit for all water projects; water balance estimation at watershed, sub-basin and river-basin levels; state-level master plan for water resource development and management; drinking water supply master plan; responsibility sharing with LSGs in the case of small and medium drinking water schemes; and promotion of rain water harvesting.

1.10 The environmental interventions enunciated were: for prevention of salt water intrusion; sewerage systems in urban areas; sanitation sub-policy and action plans; recycling and reuse of water; urban watershed master plans; draught mitigation plans; and protection and conservation of wetlands.

1.11 The 2008 Policy also recommended the following interventions: data management and information system; training, and research and development; capacity building master plan; fixing of water charges to ensure O&M cost recovery; continued subsidy for the weak and the poor; citizen's charter for drinking water and irrigation water; and involvement of women in management of projects.

1.12 The water regime in Kerala has been undergoing a change. Recent developments in water sector are associated to a greater extent with improved management and institutional changes, than with investment in physical structures. As water development, production and supply shift from a supply-driven approach to a demand-responsive approach, water has increasingly come to be treated as an economic good.

1.13 Towards operationalising GOI guidelines of 2010, GOK has constituted a Task Force to undertake an appraisal of the performance of various departments and entities in the field of rural drinking water supply to ensure:

- integrated planning;
- coordination in implementation to avoid overlap and duplication;
- efficiency in expenditure through synergies;
- generation of data on the location and functioning of different schemes;
- improved MIS relating to rural drinking water supply; and
- improved monitoring policy on pricing, standards of service and evaluation system for RWS.

1.14 Regarding existing multi-GP water supply schemes, GOK has expressed interest in piloting and developing a few implementation models—as per Jalanidhi principles—for partial transfer, rehabilitation and modernisation, which could then be adopted across the rural water sector in Kerala for all multi-GP water supply schemes to fully align with GOI guidelines. GOK has announced that for each scheme, a tripartite agreement will be signed between the KRWSA, the KWA and the participating GPs, stipulating their respective roles and responsibilities.

1.15 The key legislation in Kerala relating to rural water and sanitation are: Kerala Water Supply and Sewerage Act, 1986; and Kerala Panchayat Raj Act, 1994. The 1986 Act outlines the powers of the Kerala Water Authority (KWA). The Third and Fifth Schedules of the 1994 Act specify the role of PRIs in water and sanitation. Other state legislation includes Kerala Ground Water Act, 2002, which relates to conservation of ground water, and the regulation and control of its extraction.

Water Sector Institutions

1.16 In rural Kerala, drinking water is provided by GOK [through two para-statal agencies—the Kerala Water Authority (KWA) and the Kerala Rural Water Supply and Sanitation Agency (KRWSA)] and more than a thousand LSG institutions. The sector also comprises organisations like the Communication and Capacity Development Unit (CCDU), the Ground Water Department, the Centre for Water Resources Development and Management (CWRDM) and non-governmental organisations (NGOs), who support the service providers.

1.17 The KWA was established in 1984, as an autonomous authority for the development and regulation of water supply, and waste water collection and disposal throughout the state. It maintains about 1,600 piped water supply schemes

and produces 1,860 MLD. At present, it implements urban and rural water supply projects costing Rs 50 billion (Rs 5,000 crore). Project planning activities in the state are by and large done by the KWA.

1.18 The KRWSA was established in 1999 as a special purpose vehicle to implement Jalanidhi, a World Bank-aided rural water supply and sanitation project. It has successfully developed an alternate model for service delivery based on the principle of cost recovery. It has also acquired expertise in establishing rural water supply and sanitation projects based on demand responsiveness, community ownership and sustainability of investments. Beneficiaries in 110 Grama Panchayats (GPs) maintain 3,710 water supply schemes initiated through the KRWSA.

1.19 The LSG institutions share responsibility for O&M of water supply systems, following the 73rd and 74th Constitutional Amendments, and enabling state legislation. Also, about 30%-40% of Kerala's overall plan fund allocations are expended through LSG institutions. Therefore these institutions have been important players in the sector for almost 15 years, with experience in participatory planning, and implementation of micro- and mini- drinking water projects.

1.20 CCDU is the community support unit functioning under GOK's water resources department. It has experience in implementing human resource development, and information, education, communication (IEC) aspects of the National Rural Drinking Water Quality Monitoring and Surveillance Programme (renamed by GOK as Jalasuraksha Padhathy).

1.21 The Ground Water Department also implements water supply schemes, mainly tube well-bases schemes. The topography of Kerala is undulated and it is essential to have bore wells in hilly areas where there are no sources of surface water or water conservation structures. The department has a team of engineers and drilling crew who are experienced in the construction of tube wells, bore wells, filter point wells, and subsurface dykes. Advice on rainwater harvesting is also imparted by the department, in addition to water quality testing.

1.22 Prominent NGOs in the water and sanitation sector in Kerala include the Socio-Economic Unit Foundation, and the Centre of Science and Technology for Rural Development. These organisations work along with the para-statal agencies and LSG institutions in implementing projects aided by bilateral and multi-lateral agencies. In Jalanidhi–I, many NGOs participated and built capacity in the sector.

Water Supply Coverage

1.23 Table 1.1 shows water supply coverage in Kerala. But estimates of Kerala population covered by piped water supply vary. Measured from the supply side, based on the capacity of the water supply system, the coverage of piped water supply schemes is 73 per cent of the population (85 per cent of urban population and 69 per cent of rural population). According to the 2001 census—a demand-side estimate based on actual consumption from potable source—only 23.4 per cent of households

in Kerala get drinking water from taps, hand pumps or tube wells. About 77 per cent of the households depend on wells, hand pumps, or tube/bore wells for their drinking and cooking requirements.

Table 1.1: Water Supply Coverage in Kerala (Agency-Wise), 2001

Urban/Rural	Agency	Population Covered (in lakh)	% of Urban / Rural	% of Total Population
Urban	KWA	70.04	84.69	22.00
Rural	KWA	145.01	61.52	45.54
	KRWSA	11.28	4.78	3.54
	LSG	6.35	2.69	1.99
	Total Rural	*162.64*	*68.99*	*51.07*
Overall		**232.68**		**73.07**
Data sources: Census 2001 census, KWA, KRWSA.				

1.24 According to the Government of India's Department of Drinking Water and Sanitation, 60.57 per cent of the population in Kerala enjoy access to protected water (40 lpcd). A further 39.3 per cent have access, but at inadequate levels and of unprotected quality. There are no non-covered habitations in Kerala; all 11,883 habitations are 'fully covered'. Coverage, in this estimate dated 1 April 2010, includes not only piped water supply schemes, but also point sources such as open wells, ponds, tube wells and bore wells.

1.25 The remaining population has to depend on sources like open draw wells, ponds etc. The overall piped water supply coverage status (with reference to 2001 census) contributed by schemes implemented & operated by various agencies is summarised below

1.26 Even though the piped water Supply coverage in the rural sector of Kerala is estimated to be 69 per cent, the actual service level of coverage is not in conformity with national standards. Only about 60 per cent of the population is having access to the required quantity and quality of protected Water. (IMIS –Department of Drinking Water, GOI.) The Schemes are designed for a minimum percapita supply of 40 lpcd. But the actual availability of water at the end user is during scarcity period is far less than this level. Majority of the KWA schemes which cover about 62 per cent of the rural population of Kerala are in very pathetic physical conditions due to inadequate O&M.

Water Supply Investments in Recent Years

1.27 The KWA is the major stakeholder in the water sector in the state. The overall investment made through the KWA in the last five years was Rs 29.16 billion (Rs 2,916 crore). During the 11th Plan, the average annual capital investment through the KWA in the water sector is nearly Rs 7.5 billion (Rs 750 crore). About 80 per

cent of KWA investments in rural drinking water supply are in comprehensive or multi-GP schemes, using surface water sources and with treatment plants.

1.28 Since 2000, GOK has implemented various reform projects in the rural water supply and sanitation sector in Kerala. They include:

1. Kerala Rural Water Supply and Sanitation Project (Jalanidhi–I)—from 2000 to 2010, in 13 districts, aided by the World Bank, and implemented by KRWSA. About 3,700 water supply schemes, including 15 large water supply schemes, were implemented and handed over to beneficiaries for O&M.

2. Sector Reform Projects—in two districts (Kollam, Kasaragod), aided by GOI, and implemented by the respective District Panchayats and the GPs. About 600 small community-managed water supply schemes were implemented under this programme.

3. Rural drinking water projects under decentralisation programmes (Janakeeyaasuthranam, Kerala Vikasana Padhathi)—in all districts, under GOK's State Plan, and implemented by PRIs.

4. Rural drinking water and sanitation project (Jeevadhara)—in two districts (Alappuzha, Idukki), aided by the Royal Netherlands Embassy, and implemented by SEUF.

5. Rain water harvesting schemes (Giridhara)—in one district (Wayanad), aided by GOI, and implemented by SEUF.

Inventory of Kerala's Current Water Supply Schemes

1.29 The KWA is implementing the following programmes:

1. Kerala Water Supply Project—aided by the Japan International Cooperation Agency. The project envisages implementation of five large independent water supply schemes spread over five distinct areas and districts of the state. The estimated project cost is INR 2,987 crore and the up-to-date expenditure is INR 2,623 crore. It is targeted to have additional coverage of 7 lakh rural population through these schemes by the end of 2012. It is expected that the full commissioning of the project as a whole shall be accomplished by mid-2013.

2. Kerala Sustainable Urban Development Project (water supply and sewerage components)—aided by the Asian Development Bank.

3. Jawaharlal Nehru Urban Renewal Mission (water supply and sewerage components)—aided by GOI. It includes the Urban Infrastructure Development Scheme for Small and Medium Towns, under implementation in 22 towns of Kerala.

4. Special Package Assisted by NABARD (SPAN) from National Bank for Agriculture and Rural Development (NABARD) for completion of water supply schemes initiated with LIC assistance, and rural water supply projects under the Rural Infrastructure Development Fund with assistance from NABARD. At an estimated cost of INR 844 crore, 39 rural water projects are being implemented with targeted completion by March 2013. Additional coverage of rural population of 11.5 lakh is expected.

5. Water supply projects under Special Assistance Against Recession in Kerala (SAARK)

6. Accelerated Rural Water Supply Programme and Rajiv Gandhi National Drinking Water Mission—assistance from GOI. The committed schemes in implementation cost INR 863 crore and intend to benefit about 22 lakh people, including additional coverage of 4 lakh people. These projects are targeted to be completed by the end of the 11th plan (2012).

7. Varsha—community-managed rain water harvesting scheme

8. Community-managed rural water supply and sanitation projects (Swajaldhara)

9. Other State Plan projects relating to water supply—18 on-going rural water supply projects expect state plan funding for completion. The estimated cost of these projects is INR 439 crore but the expenditure has been only INR 5.57 crore. These projects intend to benefit about 18 lakh rural population, including additional coverage of 2 lakh people. The progress of these projects is slow, and it is expected that these projects will be accelerated and completed by the end of 2014.

1.30 GOK allots an average of INR 35–40 crore every year through PRIs for drinking water projects. The present schemes costing about INR 70 crore have been taken up for implementation under various heads such as new schemes, source improvements, pipe line extensions, etc. The sanctioned projects are to be completed within the next two years and fresh allocations are also expected in the coming years. An additional coverage of about 0.5 lakh people is expected through the committed schemes.

1.31 Projects with central assistance under the NRDWP, externally-aided projects, NABARD-assisted projects, projects under state Plan funding, and PRI schemes under decentralised planning process are in the pipeline at various stages.

1.32 NRDWP schemes: The NRDWP is expected to continue up to the completion of the 11th plan (2012). The programme might extend into the 12th plan too with or without modifications in guidelines. The state is likely to annually present projects costing INR 400 crore under the various components of the programme. The targeted additional coverage shall be 1 lakh every year in the 12th plan (3 lakh up to 2016). They include schemes for additional coverage, source sustainability, quality affected areas, enhancement of service levels, well sanitization, and strengthening of

water quality monitoring. Additional central assistance is expected for the completion of computerisation of the KWA under RGNDWM, for which the proposal is under consideration by GOI.

1.33 Jalanidhi–II under World Bank assistance: Inspired by the success of Jalanidhi–I, which was implemented in 112 GPs of the state, GOK is proposing a Project of about INR 1,022 crore. The Project was cleared by GOI and paused for loan assistance from IDA. The project shall be completed by the middle of 2017. The Project envisages additional water supply coverage at the rate of 70 lpcd to about 11 lakh population (2.4 lakh households) and full sanitation coverage of 200 GPs.

1.34 Ministry of External Affairs, GOI has cleared the integrated project for rural water supply and sanitation in 14 GPs of Kuttanad in Alappuzha district, costing INR 316 crore. The project envisages enhanced water and sanitation services to about 2.6 lakh people of Kuttanad taluk of Alappuzha district in the coming years. The project is expected to be completed by 2016.

1.35 NABARD Assisted projects: GOK proposes to avail of continued assistance under RIDF from the NABARD in rural water supply in the coming years. New and rehabilitation projects with enhanced service levels are under preparation by KWA for implementation under this. It is proposed to avail of loan assistance for projects costing about INR 150 crore, which shall be taken up for implementation from 2012 onwards. Additional coverage of 1.5 lakh population by 2016 is targeted.

1.36 Decentralised planning programme: The funding pattern under this head—schemes implemented through PRIs—will continue at an enhanced rate during the 12th plan and the expected annual outlay is INR 90 crore. The additional population targeted to be covered during 2012–16 is 1.8 lakh.

1.37 In the medium-term, to fill the gap in rural and urban areas, it is proposed to avail of external assistance. The proposed IDA loan of INR 1,000 crore will be an effective instrument in this regard.

1.38 It is expected that 27 lakh rural population will be covered through on-going programmes in the state by end-2013. The expected annual expenditure is about INR 1,150 crore. The planned sharing of implementation responsibilities is presented in the responsibility matrix in Table 1.2.

Table 1.2: Programme Implementation - Responsibility Matrix					
Programme	**Responsibility**				
	Project preparation, Implementation management	**Implementation**	**Capacity building support**	**Technical support**	**O&M**
Jalanidhi	KRWSA	PRIs, BGs	WSSO-CCDU, NGOs	KWA (rehabilitation, multi-GP schemes) NGOs, GP teams (others)	BG, GP KWA (common components of multi-GP schemes)
LSG schemes	PRIs	PRIs, BGs	WSSO-CCDU	KWA, LSGD	BG/GP
NABARD schemes	KWA	KWA, PRIs, BGs	WSSO-CCDU	KWA	BG, GP, KWA
NRDWP - Sanitation, Source Sustainability, GWR, etc.	KRWSA, PRIs, LSGD	PRIs, BGs	WSSO-CCDU, NGOs	KWA, KRWSA, LSGD	BG, GP
NRDWP - WS	KWA	KWA, PRIs, BGs	WSSO-CCDU	KWA	BG, GP, KWA
Other externally-aided projects	KWA	KWA, PRIs, BGs (Hardware) PRIs, BGs (Software)	WSSO-CCDU, NGOs	KWA	BG, GP KWA (bulk-metered supply, O&M service contracts)
State Plan	KWA	KWA/PRIs& BGs	WSSO-CCDU	KWA	BG, GP, KWA
Source: WASCON, *Medium Term RWS Programme (2011-2016)*, 2010.					

Sample O&M Performance Assessment of Existing Water Supply Schemes

1.39 The KWA has a defined system for O&M of its schemes. But the KWA system delivers poorly because of financially unsustainable practices, operational inefficiencies, lack of incentive systems, and weak administrative will.

1.40 The average cost of production of KWA water is Rs 11.12 per kilolitre (KL), as against average water charges of Rs 6.35 per KL. The KWA thus incurs a loss of about Rs 5 per KL of water produced. This neglect of the principle of cost recovery reveals itself at the macro level too, in the KWA's average revenue deficit: about Rs 2.50–2.80 billion (Rs 250–280 crore).

1.41 Also, the annual outlay for O&M is inadequate, resulting in the deterioration of the physical condition of assets. Some assets have been created with borrowed capital, and further borrowing to rebuild these assets is a concern for fiscal debt managers.

1.42 Of the O&M expenditure, about 75 per cent of the direct expenditure is towards power charges.

Assessment of Sector Information Systems, and M&E Systems

1.43 The KWA has a water quality monitoring system, which includes a network of water testing laboratories in all districts of the state. These labs are provided with facilities required for the analysis of routine water quality parameters. The KWA's quality control wing functions under the direct supervision of the Member (Technical).

1.44 There is no system to monitor and ensure the quality of water supplied through the schemes implemented and maintained by the LSGs and the KRWSA. Random samples from rural areas are collected and analysed by various organisations, including the KWA, the CCDU, and the Ground Water Department.

Current Capacity Building Programmes

1.45 Capacity building, in this context, refers to the process of upgrading knowledge, skills and management practices, together with developing an attitude to plan, implement, maintain and manage rural water supply schemes.

1.46 The existing capacity building institutions themselves lack capacities including infrastructure, manpower, professionalism and accountability. Almost every department has a human resource or training division, but they are weak in assessing capacity building needs in the context of sectoral objectives.

1.47 In Jalanidhi–I, the capacity building programme for stakeholders was planned and executed in batches by the KRWSA's human resources development division, through an in-house capacity building cell (CapCell). On completion of Jalanidhi–I,

Capcell was wound up. Between 2000 and 2008, the KRWSA arranged 20,238 capacity building events, and trained 1,191,240 persons. Some of the elements in KRWSA's capacity building programme were: learning by doing, hiring of experts, supplementing classroom learning with field exposure, development of training calendar, participatory appraisals, preparation of technical manual, application of visual media in training, modification of training modules based on demands from the field, parallel sessions, district-level training coordinators, cascading of training, network of resource centres, remedial and refresher training, trial sessions, and documentation of case studies.

Water Sector Issues in Kerala

1.48 Despite significant achievements in drinking water in Kerala, full coverage and desired service levels remain elusive. Also, assets created suffer from lack of proper management and maintenance. Many schemes, including of the KWA, operate well below design norms, and need further investments for improved efficiency. Institutionally, the key agencies—KRWSA, KWA, LSGD—will benefit from strengthening of capacity and re-orientation to meet the emerging challenges in the sector. Key issues in the drinking water sector in Kerala are briefly outlined below.

1.49 ***Inadequate service levels in summer***: During summer months, water requirement is greater but service level falls due to power problems and source failures. Single GP schemes implemented by KWA are designed for 8-hour supply, but during summer months only 4-6 hours' supply is available due to low voltage. Similarly, most Multi GP schemes are designed for 16 hours, but only 8-12 hours' supply is available in summer. Comprehensive regional rural water supply schemes covering more than 2 GPs are designed for 23 hours' operation, but such service levels are not met in all seasons due to non-availability of power during peak hours (6 p.m. to 10 p.m.). Also, due to drying up of sources and sustainability problems, source failures result. Sustainability of the limited source is possible through implementation of artificial recharge structure and water conservation measures on a watershed basis.

1.50 ***Water quality problems***: The major water quality problems in Kerala are: widespread bacteriological contamination of open wells; near-universal presence of excess iron; fluoride in ground water (in Palakkad and Alappuzha districts); salinity (mainly in coastal tracts, and in parts of Palakkad district); excess nitrate (in Pathanamthitta district); low pH value; and excess turbidity. Surface water being the source of most KWA large and medium schemes, the most common quality concerns are turbidity and bacteriological contamination. Overall environmental degradation is progressively affecting water quality in the state.

1.51 ***Inadequate monitoring facilities***: Detailed, scientific assessment of the presence of pesticides and industrial chemicals in water sources is yet to be undertaken in Kerala, for which, adequate facilities are not available in the state. At a broad level, there is no effective monitoring and evaluation system in the performance of schemes, including service status. The existing system is weak in terms of design,

indicators and data collection. Data collected are scattered, and flow only upwards, without any subsequent downward or horizontal flows. Commissioned projects are monitored irregularly, management decisions for renovation and new project formulation are taken after rapid spot assessments (by internal mechanism or external agencies), and the system lacks co-ordination and synthesis at the top.

1.52 ***Lack of a cohesive sectoral approach***: Subsidized schemes co-exist with community-managed, cost-sharing schemes. Lack of coordination among agencies, duplication of efforts, and resource wastage remain unresolved problems in the water sector.

1.53 ***Issues in project planning and implementation***: Project planning sometimes does not pay adequate attention to sustainability of selected water sources, and this leads to avoidable failure of schemes during O&M. Significant delays in project preparation and approval result in outdated cost estimates that require revision even before commencement of implementation. In project implementation, the following are major issues: land availability and acquisition, time and cost overruns, contract management, and insufficient functional autonomy. In practice, the KWA's autonomy (envisaged by the 1986 Act) is tied up by limited financial powers. The KWA's powers in tariff fixation, tariff revision, and project implementation are exercised by the GOK. For example, GOK has ordered 15 per cent annual increase in water tariff, but because prior approval is mandatory, regular revision of tariff does not happen. (Tariffs were unified and revised in 1992, 1999 and 2008.) Also, since 2007, costs of building materials and labour have risen sharply, but it has not been accompanied by corresponding revision in KWA's financial powers. The resultant waiting for GOK clearance, which takes 4–6 months, leads to delays in tenders and contracting for schemes above Rs 50 million (Rs 5 crore).

1.54 ***Inadequate focus on water conservation***: Despite high rainfall and reasonable spread in a year, most sources dry up during summer in Kerala. Yet a culture of water conservation is relatively absent in the state. Degradation of river systems and wetland ecosystems has depleted the ground water table at many places. As per GEC 2004, five administrative blocks in Kerala are overexploited, eleven blocks are critical, and thirty are semi-critical. Traditional water harvesting structures like ponds largely remain neglected. Roof top rain water harvesting has potential in places where ground water, surface water or pipe water are not available.

D. RURAL SANITATION SECTOR STATUS IN KERALA

Sanitation Sector Policies and Strategies

1.55 The concept of sanitation was earlier limited to disposal of human excreta by cesspools, open ditches, bucket system, pit latrines, and the like. Today, the concept is more comprehensive and includes disposal of solid and liquid waste (excreta, garbage, wastewater), and hygiene (personal, home/domestic, and environment).

1.56 The Central Rural Sanitation Programme was restructured in 1999 to make it more demand-driven and people-centred. Based on the principle of 'low to no subsidy', nominal subsidy is given to rural poor households for construction of toilets. The Total Sanitation Campaign (TSC) is under implementation in Kerala, with assistance from GOI. The programme: (i) generates felt demand for sanitation facilities through awareness creation and health education; (ii) promotes hygiene education and provides facilities for students in schools and anganwadis; (iii) encourages cost-effective and appropriate technologies in sanitation; and (iv) promotes the conversion of dry latrines to pour flush latrines. It is believed that Kerala is now free from open defecation and manual scavenging.

Sanitation Sector Institutions

1.57 The sanitation programmes in the state are implemented through the Suchitwa Mission. GOK established it by integrating two agencies (Kerala Total Sanitation and Health Mission, Clean Kerala Mission) that were providing technology and capacity building support to LSGs. The setting up of a unified Mission has minimised duplication and wastage of resources.

1.58 The Suchitwa Mission coordinates and monitors the Total Sanitation Campaign in Kerala. It also has built up expertise in enabling urban and rural local bodies to establish solid waste management systems. The Mission has initiated institutional reforms in the sanitation sector and launched a detailed action plan named 'Malinya Muktha Keralam'.

1.59 With the assistance of GOI, a Communication and Capacity Development Unit (CCDU) was set up in June 2008 in Kerala's Suchitwa Mission. It develops communication strategies for reform initiatives in the sanitation sector, and provides training to functionaries at all levels. CCDU also provides inputs on human resource development and IEC aspects of sanitation schemes in the state.

Sanitation Coverage

1.60 In 2005, sanitation coverage in Kerala was 96 per cent, the highest in India. It was more or less the same in urban (98.3 per cent) and rural areas (94.9 per cent). The equitable spread is an outcome of efforts since the 1950's. Since 2005, the Total Sanitation Campaign has been active in Kerala, and it is believed that sanitation coverage has improved further.

1.61 Out of 978 GPs in the state, 972 have achieved 100 per cent sanitation coverage.

1.62 In the initial days, through successful extension, single leach pit latrines with water seal bowls (ESP latrines) were constructed on an extensive scale. The state made strides thereafter under the Central Rural Sanitation Programme (launched in 1986) and the state-level People's Plan (launched in 1996). Also, historically, the state has been ahead of others in providing toilet facilities in schools and anganwadis, and in

reducing water-borne diseases and sanitation-related vector-borne diseases (like malaria and filaria). These successes—achieved through literacy, public action, and responsive government—have contributed to high human development.

Sanitation Investments in the Past 5 Years

1.63 In the last ten years, LSGs have been active in the field of sanitation.

1.64 Out of the 978 GPs in the state, 972 have so far won the Nirmal Grama Puraskar. The award has also been bagged by 106 Block Panchayats (out of the 152) and 6 District Panchayats (out of the 14), which are in the final stage of achieving full coverage.

Inventory of Kerala's Current Sanitation Schemes

1.65 The following programmes, in line with national policy and guidelines, have been developed and are being implemented in the sanitation sector in the state.

- Malinya Muktha Keralam Action Plan
- Total Sanitation Campaign
- Solid waste management
- Liquid waste management

Sanitation Sector Issues in Kerala

1.66 The sanitation sector is characterised by second generation problems, in addition to issues seen in an urbanising region.

1.67 Specific issues identified are: (i) those left out are difficult to reach, and a strategic shift is called for to achieve 100 per cent coverage; (ii) extensive biological contamination of water sources due to the significant number of leach pit latrines, which were instrumental in achieving wide sanitation coverage; (iii) solid waste management; and (iv) urban sewerage; (v) Kerala has the highest number of hospitals per population. It is estimated that solid waste and liquid waste generation per hospital per bed ranges from 1.2kg–2.0kg and 200–350 litres respectively. Also, 15 per cent of hospital waste is infectious and toxic, posing additional challenges in waste management.

1.68 A large number of self-financed latrines (constructed by individual effort) do not conform to design standards; even in government-sponsored programmes, under which subsidised latrines are constructed, adherence to design specifications is poor due to weak enforcement.

1.69 Institutionally, the key agencies—KRWSA, KWA, LSGs, Suchitwa Mission—will benefit from strengthening of capacity and re-orientation to meet the emerging challenges in the sector.

E. DECENTRALISATION AND RWSS IN KERALA

GOK Policy and Implementation Experiences of Decentralisation

1.70 In 1992, the 73rd and 74th Constitutional Amendments were passed, envisaging decentralised governance. Within two years, Kerala passed enabling legislation at the state-level—the Kerala Panchayat Raj Act 1994. Accordingly, a three-tier system—with panchayats at district, block, and grama levels—was established. The 1994 Act was amended in the light of experience, most comprehensively in 1999. On the whole, GOK policies on decentralisation have been encouraging.

1.71 From 1996, GOK gave a thrust to decentralisation. Under the People's Plan Campaign, about 30–40% of the state's five-year Plan funds were earmarked for the three tiers of local self-government. Citizens were mobilised to participate in local-level planning, with the help of voluntary agencies. The Campaign won international attention for the scale of participatory planning, and devolution of funds to grass roots. In subsequent years, however, GOK was unable to build on the successes of the Campaign, and ensure sustainable and effective decentralisation. But GPs in Kerala continue to spend around Rs 50–70 million (Rs 5–7 crore) each year through the plan process, and have built significant capacity over the past 15 years.

1.72 In recent years, GOK has undertaken administrative decentralisation, thanks to incentives in the GOI's rural development programmes. The availability of funds with LSG institutions, for health and other purposes, has enhanced the capacity of panchayats to deliver services.

Devolution of RWSS Responsibilities to PRIs in Kerala

1.73 As per state legislation in Kerala, the following are functions of the GP: management of water supply schemes within a village panchayat, setting up of water supply schemes within a village panchayat, and implementation of sanitation programmes. Implementation of water supply schemes covering more than one village panchayat is a function of the District Panchayat.

1.74 Most plan fund allocations from GOK have been utilised for extending existing KWA schemes to non-covered or partially-covered areas. A few LSGs have implemented standalone mini water supply schemes for non-covered habitations and pockets.

1.75 LSGs' ability to maintain schemes in a sustainable way is adversely affected by poor tariff administration. LSG water schemes face a matrix of low revenues, high costs, unsatisfactory services, and financial crunch.

1.76 There is no system for monitoring and evaluation of rural water and sanitation schemes. Information collected randomly is pushed upwards in government, but

there is no downward or horizontal flow of meaningful data, even to GPs for discussion and decision-making.

1.77 In 1999, GOK issued orders transferring 1,050 single GP schemes of the KWA to the respective GPs, but transfers have been effected in only a few schemes. Even where handed over, the achievements are not satisfactory. Under Jalanidhi–I, it was mandatory for GPs to take over the single GP schemes of the KWA, rehabilitate them, and hand them over to beneficiary groups (BGs). All Jalanidhi GPs took over their respective schemes, and in about a hundred schemes, rehabilitation and handing over to BGs too were effected. A few schemes were operated by the GPs without any rehabilitation. Since the LSGs are the potential owners of the schemes, it is essential to have a fully transparent handover procedure so that the implications of taking over are fully understood by the PRIs. Similarly, concerted efforts are necessary for the rehabilitation and renovation of the multi-GP schemes maintained by KWA.

1.78 Participation of LSGs in KWA's project planning activities is limited. LSGs' own decentralised planning witnesses year-end rush to accomplish expenditure targets. In the water sector, this sometimes translates into hasty preparation of projects, deposit of funds with the KWA in March, and quick clearances overlooking technical and functional discrepancies. LSG investment in the sector is sometimes used for unscientific pipeline extensions of KWA schemes, rather than implementation of new piped water supply schemes.

1.79 Only 126 GPs have land for waste treatment. Full-fledged treatment facilities are available only in seven GPs. Partial facilities (biogas plants, vermi compost units) are available in 105 GPs. Resource recovery centres for collection of recyclable materials, especially plastics, have been set up in 35 GPs.

F. KEY LEARNINGS FROM RWSS

1.80 Water reform envisages a demand-responsive approach in the rural water sector. Demand, measured by the willingness to pay, was not too encouraging in the case of the marginalised sections (the poor, the Scheduled Castes, and the Scheduled Tribes), in the reform schemes (Jalanidhi–I, Swajaldhara, and Sector Reform Projects). The revised NRDWP guidelines, with provision for cross subsidy, provide for the inclusion of the marginalised groups.

1.81 The national policy framework envisages a system in which the responsibility of in-village water distribution is shared between PRIs and the community. It also envisages bulk metered supply to the villages, by governmental agencies responsible for water supply in the state. A medium term perspective plan for rehabilitation and renovation of multi-GP schemes shall be formulated.

1.82 As per the water tariffs fixed by the GOK, the KWA incurs a loss of about Rs 5 per KL of water produced. To ensure cost recovery, GOK has to allow KWA to fix water tariffs, or reimburse the subsidy by increased grant-in-aid.

1.83 Service levels fall short of design expectations. Jalanidhi–I small schemes were designed for 4 hours' operation, but a study (conducted by the Water and Sanitation Programme) indicated that in 64 per cent of the 30 studied schemes, daily supply was only 30–120 minutes. Reduced hours of supply result in lower per capita consumption.

1.84 There is no systematic monitoring or assurance of water quality in new generation schemes (under Jalanidhi, Sector Reform Projects, and decentralised planning). The disinfection arrangements—mostly chlorination—were less than effective. Under Jalanidhi, a few silver ionisation plants, iron removal plants and Decontamination Demonstration Facilities were erected, but minor problems have plagued their use.

1.85 Comprehensive master plans—for water resource development, and drinking water—as envisaged in GOK's Water Policy of 2008 have to be developed for sustainable management of water in Kerala.

1.86 Institutional weaknesses in project planning need to be addressed with integral planning that ensures the active participation of stakeholders (para-statal agencies, the LSGs, users). It is necessary to frame guidelines defining and detailing the roles and responsibilities of each stakeholder, in planning, implementation, and O&M of water projects.

1.87 The state has to focus on water conservation, recharge, technology mix and conjunctive uses, and on using tariff as an effective instrument for water conservation (regulating demand and discouraging waste).

1.88 A change in mindset—from asset creation to asset management, hardware to software, and complex solutions to simple demystified technologies—requires policy and programme gaps to be filled. At the policy level, key requirements are visioning, planning, budgeting, sustainability and environmental impact assessment, institutional restructuring, technical analysis, technology development, regulatory approach, water rights, and conflict resolution. At programme level, key requirements are technical, managerial, O&M, tariff fixation and administration.

1.89 Overall, there is a severe dearth of capabilities and skills to take up the contemporary challenges of water management. Major institutions in the sector are technically oriented, sectoral and centralised. Only by building their own capabilities, and re-orienting existing manpower, can these institutions guide society towards efficient use of water.

1.90 In Jalanidhi–I, due to capacity building at the grass roots, hundreds of beneficiary communities were able to identify threats (or potential threats), and address them through technical and institutional innovations. Jalanidhi–I had a large collection of

such innovations and community practices, which emerged from beneficiary communities' self-awareness, self-mobilisation and empowerment.

1.91 Key lessons in capacity building from Jalanidhi–I were: (i) Direct retailing of training programme was effective. Direct employees of SOs were more effective than employees contracted for the project by the SOs. (ii) GPATs lacked the desired levels of professionalism and efficiency in capacity building. (iii) Training in community contracting, and operation and management were effective. (iv) Problem-solving workshops and refresher training need to be given periodically to strengthen sustainability. (v) The Training of Trainers (TOT) method helps to extend the reach quickly, but quality loss occurs during cascading of skills and knowledge. The quality of cascading depends heavily on the commitment and skill of the trainees. (vi) SOs were not keen to implement software component. (vii) Output payment for capacity building is low and unattractive, due to weak incentives and higher effort required. (viii) Withdrawal of incentive to staff dampened the search for resource persons, and made the process difficult. (ix) Follow-up training should be mandatory.

1.92 Availability of water at home in rural and tribal households has brought about positive changes in the life of the tribal communities, especially of women and children. Personal hygiene has improved, more time is available now for women to earn a living and take care of their families, and there is relief from drudgery in fetching water from a distance.

1.93 Despite a special tribal development plan, empowerment of tribals is yet to happen. In schemes benefiting tribes and non-tribes, leadership has invariably rested with the non-tribes, and in most cases, tribes remain tentative and uncertain beneficiaries.

1.94 In small tribal schemes, members of BGs make timely payments but real leadership or initiative has been rare. Scheme performance depends on the quality of leadership in the BG, especially traditional leaders. In some cases of crisis, the GP or its members took up responsibility and provided leadership, but largely the GPs and their members are not heavily involved in the running of community-led water supply schemes. Tribal BG leadership capacity is weak—the tendency is to live with water problems, than analyse and resolve them. Motivation levels depend on memories of hardship faced due to water scarcity. (In some places, availability of an alternative source led the BGs to neglect the schemes.) With increasing exposure to the state's political culture, narrow lines of political affiliation are being drawn amongst the tribes, and party interests surface in tribal BGs. Leadership development should run parallel to scheme building.

1.95 In a few tribal schemes, inadequacies in book-keeping and documentation led to lack of transparency, and corruption. Lack of regular meetings and absence of faith in BGs as an institutional form, have also been observed. Rampant alcoholism in tribal settlements makes it difficult to call evening meetings of BGs.

1.96 Small water supply schemes seem suitable to the tribal psyche. The tribes find large water supply schemes difficult to comprehend, or appreciate technically, socially and institutionally. Technical failures have led to social and institutional failures in several places, and tribes are ill-equipped to resolve problems without them developing into crises.

1.97 In sanitation, there is a need for standardization of area-specific designs, and quality assurance in construction of latrines.

G. ROLE OF JALANIDHI

1.98 The proposed Project—Jalanidhi–II—is intended to support GOK in state-wide sector development and institutional strengthening of its RWSS sector with a view to bringing rationality, accountability and efficiency to it, and to align it with both GOI and GOK guidelines and policy. The project design provides for: (i) sector development, rationalization and institutional strengthening—including bringing cutting-edge expertise to bear on the interfaces between water resources management in the state and WSS provision; (ii) specific infrastructure investments related to water supply and sanitation in an agreed geographical area of the state; and (iii) partnership activities with the KWA.

1.99 The overall experience of Jalanidhi–I was considered satisfactory on all fronts—project preparation, design, quality of entry, implementation arrangements, monitoring and evaluation, compliance with environmental and social safeguards, fiduciary management and procurement. The project's sustainability prospects were assessed as 'good', and overall performance of BGs in managing watsan facilities as 'excellent'. Also, as an implementing agency in Jalanidhi–I, the KRWSA showed its capacity to deliver satisfactory performance. The KRWSA's functioning was marked by: strong ownership of project principles; commitment of diverse and multi-disciplinary staff; emphasis on forging collaboration with GPs, SOs and user groups; adopting scheme cycle approach for activity sequencing; developing and managing an excellent M&E system; field-based capacity building programmes; and regular learning. Other implementing agencies like beneficiary groups (who demonstrated high level of interest, ownership and capacity) and GPs (who provided support to beneficiary groups) too performed satisfactorily.

1.100 The proposed Project is a state-wide scaling up of a successful project in rural water supply and sanitation. The Project will be undertaken in the same state, and under the leadership and management of the same agency that has proven its capabilities in implementing a model of decentralised service delivery. The proposed Project can hence be expected to meet the challenges of water and sanitation in rural Kerala, in line with GOI guidevlines advising a community-driven, demand-responsive approach.

1.101 Also, building on the successful approach of Jalanidhi–I, GOK now intends to adopt the Jalanidhi approach to all single-GP rural water supply schemes to ensure

consistency in policy and practices. Accordingly, GOK has drafted guidelines to govern implementation of all drinking water supply schemes (including new, rehabilitation, upgradation, augmentation, expansion, and extension of existing schemes), which are located within the jurisdiction of a single GP, irrespective of the implementing department or agency, source of fund, or scheme cost.

CHAPTER 2: PROPOSED PROJECT

A. PROJECT DEVELOPMENT OBJECTIVES AND KEY INDICATORS

2.1 The development objective of the proposed Project is to assist the Government of Kerala (GOK) in increasing the access of rural communities to improved and sustainable water supply and sanitation services in Kerala, using a decentralised, demand-responsive approach.

B. KEY PROJECT OUTCOMES

2.2 The expected key project outcomes 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 decentralised, demand-responsive projects in rural WSS
- Number of operational water schemes for which KRWSA's sustainability index is >80%

C. KEY SHIFTS FROM JALANIDHI–I PROJECT

2.3 The successful completion of projects under Jalanidhi–I boosted confidence at all levels of the community: members of BGs, SOs, and GPs. With its emphasis on inclusion of women, participative decision-making and decentralised management, Jalanidhi–I helped in the surfacing and tapping of leadership potential among people from different walks of life. Training in leadership, management and accounting opened up opportunities. However, stakeholders (from BGs to GPs) felt that technical support was needed in the long run for maintaining the scheme satisfactorily. Based on lessons learned and to capacitate GPs, the following shifts from Jalanidhi–I are envisaged in the proposed Project:

2.4 An important and major feature of Jalanidhi–II is in deepening decentralisation in the state by envisaging GPs to play a critical role in Project implementation. The Project proposes greater participation of GPs by:

- making GPs joint owners (with BGs) of scheme assets;
- increasing GP's share of capital costs in a scheme from 10 per cent to 15 per cent (and correspondingly reducing that of BGs from 15 per cent to 10 per cent);

- assigning GPs to arrange O&M support to BGs;
- granting GPs greater fiduciary control over BGs and other stakeholders at grass root level;
- encouraging GPs to avail services of technical support providers (such as individual experts, LSGD Engineering wing, the KWA, the KRWSA) as needed, for a fee; and
- conferring more powers in monitoring and evaluating activities of BGs and other stakeholders at grass root level.

2.5 Since GPs will be responsible, more than earlier, for successful implementation of the Project at the local level (including BG activities), GPs will enjoy extra capacity support under Jalanidhi–II. Thus, the Project's institutional arrangements too will be decentralised by:

- setting up a GP-level Support Team (GPST) in the GP to provide speedy, on-site support to GPs and BGs, and work closely with the GP;
- downsizing the district project management unit, in favor of employing engineering and accounting personnel in the GP for local strengthening; and
- delegating more administrative and financial powers from the PMU to field units (RPMUs and GPSTs).

2.6 In Jalanidhi–II, there will be greater integration in rural water supply at village levels. The up-front setting up of an operating institutional mechanism at the GP level will provide sustainable O&M backup support to all rural water supply schemes (not only Jalanidhi schemes) in the GP.

Sector Development and Collaboration with the KWA

2.7 The Project proposes the setting up of a formal coordination mechanism at the state level to maximise synergy, collaboration and cooperation among the Water Resources Department (WRD), the LSGD, the KWA and the KRWSA. The initiative is expected to ensure consistency in policy objectives and optimal use of sector resources, especially in the context of the ongoing local government strengthening project (supported by the World Bank).

2.8 Collaboration and partnership between KRWSA and the KWA will be strengthened in various ways. In Jalanidhi–I, the KRWSA partnered with the KWA to rehabilitate one multi-GP scheme. In Jalanidhi–II, collaboration with the KWA will be wider as 5 multi-GP schemes are proposed, where the KWA will provide bulk metred supply to GPs. The KWA, in partnership with participating GPs, will be responsible for planning, implementation and O&M management of the multi-GP schemes. The KRWSA will be responsible for facilitating funding, and monitoring the implementation and O&M of the completed schemes.

2.9 Jalanidhi-II will also undertake sector development activities to facilitate convergence in sector management, by encouraging studies and capacity building at

the strategic level in the water sector. Sector development activities will strengthen relations and arrangements with the KWA and other institutions in the sector.

Other Highlights

2.10 Unlike Jalanidhi–I, which was first envisaged for 80 GPs, and subsequently implemented in 112 GPs, the proposed Project is envisaged for implementation in around 200 GPs. The 80 per cent increase in coverage reflects strengthened capacity of the sector institution (KRWSA) as well as scaling up of rural water sector reform.

2.11 Criteria for selecting GPs have been modified to better target the poor and the socially disadvantaged, and areas facing water scarcity and quality problems as given under subtitle F above.

D. ALIGNMENT WITH GOI GUIDELINES

2.12 In a phased manner, GOK has been operationalising GOI's Guidelines on Rural Water Supply.

Sector Management

2.13 In 2011, GOK constituted a sectoral task force to formulate a sector management plan that promotes convergence in water sector activities. The task force has been mandated to study the existing roles and responsibilities of various water sector actors, clarify roles and responsibilities of each sector institution, and suggest revised institutional arrangements. The task force has been mandated to formulate recommendations after considering GOI guidelines. It is expected that Kerala's water sector will progressively align with GOI guidelines.

Decentralised, Demand-responsive Approach

2.14 Within the institutional framework of the state's Panchayati Raj Act, the LSGD has been furthering the decentralised service delivery approach in water supply. LSGD has issued guidelines to PRIs to follow principles of cost recovery and community-based approaches in the implementation of drinking water supply schemes. Accordingly, water sector funds from GOI, GOK and other sources to PRIs are used in line with the reform approach.

2.15 Taking a cue from national guidelines, a 2011 order of GOK reiterated that all new, rehabilitation, extension, augmentation, or expansion of water supply schemes covering households or beneficiary groups within GP area, irrespective of the scheme cost, will be implemented by GPs in partnership with BGs, by adopting Jalanidhi principles.

Transfer of Schemes to PRIs

2.16 GOI Guidelines recommend transfer of existing drinking water supply systems to communities and PRIs for management, operation and maintenance. In 2010, 1.04 million people in Kerala were being covered by 452 KWA schemes transferred to PRIs in 12 districts.

2.17 In 1998 GOK had decided to rehabilitate and transfer all single-GP water supply schemes from the KWA, and hand over their management to GPs. As a first step, GOK identified 1,050 schemes to be transferred. Of those, as of March 2010, 229 stood transferred from the KWA to GPs. An additional 223 schemes have been transferred, thus taking the tally to 452 schemes in 12 districts. GOK intends to formalise that that any single-GP scheme—new or upgradation—implemented by the KWA will adopt Jalanidhi principles.

2.18 The proposed Project includes transfer and rehabilitation of single-GP schemes from the KWA to GPs, and reflects GOK's continued commitment to the policy.

2.19 According to GOI guidelines, the state government or its agencies may shoulder the responsibility of bulk metred transfer of water, its treatment and distribution up to the village, whereas inside the village, it is the PRI or its sub-committee that is to take over the responsibility for water management and distribution. Under Jalanidhi–I, the KRWSA and the KWA adopted this approach in implementing one scheme (Chavara-Panmana) in Kollam district. With a view to consolidating the experience, the Project proposes to undertake 5 such multi-GP schemes. Lessons learnt from the Project will help in scaling up the reform approach across the state.

State-wide Scale-up of Sector Reforms in Jalanidhi-II

2.20 The sector institutional strengthening activities to be supported under the Project will be statewide and will involve reviewing institutional arrangements, rationalization and integration of functions, and strengthening capacities of the multiple institutions in the sector (SWSM, WSSO, KRWSA, KWA, PRIs, CCDU, DWSMs, 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:

- statewide water resources studies;
- MIS designed for the whole state based on GIS, initially implemented for the project GPs, with a view to its subsequent roll-out to all GP's in the state;
- statewide sector policy analyses/studies;
- development of a medium-term plan for the sector;
- performance assessments of all existing multi-GP schemes in the state;
- performance assessments of a sample of existing single-GP schemes in the state;
- sector institutional development studies;
- statewide independent monitoring and evaluation of RWSS schemes (*eg*, through consumer household surveys);

- the setting-up of a state level sector development unit and project appraisal unit; and
- a programme for water quality surveillance of samples of all drinking water sources in the GPs of the eight Project districts.

2.21 The proposed Project, by implementing the aforesaid sector development systems and new service delivery approach, will significantly contribute to GOK's scaling up of sector reforms in the State.

E. PROJECT SCOPE AND AREA

2.22 In order to derive maximum benefit from the Project's resources, specific infrastructure investments will focus on areas that are water-stressed in terms of quantity or quality, and/or are predominantly populated by below-poverty-line (BPL) households, generally, and SC/ST and fishermen communities more specifically, and that have not benefited from recent or ongoing investments in the RWSS sector. The Project will support GOK: (i) through sectoral institutional strengthening programmes throughout the state; and (ii) in about 200 GPs in eight selected districts through (a) piloting implementation models for meeting the next generation of sector challenges; and (b) extending investment support.

2.23 Based on an analysis of recently completed and ongoing RWSS investments through various programmes, and analysis of the state's tribal population, BPL households and water supply coverage, it is proposed that the Project's infrastructure investments be in 8 districts out of the 14 in Kerala (The eight districts are Kasargode, Kannur, Kozhikode, Wayanad, Malappuram, Palakkad, Idukki and Kottayam). The location of these districts in Kerala is given in a map attached as Appendix 1. Within these districts, GPs which will receive Project support will be identified following a self-selection process based on the agreed eligibility criteria and prioritisation of water-stressed locations and areas with socially disadvantaged populations. Table 2.1 and Table 2.2 show the criteria for selecting districts, and the rankings carried out for the respective districts.

Table 2.1: Criteria for Selecting Districts

Sl No	Criteria	Indicator	Source of data
1	Water supply coverage	Water supply coverage	Economic Review 2010
2	Tribal population	Total Scheduled Tribe population to the total population of the district	Census 2011
3	Poverty	Total number of BPL households to the total number of households in the district	BPL Survey 2009

Table 2.2: Ranking of Selected Districts		
Ranking No	**District**	**Total Score**
1	Wayanad	18.59
2	Idukki	16.13
3	Kozhikode	14.46
4	Malappuram	12.86
5	Kottayam	12.22
6	Palakkad	11.77
7	Kannur	11.74
8	Kasargode	10.69

2.24 Investments under the rehabilitation, partial transfer and modernisation of multi-GP schemes will be selected from the same eight districts, as far as possible, 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.

2.25 The Project is expected to directly benefit about 1 million people through the implementation of interventions in about 4,000 small water supply schemes, 10 large single-GP schemes and 5 multi-GP schemes. A specifically designed Tribal Development Plan is an integral part of the Project design through which tribal communities will be pro-actively targeted for inclusion in the Project.

F. PROJECT COMPONENTS

2.26 The Project has three main components: (1) Institutional Building; (2) Technical Assistance; and (3) Infrastructure Development.

Component A – Institution Building

2.27 This component will provide funds to implement the following subcomponents:

a. ***Project Management*** including the establishment and operating costs of the project implementation units and related consultancies, equipment, goods and services for project management support.

b. ***Capacity Building*** of sector institutions and of support organisations.

c. ***Statewide Sector Development Programme*** involving setting up and operation of a state level unit and conducting a range of sector development programmes 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

2.28 This component will provide technical assistance (mainly through consultants and support organisations) to the implementing agencies (GPs, BGs and KWA), involved in implementing the following Project activities, such that the corresponding infrastructure investments under Component C are properly implemented and so that the resultant services are efficiently provided:

B1. New and rehabilitated intra-GP rural water supply schemes;

B2. Rehabilitation and modernisation of multi-GP water supply schemes and transfer of internal distribution to GPs; and

B3. Sanitation schemes, mainly covering solid waste management.

Component C – Infrastructure Development

2.29 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 modernisation of multi-GP water supply schemes and transfer of internal distribution to GPs.

C3. Sanitation schemes, mainly covering solid waste management

Project Component A: Institution Building (INR 114 crore; USD 26.51 million)

A1: Project Management (INR 83.9 crore; USD19.5 million)

2.30 The subcomponent will finance the costs towards strengthening the existing Project Management Unit (PMU) in KRWSA, establishment of operations of three Regional Project Management Units (RPMUs), in Grama Panchayats (GPs) GP Support Teams (GPSTs), and the day-to-day operations of KRWSA. Special emphasis will be placed on building their capacities to adopt participatory processes and a demand-responsive approach. The PMU, RPMUs and GPSTs will not be mandated for direct service delivery, but will act as facilitating and support units to GPs and BGs.

2.31 GOK shall ensure that the KRWSA's "autonomous" status is not compromised and that only those decisions are referred to GOK which do not fall within the KRWSA's authority and mandate (as per its MOA and bye-laws).

2.32 Three RPMUs will be set up to undertake project management at the regional level, with support from the state-level PMU. The teams will be equipped with computers, office facilities, and modern communication facilities, and will travel in Project GPs and BGs, about 50 per cent of the time every month. Assistance to the PMU, RPMUs and GPSTs will be in the form of incremental costs.

2.33 For the 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, monitoring and evaluation, IEC [information, education and communication], auditing, and quality monitoring of construction), post-implementation water quality monitoring and surveillance and demonstration units, conducting surveys, and analyses and studies to assess adequacy and effectiveness of project strategies, implementation experiences, processes, results, outcomes-impacts and recommend course of changes, and other studies as deemed required to facilitate achieving the Project objectives. Recurring costs will include incremental operating costs covering consultant staff salaries (for individual consultants or consulting firms), all staff travel costs, and the administrative and running costs of the Project offices. The Functions of Key Officers in the KRWSA are detailed in Appendix 4.

2.34 For KWA's PMU, the Project will fund incremental operating costs and dedicated technical assistance support for Bank-specific issues such as financial management and procurement. The salaries and overheads of regular GOK and KWA staff, and those from other government-supported agencies, in KWA's PMU engaged with the project will not be financed by the Project. However, expenditure relating to their travel and other Project-related activities will be covered by Project funds under this subcomponent.

A2: Capacity Building (INR 10.2 crore; USD 2.37 million)

2.35 The objective of the capacity building programme 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 has taken place in capacity building during Jalanidhi–I. Approach to capacity building in Jalanidhi–II will build on the lessons learnt from Jalanidhi–I. The essence is to make capacity building responsive to field realities and needs.

2.36 Capacity building initiatives build and improve stakeholders' knowledge, skills, and practices in technical, institutional, financial, and management spheres. The objectives of the component are:

- develop core competencies in user groups, such that they build systems and offer services envisaged in the Project;

- strengthen the capacities of local communities and facilitating institutions (GPs, GPATs, Support Organisations (SOs), and PMUs) for institutionalization and follow-up support;
- improve the efficiency of sector institutions, towards effective and scientific water management practices; and
- create an enabling environment for reform initiatives in the water and sanitation sector.

2.37 The Project aims to develop sufficient social assets (at policy, programme and grass root levels) in Kerala to sustain the demand-driven, decentralised service delivery model in water and sanitation. It is proposed to adopt a dual-point strategy: direct training to stakeholders at policy, strategic and intermediary levels; indirect training to stakeholders at grass-root level. Trained intermediaries like SOs and GPATs will in turn train BGs at the grass roots.

2.38 To achieve this, the following thrust areas have been identified in training and capacity building:

1. enhance knowledge, attitudes and management practices at policy and programme levels of Jalanidhi;

2. build skills and facilitate the development of attitudes necessary for bringing about change in the sector, at all levels of stakeholders;

3. allow exposure to simplified technology, share information and thereby enable communities to arrive at informed choices;

4. synchronize capacities to be in tune with Project components and scheme cycle;

5. 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 programme accordingly;

6. 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

7. make the PMU's capacity building team lean and efficient, while hiring expertise and services from the private sector to support training and capacity building as appropriate.

2.39 Specific programmes have been envisaged based on needs analysis and learning requirements of different categories of stakeholders. Investment will include technical assistance, orientation training, motivational and management training, and training in social engineering.

A3: Statewide Sector Development Programme (INR 19.9 crore; USD 4.64 million)

2.40 This subcomponent will 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 organised and a prognosis of how the roles and responsibilities of the different sector entities can be better organised 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 all 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.

2.41 This subcomponent will also support other elements of the development of RWSS 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:

1. statewide water resources studies;
2. an MIS designed 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;
3. statewide sector policy analyses/studies;
4. development of a medium-term plan for the sector;
5. performance assessments of all existing multi-GP schemes in the state;
6. performance assessments of a sample of existing single-GP schemes;
7. sector institutional development studies,
8. statewide independent monitoring and evaluation of RWSS schemes (eg, through consumer household surveys);
9. the setting-up of a state level sector development unit and project appraisal unit;
10. a programme for water quality surveillance of samples of all drinking water sources in the GPs of the eight Project districts
11. setting up a state-level RWSS sector management cell; and

12. operationalizing GOK's WSSO as per GOI's sector guidelines;

Project Component B: Technical Assistance to Implementing Agencies (INR 115 crore; USD 26.73 million)

B1: New and Rehabilitated Intra-GP RWS Schemes (INR 100.4 crore; USD 23.34 million)

2.42 This subcomponent will finance consultancy contract fees of SOs and GPATs, including personnel, other resources, travel, and documentation, which will be recruited for providing community development, engineering, and management support for implementing subcomponent C1. SO support will be provided in two ways, as outlined below.

2.43 ***For new small rural water supply schemes, and for the transfer and rehabilitation of existing single-GP KWA/GP schemes***: The SOs will be either NGOs and consultant firms, or groups of professionals recruited individually by the GPs (the latter will be called 'GP Action Teams' [GPATs]). The SO staff will work with 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 are attached herewith in Annex 2 and Appendix 3 respectively. For the universe of 200 Project GPs, about 65–100 SO/GPAT agencies are expected to be recruited with one SO each for each GP. Each SO's contract is expected to cost about USD 70,000. 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 Project.

2.44 The main activities of the SO/GPAT include: awareness creation; community mobilisation; preparing water security plans; RWSS development and O&M management plans; assisting the 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 programmes for GPs and BGs. The SOs/GPATs themselves will also be initially eligible for capacity building activities and funding by KRWSA to enable them to provide the requisite capacity support to the GPs and BGs in each stage of the subproject implementation cycle.

2.45 ***For new large intra-GP water supply schemes and for the transfer and rehabilitation of existing large intra-GP KWA/GP schemes***: About 10 such schemes will be targeted under the Project for which the beneficiary GPs will recruit SOs similar in profile to those used under the small water supply schemes. However, in large schemes, 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 for providing engineering design and construction supervision support for the large RWS scheme, since these schemes are technically more complex.

B2: Rehabilitation and Modernization of Multi-GP Water Supply Schemes (INR 5.5 crore; USD 1.28 million)

2.46 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 one or more SOs to provide the necessary community development and the engineering and management support for the intra-GP storage and distribution network elements of the scheme. 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 modernisation and efficiency-gains proposals 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.

2.47 ***Service delivery modernisation***: For rehabilitation/construction of multi-GP schemes, 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 funded by the Project, with a view to providing 24 x 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. As an extension of this initiative, Subcomponent B3 will prepare a road map for the reduction of NRW in Thiruvananthapuram and Kochi multi-GP schemes maintained by KWA.

B3: Sanitation Schemes (INR 9.1 crore; USD 2.11 million)

2.48 This subcomponent will finance the provision of technical assistance to GPs and BGs for the implementation of sanitation infrastructure investments described in Subcomponent C3, encompassing community mobilisation 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 (INR 793.4 crore; USD 184.51 million)

C1: New and Rehabilitated Intra-GP RWS Schemes (INR 624.7 crore; USD 145.29 million)

2.49 The subcomponent will be used mostly for constructing new, small piped water supply schemes, new large water supply schemes and transfer and rehabilitation of existing small water supply schemes. The details are as follows:

2.50 ***New small water supply schemes***: Around 4,000 small piped water systems covering about 40 households each per scheme (estimated to cost up to USD 50,000 per scheme) will be financed under the 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 about 2 km length on average 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.

2.51 ***New large water supply schemes***: Some 10 large water supply schemes covering more than 1,000 households each per scheme (estimated to cost up to USD 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 National Competitive Bidding (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.

2.52 ***Transfer and rehabilitation of existing small water supply schemes***: There are about 530 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 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 maximise the utilisation of the existing assets and upgrade these at a cost of about USD 25,000 per scheme. KWA, KRWSA and 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.

2.53 GP-wide water security maps will first be prepared for the GP, before any water supply scheme under Subcomponent C1 will have complementary components such as groundwater recharge measures for source sustainability and source protection works. The type of ground water recharge interventions will be selected based on the water security plan.

C2: Pilot Rehabilitation and Modernization of Multi-GP Water Supply Schemes and Transfer of Internal Distribution to GPs (INR 95.1 crore; USD 22.12 million)

2.54 The Project will finance the partial transfer (of the distribution network from KWA to the respective GPs) and subsequent rehabilitation of about 5 such schemes 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 part of the schemes will be designed (by consultants or in-house), implemented (through NCB contracts), and managed (through PPP models) by KWA, while the improvement of the local distribution networks will be designed and implemented by the participating GPs (with support from consulting firms and/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 pre-determined basis, and levy and collect user charges from the consumers. These schemes will be initially identified based on the willingness of the GPs, by the KWA in partnership with potential GPs, and will be subject to prior review by the World Bank, as per procurement thresholds, for technical, economic and safeguard compliance. A typical multi-GP scheme will cover more than 3,000 households and have a rehabilitation, expansion and improvement cost in the range of USD 2–4 million.

C3: Sanitation Schemes (INR 73.6 crore; USD17.11 million)

2.55 This subcomponent will address 'second generation' sanitation issues facing the state, particularly those of solid and liquid waste management in its urbanising rural areas. It will finance the provision of technical assistance, civil works, goods and equipment for the sanitation interventions, which will be subject to the World Bank's prior review, as per procurement thresholds, for their technical, economic and safeguard compliance and will encompass the following groups of intervention:

- The safe disposal of human excreta through: (a) the provision of subsidies for the construction of household toilets for tribal populations under the Project's tribal development plan (TDP); (b) the piloting of new technologies for latrine solutions in water-logged and other difficult areas; and (iii) the installation of pay-and-use public latrines in appropriate locations (markets, tourist spots, etc.).

- The safe disposal of solid waste through: (a) household-level vermin composting, pit composting and biogas units; (b) the processing of market waste through composting or bio-methanation technologies; and (c) cluster-level processing units for plastic waste (shredding units).

- The safe disposal of liquid waste through: (a) interventions in critical areas of GPs, with drainage systems with a view to protecting the GPs' raw water sources.

- Capacity building for water safety through: (a) setting up water quality testing facilities in the beneficiary GPs, to be based in higher secondary schools for ongoing testing of drinking water sources including domestic wells; and (b) IEC activities for environmental and sanitary interventions.

2.56 ***Community septic tank solutions for densely populated areas***: 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 fixed depending on the design, number of users, and the discharge will be directed to a soak pit. The Project provides for 100 such units with an average cost for each unit of INR 375,000 (or about USD 8,333). The capital cost of these interventions will be shared between KRWSA and the GP in the ratio of 80:20.

2.57 ***Demonstrating new technologies for latrine solutions***: The Project will demonstrate latrine solutions for difficult areas, such as waterlogged or rocky terrain, through an action research programme. The KRWSA will associate itself with institutions which are developing practical models for difficult areas. Fifteen units are proposed and the construction cost of each demonstration unit is estimated as INR 50,000 (about USD 1,176). There is also provision under the Project for the research component of this programme under separate consultancy assignments.

2.58 ***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 organisation by the GP. Each unit will consist of four toilet seats and six urinals, with separate blocks for men and women. The estimated cost of a unit is about INR 820,000 (about USD 18,220), and 100 units are proposed for implementation under the Project. Cost sharing for this programme will be in the ratio 80:20 between KRWSA and the GP.

2.59 ***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 a regional septage treatment facility in one district. The intervention will be implemented jointly by KRWSA and other stakeholders including the LSGD, various PRIs, the Suchitwa 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 location of the facility. The necessary institutional arrangements for construction and operation will be finalized after discussions with the relevant PRIs, ULBs and Suchitwa Mission. KRWSA will play the lead facilitation role in the piloting of this intervention. A provision of INR 20,000,000 (about USD 444,445) has been made in

the Project for sharing the costs of the sanitation interventions; the associated consultancy costs are budgeted for separately through TA in Subcomponent B3.

2.60 ***Household-level vermi composting, pit composting and biogas units***: The Project will encourage households to manage their biodegradable wastes through various technology options like vermi composting, pit composting or biogas facility at the household level. The estimated cost of a vermi composting unit is INR 800 (USD 18), a pit composting unit is INR 1,800 (USD 40) and a 1 m^3 household level biogas unit is INR 10,000 (USD 222). The costs for these facilities will be shared equally between the beneficiary and the Project. The SO/GPAT will do the IEC work and identify the beneficiaries for these interventions.

2.61 ***Community level biogas units in hotspots for processing of biodegradable waste***: The Project will provide investment support for setting up community-level biogas units at hotspots like markets, tourism centres, and schools. 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 INR 552,000 (about USD 12,265), and the Project proposes 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 the ratio fo 80:20. The facilities will be owned by the GP, and Kudumbasree will be engaged to operate them. The SO/GPAT team will facilitate their implementation, under the technical supervision of the concerned RPMU staff.

2.62 ***Implementing plastic waste processing units***: The Project provides for the implementation of cluster-level processing units for plastic wastes, encompassing the segregation of the plastics from other wastes, and its 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 INR 525,000 (about USD 11,665). The facilities will be owned by the GP and Kudumbasree 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. The implementation costs of the plant will be shared by the Project and the GP in the ratio 80:20.

2.63 ***Safe disposal of liquid waste***: 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, with a view to diverting storm water and wastewater away from the GP's raw water sources. A provision of INR 2,900,000 (about USD 64,450) is made for the construction of 1 km of drainage channels in a GP. The capital costs of the drains will be shared in the ratio 80:20 by KRWSA and the beneficiary GP.

2.64 ***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) programme and from other organisations 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 water sources in the GP, including domestic wells, to identify any water pollution 'hotspots' such that Project-supported interventions, or those from other programmes, can be mobilised to respond to them.

G. PROJECT COSTS AND FINANCING

Project Costs

2.65 The total cost of the Project—including taxes and duties, and physical and price contingencies—is estimated at INR 1,022 crore (USD 241 million) as given in Table 2.3 below.

Table 2.3: Project Cost by Activity

	INR crore	USD million
Institution Building	98.2	23.1
Technical Assistance to Implementing Agencies	97.7	23.1
Infrastructure Development	646.4	152.3
Total Baseline Cost	**842.3**	**198.4**
Physical Contingencies	32.3	9.4
Price Contingencies	147.7	33.4
Total Project Costs	**1,022.3**	**241.2**
Interest during construction	0	0
Front-end Fee	0	0
Total Financing Required	**1,022.3**	**241.2**

2.66 A summary of component-wise cost sharing is given in Table 2.4. Detailed year-wise cost estimates, including of subcomponents, are furnished in Chapter 3.

Table 2.4: Component-wise Base Costs for Jalanidhi-II			
	Component-wise Base Costs	**Total programme**	
		INR crore	**USD million**
A	**Institution Building**		
	A1. Project Management	71.2	17
	A2. Capacity Building	8.9	2
	A3. Sector development programmes	18.1	4
	Total - Institution Building	98.2	23
B	**Technical Assistance**		
	B1. For Intra GP RWS Schemes	85.3	20
	B2. For Multi GP Scheme Rehabilitation & Modernisation	4.6	1
	B3. For Sanitation Schemes	7.8	2
	Total - Technical Assistance	97.7	23
C	**Infrastructure Building**		
	C1. Intra GP RWS Schemes	507.2	120
	C2. Multi GP Schemes Rehabilitation & Modernisation	79.0	18
	C3. Sanitation Schemes	60.1	14
	Total - Infrastructure Building	646.4	152
	Base Costs - Total Programme	842.3	198
	Physical Contingencies	32.3	9
	Price Contingencies	147.7	33
	Total Project Costs	1,022.3	241
	Interest during construction	0	0
	Front-end Fee	0	0
	Total Financing Required	1,022.3	241

H. RATIONALE FOR SELECTION OF GPS

2.67 A GP is the focal point for Project activities. GPs are responsible for seeking Project assistance and for facilitating Project implementation by BGs. For selecting GPs in Jalanidhi–II, it is proposed to adopt the following process and criteria.

(a) Selection of GPs under General Category

2.68 Consistent with demand-responsive principles, a self-selection process of GPs will be adopted for their inclusion in the Project. Interested GPs will be required to apply for inclusion in the Project, along with a resolution to adopt the key principles of the

Project and to take over single-GP KWA schemes for rehabilitation and handing over to BGs.

2.69 GPs, however, vary widely in terms of socio-economic characteristics, financial status, managerial capability, and water supply coverage. There is a concern that due to the Project's self-selection criteria (demand-driven, cost sharing stipulations), good and strong GPs might beat the weaker GPs in the race for inclusion. Towards addressing this, and ensuring inclusion of the needy ones, the Project proposes prioritisation-ranking of GPs based on objective criteria. Also, to avoid duplication, exclusion criterion will be used to eliminate GPs covered under similar projects (Jalanidhi–I, JBIC project, sector reform project, and RNE-SEUF project) and having more than 90 per cent coverage.

2.70 The ranking and selection procedure is outlined below:

- Prior to commencement of the Project, the KRWSA (on behalf of GOK) will place an advertisement in leading daily newspapers, informing Project details and seeking expression of interest from GPs.
- Simultaneously, letters enclosing the press notification shall be sent to all Jilla Panchayats, Block Panchayats and Grama Panchayats, for information.
- District-level sensitization programmes will be conducted to generate awareness among GPs about Jalanidhi, and invite expression of interest from GPs.
- Applications will be obtained from GPs in a prescribed format, which will include assurances regarding GPs' commitment to adopting the Project's rules on cost recovery and other administrative matters.
- GPs that have applied in the prescribed format will be assigned scores, based on criteria given in Table 2.5. After applying the exclusion criterion, the GPs will be ranked in descending order, and district-wise to ensure adequate geographic spread. The toppers will qualify for self-selection on a priority basis. (The process of ranking GPs will be carried out at the commencement of each phase.)
- The selected list, district-wise, will be made available on the KRWSA website as well as shared with the district administration and all relevant line departments.

(b) Selection of GPs under Tribal Development Plan

2.71 For the Tribal Development Plan, as given in Table 2.6 and Table 2.7, district-wise population figures were first looked at to identify the two districts with the highest percentage of tribal population. Of these districts (Wayanad, and Idukki), GPs were ranked based on tribal concentration, as shown in Table 2.8.

2.72 By such targeted selection, 14 GPs in Wayanad and 7 GPs in Idukki were identified for the Project. In addition, one GP (Edamalakkudy in Idukki district) was chosen

for being the state's 'priority GP'. In the recent local body limitation, Edamalakkudy became the first exclusively tribal GP in the state. Its infrastructure facilities, including for water and sanitation, are poor and need to be addressed on a priority basis.

2.73 All 22 GPs under the TDP will be intimated and their willingness to participate ascertained. The participating GPs will have to, through a resolution, express willingness to participate and accept cost-sharing arrangements.

(c) Selection of Multi-GP KWA Rehabilitation schemes

2.74 It is proposed that the following five criteria will be employed for selection of schemes for rehabilitation: age of scheme; operational efficiency; water scarcity; water quality; and physical condition of assets, above all the willingness of the people and GP to takeover for rehabilitation. Based on these criteria, the schemes will be classified as: (i) schemes requiring rehabilitation and modernisation; (ii) schemes requiring capacity augmentation and service level improvement; and (iii) scheme which covers 5,000–10,000 households (approximately) and needs rehabilitation, expansion and improvement.

2.75 The GPs selected will have to give a resolution showing their demand and willingness to participate in the Project.

Table 2.5: Criteria for Selection of Grama Panchayats (General)

Sl No	Criterion	Indicator	Data Source	Weight / score
1	Water supply coverage (WS)	Non-coverage denoted by number of BPL households traversing a distance of 300 metres or more to fetch water, to the total number of HHs in the GP	BPL Survey 2009 conducted by CRD (GOK)	40
2	Water quality affected GPs/(WQ)	Number of wards affected with water quality problems like iron, fluoride, salinity and nitrates, to the total number of wards in the GP	DDWSS website of GOI	20
3	Poverty (P)	Total number of BPL HHs, to the total number of HHs in the GP	BPL Survey 2009 conducted by CRD of GOK	20
4	SC/ST Population (SCST)	Total SC/ST population, to the total population in the GP	Census 2001	10
5	Efficiency in implementing development projects (E)	Average use of Plan Funds for the preceding three years of allotment and utilisation	Data from the Directorate of Panchayats (GOK)	10
	Total			100
Total Score of a GP = WS*40 + WQ*20 + P*20 + SCST*10 + E*10				

Table 2.6: Criteria for Selection of Grama Panchayats (Tribal Development Plan)				
Sl No	**Criterion**	**Indicator**	**Data source**	**Method**
1	Tribal population	Tribal population in the district	Census 2001	Rank and select top two districts
2	Tribal concentration	Percentage of tribal population in the GP (to total population in the GP)	Census 2001	Select GPs with 16% or more tribal population

Table 2.7: Scheduled Tribe Population (District-wise)				
Rank	**District**	**ST Population**	**Total Population**	**% of ST Population**
1	Wayanad	136,062	780,619	17.43
2	Idukki	50,973	1,129,221	4.51
3	Palakkad	39,665	2,617,482	1.52
4	Kasaragod	30,338	1,204,078	2.52
5	Thiruvananthapuram	20,893	3,234,356	0.65
6	Kannur	19,969	2,408,956	0.83
7	Kottayam	18,340	1,953,646	0.94
8	Malappuram	12,267	3,625,471	0.34
9	Ernakulam	10,046	3,105,798	0.32
10	Pathanamthitta	6,549	1,234,016	0.53
11	Kozhikode	5,940	2,879,131	0.21
12	Kollam	5,190	2,585,208	0.20
13	Thrissur	4,826	2,974,232	0.16
14	Alappuzha	3,131	2,109,160	0.15

Table 2.8: Grama Panchayats with ST Population 16% and Above						
Sl No	**District**	**Grama Panchayat**	**Total population**	**Tribal population**	**% Tribal population**	**Rank**
1	Wayanad	Noolpuzha	26,184	10,288	39	1
2	Idukki	Vattavada	5,102	1,586	31	2
3	Wayanad	Kottathara	16,636	4,600	28	3
4	Idukki	Marayoor	11,027	2,953	27	4
5	Wayanad	Vengappally	11,072	2,661	24	5
6	Idukky	Veliyamattom	21,557	5,131	24	6
7	Wayanad	Panamaram	42,922	10,056	23	7
8	Wayanad	Thariyode	11,843	2,649	22	8
9	Wayanad	Meenangadi	32,054	7,099	22	9
10	Wayanad	Pulpalli	34,293	7,143	21	10
11	Idukki	Kanthalloor	10,935	2,250	21	11
12	Wayanad	Kaniambetta	29,516	6,035	20	12
13	Idukki	Arakkulam	20,262	4,035	20	13
14	Wayanad	Thondernad	22,455	4,374	19	14
15	Wayanad	Pozhuthana	17,397	3,266	19	15
16	Wayanad	Poothadi	39,687	7,262	18	16
17	Wayanad	Thavinhal	38,654	6,790	18	17
18	Idukki	Mankulam	9,607	1,556	16	18
19	Idukki	Adimali	36,314	5,749	16	19
20	Wayanad	Edavaka	31,168	4,910	16	20
21	Wayanad	Vellamunda	36,415	5,720	16	21
Priority Grama Panchayat as per 2010 GP delimitation						
22	Idukki	Edamalakudy	2,486*	2,486	100	1
Source: Census (2001) *As per records of the Tribal Department (GOK)						

2.76 GPs eligible for participation in the Project must be willing to adopt all of the Jalanidhi implementation and operational principles, procedures and processes, and the minimum accounts/auditing criteria for a GP to be eligible to receive Project funds. The GP should have a clean financial audit opinion (i.e. 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 or 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 Finance Manual). GPs with such qualifications will not eligible to receive funds for the year under consideration and until the qualifications are addressed.

I. TECHNICAL ASPECTS

2.77 ***Water supply:*** The project will implement water supply improvements in eligible GPs by rehabilitating existing water supply schemes and constructing new water supply schemes in a demand-driven way. Over 90% 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/galleries or conventional water treatment plants. GP-wide water security maps will be prepared which identify potential water resources around the problem habitations and which help in planning groundwater recharge structures to improve the sustainability of the raw water sources. A selected number of multi-GP schemes will be partially transferred to the respective GPs, and then rehabilitated, expanded and improved under the project – with the GPs designing, implementing and managing the internal water distribution system within the respective GPs, with the assistance of consultants, and with KWA designing, implementing and managing the bulk water supply systems from the source to the GP entry points. KWA will collect bulk water tariffs from the GPs, and the GPs will be responsible for collecting tariffs for the running of the distribution networks. In water quality affected habitations, GP-wide design, build and operate turnkey contracts for water treatment plants will be implemented, initially for a five year period, for providing safe drinking water to water quality affected habitations. The proposed project will support programmes for motivating communities to practice regularly chlorination though onsite generation of hypo solution.

2.78 A technical manual has been prepared for the project which includes design criteria, guidelines on sound engineering practices, standard drawings and cost estimates, specifications for construction materials, goods, equipment and civil works. Independent construction quality consultants will carry out surveillance of the quality of supervision, the quality of the materials procured, and the quality of construction of the project works.

2.79 The BGs will control chlorination through daily checking of residual chlorine. BGs and SLCs will analyse the water samples of the project schemes during implementation in the nearest laboratories. Physical, chemical and bacteriological samples will be undertaken during O&M. The Project will also support a water quality surveillance programme for samples of all drinking water sources in the eight project districts' GPs. The Project has provision for a GIS-based MIS to allow each Project GP to collect, enter and update the data related to all rural water supply schemes in the GP. The GIS-based system will support GP selection, and mapping

(of water security, project progress, new infrastructure development, and vulnerable areas like those facing salinity intrusion).

J. PROJECT IMPLEMENTATION SCHEDULE

2.80 The Project will be implemented in five-and-a-half years starting 1 January 2012. The Project calendar showing major milestones is given in Table 2.9.

Table 2.9: Project Calendar	
Project appraisal	August 2011
Signing of loan agreement	November 2011
Project Start Date	1st January 2012
Preparation of annual work plans	To be submitted in December of every year
Mid-term review	July 2014
Preparation of implementation completion reports	April 2017
Project closure	30th June 2017

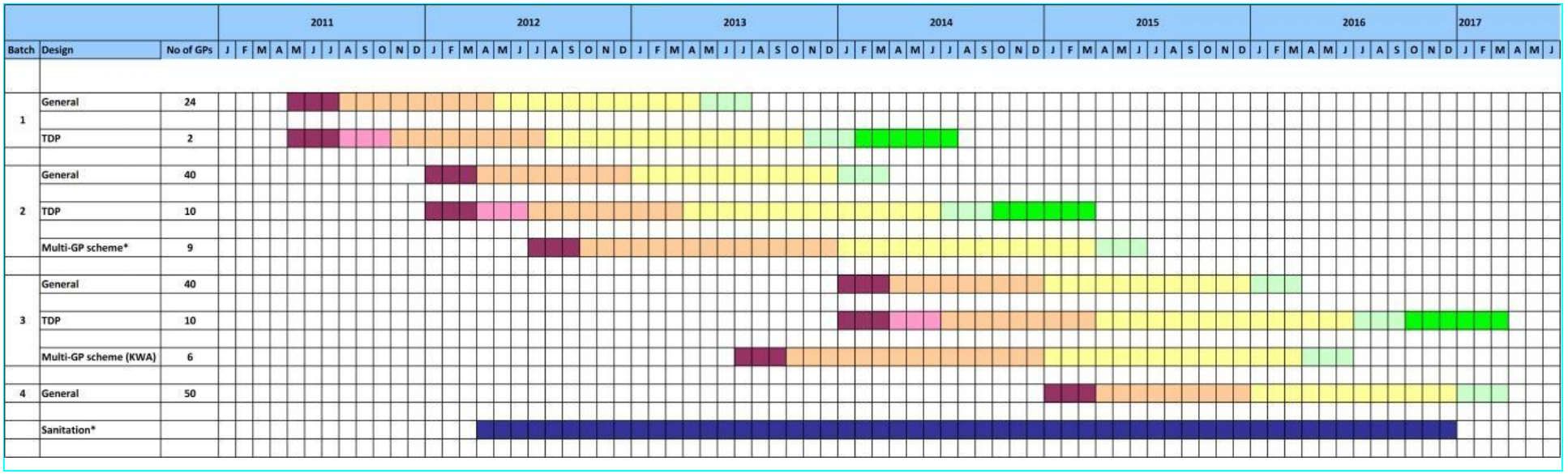
Programme Phasing

2.81 Scheme cycle outlines on a time scale, the various activities in each phase of scheme implementation. Table 2.10 compares the phase-wise duration of different types of schemes in the Project.

Table 2.10: Scheme Duration: Phase-Wise Comparison							
Scheme Type	**Duration (months)**	**Pre-planning**	**Preparatory**	**Planning**	**Implementation**	**Post-implementation**	**Hand-holding**
Small scheme	**27**	3	-	9	12	3	-
Large scheme	**30**	3	-	11	13	3	-
Multi-GP scheme	**36**	3	-	15	15	3	-
Tribal development plan scheme	**39**	3	3	9	15	3	6

2.82 The implementation schedule covering the proposed 200 GPs in four batches is given in Figure 2.1.

Figure 2.1: Project Implementation Schedule



* Comprises IEC activities, planning & implementation through project period in various GPs in different batches

Pre Planning Phase		
Preparatory Phase		Only for TDP
Planning Phase		
Implementation Phase		
Post Implementation Phase		
Hand Holding Phase		Only for TDP

2.83 Table 2.11 presents a summary of key activities in each phase for small schemes, and Table 2.12 presents for multi-GP schemes.

Table 2.11: Scheme Cycle Summary: Small Schemes		
Phase	**Duration (months)**	**Outputs**
Pre-planning	3	GP selected; SO shortlisted; GPAT selected; Water security consultant selected; Launch workshop completed
Planning	9	Agreement between GP and KRWSA signed; GP bank account opened; Agreement between GP and SO/GPAT signed; GP and SO capacitated; Social mobilisation of BGs completed; Resource maps prepared; BCs constituted; BGs registered; BG bank account opened; BGs and BCs capacitated; BG Federation constituted; Preliminary feasibility reports "agreed" upon; DSR for water supply; prepared and approved; Plans for GWR, GP strengthening, sanitation, and WDI prepared; Community contributions mobilised; Implementation phase proposals "agreed" upon; Administrative and technical sanctions issued; GP transferred 40% of the project cost; Implementation phase agreements signed; Release of first installment requested.
Implementation	12	Funds Transferred to GP and onward to BG as requested by BG; Construction training to BGs; Materials procured through community contracting; Implemented water supply scheme; Implemented GWR; Implemented sanitation schemes; Implemented women development initiative; Commissioned schemes; O&M training to BCs and BGF completed.
Post-implementation	3	Final audit; Account closed; BG exit; Assets created jointly by the BG and the GP taken over by BGs and GPs; Implemented monitoring and evaluation plan.

Table 2.12: Scheme Cycle Summary: Multi-GP Schemes		
Phase	**Duration (months)**	**Outputs**
Pre-planning	3	Schemes selected; Schemes handed over
Planning	15	Consultant selected (DSR, Bid Documents, Environmental safeguards); Positioned consultant (DSR); Finalise DSRs; Technical sanction issued; Consultant selected (social mobilisation); Agreement between GP & SO signed; Registered and trained GP committee; Discussed DSR with SLC/GP; Finalized share of capital costs (beneficiaries, GP); Agree-to-implement Meeting held; Approved overall GP plan (by GP); Administrative sanction for distribution by GP issued; Mobilised contributions; Approved GP-level plan (by DPC); Combined administrative sanction for schemes
Implementation	15	Capacity Building completed; Training (community mgmt, procurement, GP committee's responsibilities, accounts mgmt completed; GP deposited its share; Agreement between GP committee and GP signed; Selected and positioned ICQSM consultant; Common infrastructure (Competitive bidding ; Awarded work; Completed scheme; Conducted trial Runs; Commissioned assets; Implementation completion report - Prepared; O&M agreement with GPs, KWA signed); Distribution network bided completed and Commissioned
Post-implementation	3	Completed - Final evaluation, audit, payment of scheme; Scheme completion report; Training (O&M - community); GP committee separate O&M account opened; Deposited Upfront 6 months' O&M cost; GP committee exited; Scheme transferred (joint ownership); GP exited from distribution

2.84 For GPs under the tribal development plan subcomponent, the scheme cycle has been modified to create an enabling environment. Table 2.13 outlines the phase-wise activities for GPs under the Tribal Development Plan.

Table 2.13: Scheme Cycle Summary: Tribal Development Plan

Phase	Duration (months)	Outputs
Pre-planning	3	SO selected; Water security consultant positioned; Settlements of water scarcity mapped; Settlements firmed up.
Preparatory	3	Unlearning and learning; Credibility for project developed; Savings and credit for self-help groups introduced, hygiene and sanitation promoted; tribal law education.
Planning	9	Tribal communities mobilised; Awareness created; Completed needs assessment; Exposure visits; Community decided participation in the project. Situation analysis carried out by tribal community; Alternatives identified and proposals developed; Community Empowerment Plan (CEP) prepared; Financing components included: water supply, household latrines, hygiene and sanitation promotion, functional literacy, women development and capacity building; Signed agreements.
Implementation	15	CEPs implemented by tribal communities.
Post-implementation	3	Final audit completed; Books of Account closed; BG exited; Assets created jointly by the BG and the GP taken over; completed monitoring and evaluation plan.
Hand-holding (O&M)	6	Tribal communities self-manage; Consolidation and ensuring sustainability of delivery and facilities.

K. SOCIAL AND ENVIRONMENTAL SAFEGUARDS

K.1 SOCIAL SAFEGUARDS

2.85 The proposed Project follows a successfully implemented predecessor project (Jalanidhi-I), which helped establish a sound set of procedures to ensure compliance with World Bank safeguard policies and to promote a broader social development agenda which encompassed inclusion, participation, accountability and transparency. Jalanidhi–I was the recipient of the prestigious "People First Award" awarded by SDV from among several global contenders for inclusion, transparency, accountability and sustainability. 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 neighboring households (HHs). In addition, the existing schemes in the Project GPs (currently run either by the GP or the KWA) will be rehabilitated to make them more inclusive and providing improved service delivery. A handful of larger schemes, covering about 250–500 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 modernisation of a number of such existing schemes.

2.86 The Project design incorporates the main findings of the social assessment that emphasises 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 hydrogeological and topographical considerations, there is a need to provide RWSS coverage to vulnerable groups—who normally live in the high/hilly areas of the state—through small water supply schemes that cater to small clusters of excluded households. In the hydrogeological 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. Further details on social safeguards are given in Chapter 8.

K.2 ENVIRONMENTAL SAFEGUARDS

2.87 Jalanidhi-II Project falls in the World Bank's environmental screening category B as per OP 4.01. An Environmental Assessment (EA) study has been undertaken by KRWSA.

2.88 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 World Bank safeguard policies: Environmental Assessment (OP 4.01), Forests (OP 4.36) and Natural Habitats (OP 4.04).

2.89 An Environmental Assessment (EA) of the proposed project was undertaken, and an Environment Management Framework (EMF) prepared, to ensure compliance with the applicable regulations and triggered safeguards policies. The EMF will be applied to schemes to be taken up by GPs making use of investments provided to them under Component C of the project. The EMF comprises a set of procedures for granting environmental approval that includes screening through a regulatory requirements list to filter out activities that contravene the relevant national and state regulations and triggered Bank safeguard policies. The Project will thus use classification criteria for categorization of schemes on the basis of the perceived intensity of risk/impact of the schemes being low, medium or high. Environmental Data Sheets (EDSs) will be produced to record the relevant baseline information for water supply, sanitation, and solid and liquid waste management schemes.

Environmental codes of practice and technical guidelines have also been produced for the various types of schemes. The EMF thus includes a provision for undertaking Limited Environmental Assessments for medium impact schemes and Environmental Impact Assessments for high impact schemes. The EMF documentation completed as a result of the above procedures will be incorporated as part of the scheme-specific engineering designs and will become a binding provision in the contract documents, where applicable.

2.90 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 (SEEs) 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.

L. PROJECT ECONOMIC AND FINANCIAL ANALYSIS

2.91 The economic analysis demonstrates that investments to be supported under the proposed project are economically feasible. In terms of cost recovery, the financial analysis of capital and O&M costs shows that the proposed investments under the project 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. The fiscal risks associated with the project are low and can be accommodated by GOK. The justification for investing in the project is that there are either no private providers for provision of improved water supply and sanitation services or that the few existing private providers have no incentive to provide such 'quasi public' basic service provision to the poor segments of the target population.

2.92 There are several benefits expected from the project. Improved provision of basic water supply and sanitation is likely to generate external benefits, including improved health conditions of the direct and indirect project beneficiaries. Approximately 287,712 households (or about 1.15 million people) are likely to directly benefit from the project investments. 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 improved sanitation resulting from improved community environments, and better health and hygiene activities of the households. Better health is also likely to enhance household productivity. There are also possible efficiency gains likely to result from implementation of demand-driven and decentralised provision of water supply and sanitation through GPs and BGs in

Kerala, particularly given the advanced nature of decentralisation reforms in the state. With regard to sanitation, the expected benefits, which cannot be solely attributed to investments in sanitation activities under the project, 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.

2.93 The economic internal rate of return (EIRR) for the project is estimated at 19.4 per cent when a beneficiary population of 287,712 households was assumed. The corresponding net present value and benefit-cost ratio are INR 407 crore (about USD 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: (i) opportunity cost of time; (ii) value of incremental water consumption; (iii) water consumption; and (iv) 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. The financial analysis shows that cost recovery performance of schemes managed by BGs was better than for publicly managed schemes. In addition, institutional costs are low in decentralised, community-based, demand-driven RWSS interventions. Finally, the analysis showed that the impact of the project financing on the State's fiscal situation is tenable since it does not cause significant fiscal risks.

M. BY-LAWS, AGREEMENTS, MANUALS

2.94 The following instruments will be used towards operationalizing the proposed institutional model:

1. Memorandum of Association, and by-laws of registered societies in the Project—the KRWSA, BGs, scheme-level committees multi-GP schemes; and

2. Agreements clarifying the roles and responsibilities, including arrangements for fiduciary assurances—Agreement between the KRWSA and the GP, Agreement between the KRWSA and the SO, Agreement between the GP and the SO, Agreement between the GP and the BG.

3. Manuals—on finance, monitoring and evaluation, procurement, and technical aspects, which will serve as detailed guidelines to primary stakeholders in Project implementation.

2.95 The by-laws of the KRWSA are given in Annex 1. The model agreements between KRWSA and Grama Panchayat, GP and SOs, GPs and BGs, and among the KRWSA, KWA and GPs are given in Annex 2. In addition, KRWSA has also prepared the bye-laws for BGs and SLCs, which are enclosed as Annex 3.

2.96 The following manuals has been prepared by KRWSA to facilitate project implementation: Technical Manual (Annex 4), Sanitation Guidelines (Annex 5), Procurement Manual (Annex 6), Finance Manual (Annex 7), Tribal Development Plan (Annex 8), Environment Management Framework (EMF) (Annex 9), and Monitoring and Evaluation Manual (Annex 10). Earlier versions of these manuals were approved by the World Bank and used in Jalanidhi–I. An updated version of each manual is proposed to be used in the Project broadly for efficient utilisation of funds, consistency in procurement, better monitoring, and enhanced quality of engineering. The manuals have been fine-tuned for easier reference (in the light of experience), reflect changes required for the proposed Project, and conform to the latest codes in their respective fields.

2.97 In addition to these instruments, government orders, circulars and guidelines will be issued from time to time for the smooth implementation of the Project. A few orders passed during Jalanidhi–I will be used in Jalanidhi–II too (like orders for the transfer of single-GP KWA schemes, power connection, opening of Project account, transfer of funds by GPs, and electricity charges for Jalanidhi schemes).

CHAPTER 3: DETAILED PROJECT COST ESTIMATE

3.1 The detailed cost estimates for the Project are given in Tables 3.1 to 3.6.

Table 2.3: Project Cost by Activity		
	INR crore	**USD million**
Institution Building	98.2	23.1
Technical Assistance to Implementing Agencies	97.7	23.1
Infrastructure Development	646.4	152.3
Total Baseline Cost	**842.3**	**198.4**
Physical Contingencies	32.3	9.4
Price Contingencies	147.7	33.4
Total Project Costs	**1,022.3**	**241.2**
Interest during construction	0	0
Front-end Fee	0	0
Total Financing Required	**1,022.3**	**241.2**

Table 2.4: Component-wise Base Costs for Jalanidhi-II			
	Component-wise Base Costs	**Total programme**	
		INR crore	**USD million**
A	**Institution Building**		
	A1. Project Management	71.2	17
	A2. Capacity Building	8.9	2
	A3. Sector development programmes	18.1	4
	Total - Institution Building	98.2	23
B	**Technical Assistance**		
	B1. For Intra GP RWS Schemes	85.3	20
	B2. For Multi GP Scheme Rehabilitation & Modernisation	4.6	1
	B3. For Sanitation Schemes	7.8	2
	Total - Technical Assistance	97.7	23
C	**Infrastructure Building**		
	C1. Intra GP RWS Schemes	507.2	120
	C2. Multi GP Schemes Rehabilitation & Modernisation	79.0	18
	C3. Sanitation Schemes	60.1	14
	Total - Infrastructure Building	646.4	152
	Base Costs - Total Programme	842.3	198
	Physical Contingencies	32.3	9
	Price Contingencies	147.7	33

	Total Project Costs	1,022.3	241
	Interest during construction	0	0
	Front-end Fee	0	0
	Total Financing Required	1,022.3	241

Table 3.3: Component-wise Total Costs

	Component	Programme Cost (USD million)	% of total programme	Bank Financing (USD million)	Bank share as a % of component cost	Bank share as a % of total programme
A	Institution Building					
	A1. Project Management	19.9	8%	17.9	90%	7%
	A2. Capacity Building	2.4	1%	2.2	90%	1%
	A3. Sector development programmes	4.6	2%	4.1	90%	2%
	Total - Institution Building	26.8	11%	24.1	90%	10%
B	Technical Assistance to Implementing Agencies					
	B1. For Intra GP RWS Schemes	23.7	10%	21.4	90%	9%
	B2. For Multi GP Scheme Rehabilitation & Modernisation	1.3	1%	1.2	90%	0%
	B3. For Sanitation Schemes	2.1	1%	1.9	90%	1%
	Total - Technical Assistance	27.2	11%	24.5	90%	10%
C	Infrastructure Development					
	C1. Intra GP RWS Schemes	147.6	61%	80.7	55%	33%
	C2. Multi GP Schemes Rehabilitation & Modernisation	22.2	9%	14.0	63%	6%
	C3. Sanitation Schemes	17.3	7%	12.0	69%	5%
	Total - Infrastructure Building	187.2	78%	106.7	57%	44%
	Total	**241.2**	**100%**	**155.3**	**64%**	**64%**
	Note: Costs include price and physical contingencies.					

Table 3.4: Component-wise Sources of Funds for Programme											
	Component	Total	Total %	Sources of funds (in USD million)							
				WB	% WB	GOK	% GOK	GP	% GP	BG	% BG
A	Institution Building										
	A1. Project Management	19.9	8.2	17.9	7.4	2.0	0.8	-	-	-	-
	A2. Capacity Building	2.4	1.0	2.2	0.9	0.2	0.1	-	-	-	-
	A3. Sector development programmes	4.6	1.9	4.1	1.7	0.5	0.2	-	-	-	-
	Total -Institution Building	26.8	11.1	24.1	10.0	2.7	1.1	-	-	-	-
B	Technical Assistance										
	B1. For Intra GP RWS Schemes	23.7	9.8	21.4	8.9	2.4	1.0	-	-	-	-
	B2. For Multi GP Scheme Rehabilitation & Modernisation	1.3	0.5	1.2	0.5	0.1	0.1	-	-	-	-
	B3. For Sanitation Schemes	2.1	0.9	1.9	0.8	0.2	0.1	-	-	-	-
	Total - Technical Assistance	27.2	11.3	24.5	10.1	2.7	1.1	-	-	-	-
C	Infrastructure Building										
	C1. Intra GP RWS Schemes	147.6	61.2	80.7	33.4	34.0	14.1	23.1	9.6	9.9	4.1
	C2. Multi GP Schemes Rehabilitation & Modernisation	22.2	9.2	14.0	5.8	5.1	2.1	2.0	0.8	1.1	0.4
	C3. Sanitation Schemes	17.3	7.2	12.0	5.0	1.7	0.7	3.1	1.3	0.5	0.2
	Total - Infrastructure Building	187.2	77.6	106.7	44.2	40.8	16.9	28.2	11.7	11.5	4.8
	Total	**241.2**	**100.0**	**155.3**	**64.4**	**46.2**	**19.2**	**28.2**	**11.7**	**11.5**	**4.8**

Table 3.5: Sources of Funds for Programme								
							In USD Million	
Source of Funding	**1st year**	**2nd year**	**3rd year**	**4th year**	**5th year**	**6th year**	**Total**	**% to total**
World Bank	1.0	18.6	34.6	39.8	40.0	21.5	155.4	64%
Government of Kerala	0.1	5.5	10.6	12.0	12.1	6.0	46.2	19%
Grama Panchayat	0.0	3.3	6.5	7.3	7.5	3.5	28.1	12%
Beneficiary Group	0.0	1.3	2.7	3.0	3.0	1.4	11.5	5%
Total	**1.1**	**28.7**	**54.3**	**62.1**	**62.5**	**32.5**	**241.2**	**100%**

Table 3.6: Jalanidhi II - Main Components and Sub-Components – Base Costs

(Amount in INR Crores)

	Main Components	1st year	2nd year	3rd year	4th year	5th year	6th year	Total	Total Incl. Contingencies (Amount)	% to Total
A	Institution Building									
	A1. Project Management	3.8	7.8	12.4	16.2	16.4	14.6	71.2	83.9	8.2%
	A2. Capacity Building	0.9	1.4	1.9	2.0	1.7	1.0	8.9	10.2	1.0%
	A3. Sector development programmes	0.0	8.9	5.4	3.6	0.1	0.1	18.1	19.9	1.9%
	Total -Institution Building	4.7	18.1	19.6	21.8	18.3	15.7	98.2	114.0	11.1%
B	Technical Assistance to Implementing Agencies									
	B1. For Intra GP RWS Schemes	0.0	9.0	19.8	23.1	22.6	10.8	85.3	100.4	9.8%
	B2. For Multi GP Scheme Rehabilitation & Modernisation	0.0	0.2	0.9	1.5	1.5	0.6	4.6	5.5	0.5%
	B3. For Sanitation Schemes	0.1	1.1	2.0	2.0	1.5	1.1	7.8	9.1	0.9%
	Total - Technical Assistance	0.2	10.2	22.7	26.6	25.6	12.5	97.7	115.0	11.2%
C	Infrastructure Development									
	C1. Intra GP RWS Schemes	0.0	58.1	121.4	137.5	133.9	56.3	507.2	624.7	61.1%
	C2. Multi GP Schemes Rehabilitation & Modernisation	0.0	20.0	23.0	15.0	15.0	6.0	79.0	95.1	9.3%
	C3. Sanitation Schemes	0.0	8.9	16.7	15.7	10.6	8.4	60.1	73.6	7.2%
	Total - Infrastructure Building	0.0	87.0	161.0	168.2	159.5	70.7	646.4	793.4	77.6%
	TOTAL PROGRAM	**4.9**	**115.3**	**203.4**	**216.6**	**203.3**	**98.8**	**842.3**	**1,022.3**	**100.0%**
	Percentage	1%	14%	24%	26%	24%	12%	100%		

CHAPTER 4: PROJECT IMPLEMENTATION ARRANGEMENTS

A. OVERALL INSTITUTIONAL MODEL AND RATIONALE

4.1 The implementation arrangements for the proposed Project have been worked out considering the socio-economic conditions of Kerala, and success in implementing Jalanidhi project through local self-government (LSG) institutions. The Government of Kerala (GOK) proposes to strengthen the Kerala Rural Water Supply and Sanitation Agency (KRWSA) to manage and monitor water and sanitation programmes under the reform approach.

4.2 GOK's Water Resources Department (WRD) will be the nodal department for the Project. The KRWSA (a registered society and its updated MOA and bye-laws, mandate, composition, functions, powers and operational procedures – enclosed as Annex 1) 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 timely and efficiently.

4.3 To pursue project management in compliance with the above, the state-level Project Management Unit (PMU) for the Project will located in the KRWSA. The PMU has five organisational units: one each for operations, technical, finance and administration, human resources development (HRD), and monitoring and evaluation (M&E). The KRWSA will support a cell for managing 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. The PMU professional staff are drafted from within GOK offices/agencies or recruited from the private sector on contract basis. In addition, the PMU will recruit private sector consultants/experts (individuals, institutions or firms) from time to time, and as necessary, to strengthen its project management capacity. The proposed structure of the PMU is given in Figure 4.2.

4.4 KRWSA's PMU will undertake the following roles:

- Overall programme management for improved and sustainable rural water supply and sanitation services in Kerala, including information, education and communication (IEC), and monitoring and evaluation of activities, outcomes and impacts.
- Support the development and management of common infrastructure of multi-GP water supply, with improved financial and operational performance.

- Planning and construction of community sanitation schemes (including solid waste management units), with active participation of user groups and GPs.
- Arranging social, technical, management and capacity building support to GPs, community-based organisations and beneficiary groups (BGs), for all single-GP schemes and multi-GP rehabilitation schemes.

4.5 In addition to overall programme planning and management, the PMU will be responsible for:

- setting up and guiding the functioning of the Regional Project Management Units (RPMUs);
- consolidation of annual work plans;
- consolidation of periodic progress reports;
- liaison with GOI, GOK, the World Bank, and other agencies;
- financial management and audit;
- human resource development, including hiring of specialists;
- fund flow management and fund releases;
- state-level IEC campaigns;
- procurement of goods, works and services at the PMU level and guiding RPMUs, GPSTs, GPs and BGs on procurement guidelines;
- overseeing implementation of the Environment Management Framework;
- knowledge management;
- water resources planning and management;
- monitoring, learning, impact evaluations and MIS;
- quality control of works and processes.
- reporting of progress to the KRWSA on Project activities.

4.6 The overall institutional design (depicted in Figure 4.1) supports decentralisation, and through collaborative arrangements will strengthen partnership with existing sector institutions (LSG institutions, the KWA, the Suchitwa Mission). During Jalanidhi–I, it was found that after the withdrawal of implementation support agencies (like SO/GPAT), there was nobody to support the BGs in O&M-related issues. The Project proposes to effectively address this by providing on-site capacity building to GPs, such that O&M support to the BGs will be the sole responsibility of LSG institutions. Where this support is beyond the technical capacity of GPs, they can approach sector institutions (like the KWA) for help and support.

B. IMPLEMENTING AGENCIES: ROLES AND RESPONSIBILITIES

4.7 The key institutions responsible for Project implementation are at three levels: GOK, the KRWSA, and the GP. Table 4.1 presents a snapshot of their broad roles.

Table 4.1: Institutional Design	
Institution	**Main functions**
Government of Kerala (GOK) • Water Resources Department • Kerala Rural Water Supply and Sanitation Agency (KRWSA) – General Body (GB) – Governing Council (GC)	Policy; annual plans; budget approval; and overall implementation support and monitoring.
KRWSA • Project Management Unit • Regional Project Management Units (RPMU) • Grama Panchayat Support Teams	Overall management of the Project; implementation support; and on-site project implementation support.
Grama Panchayat (GP), Grama Panchayat level Water Supply Committee (GPWSC)	Support for Project implementation as per scheme cycle; capital cost sharing; management of GP-level components; fund management; monitoring and supervision.
Beneficiary Group	Implementation of schemes as per scheme cycle; capital cost sharing; and 100% O&M.
GP Action Team (GPAT), Support Organisation (SO)	Implementation support; IEC and capacity building support; technical assistance support; supervision.
Kerala Water Authority	Implementation of multi-GP schemes and rehabilitation of schemes as per scheme cycle; technical assistance on demand; capacity building support; WQM; and implementation, monitoring and supervision of bulk water supply component.
Suchitwa Mission	IEC and implementation support in sanitation component.

4.8 Component-wise distribution of primary institutional responsibilities is given in Table 4.2.

Table 4.2: Distribution of Responsibilities		
Project Component	**Subcomponents**	**Responsible Institution**
A: Institution Building	A1: Project Management A2: Capacity Building A3: Statewide Sector Development Programme	KRWSA KRWSA KRWSA through WRD-level cell
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
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

Figure 4.1: Proposed Institutional Structure

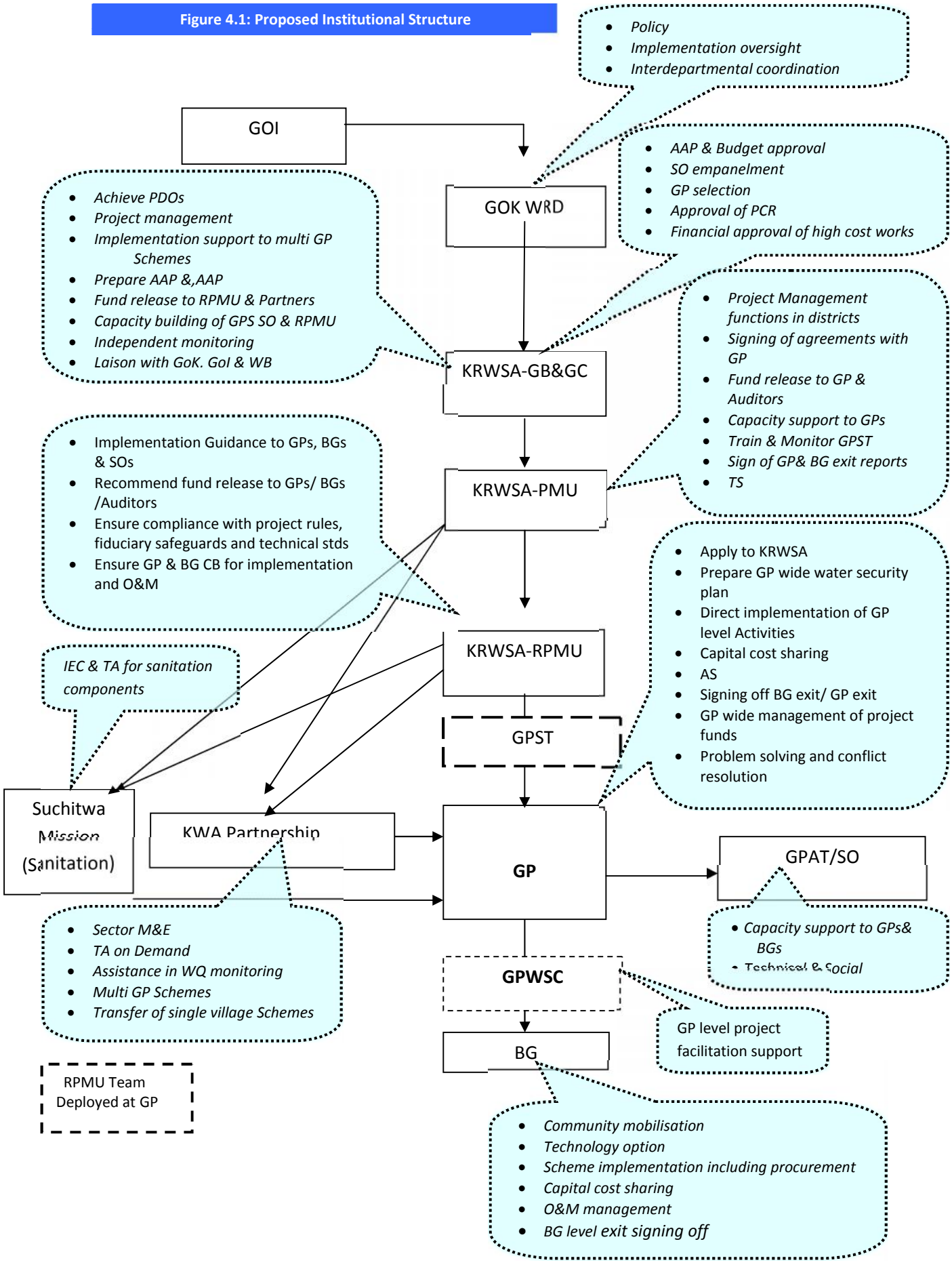
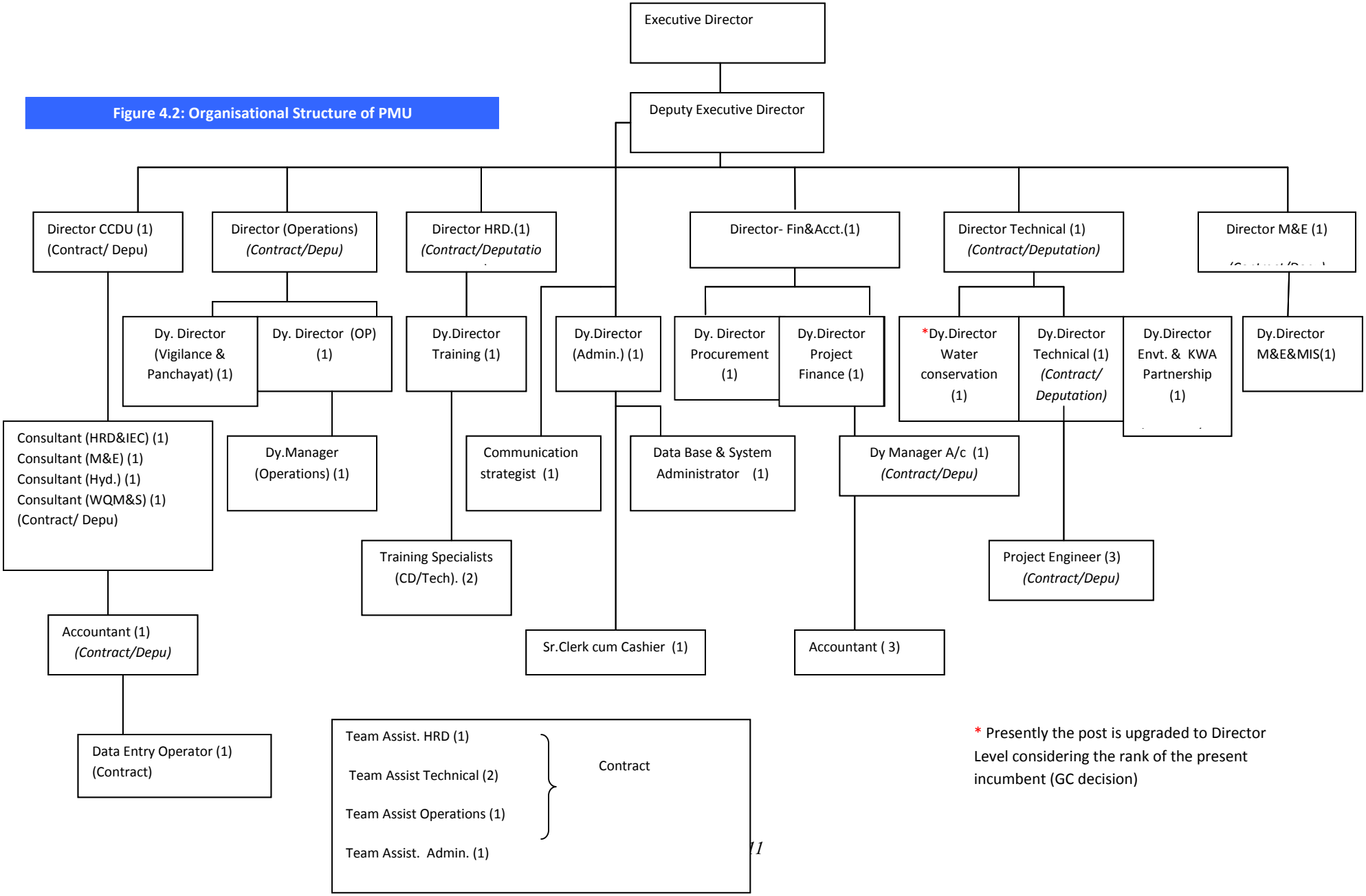
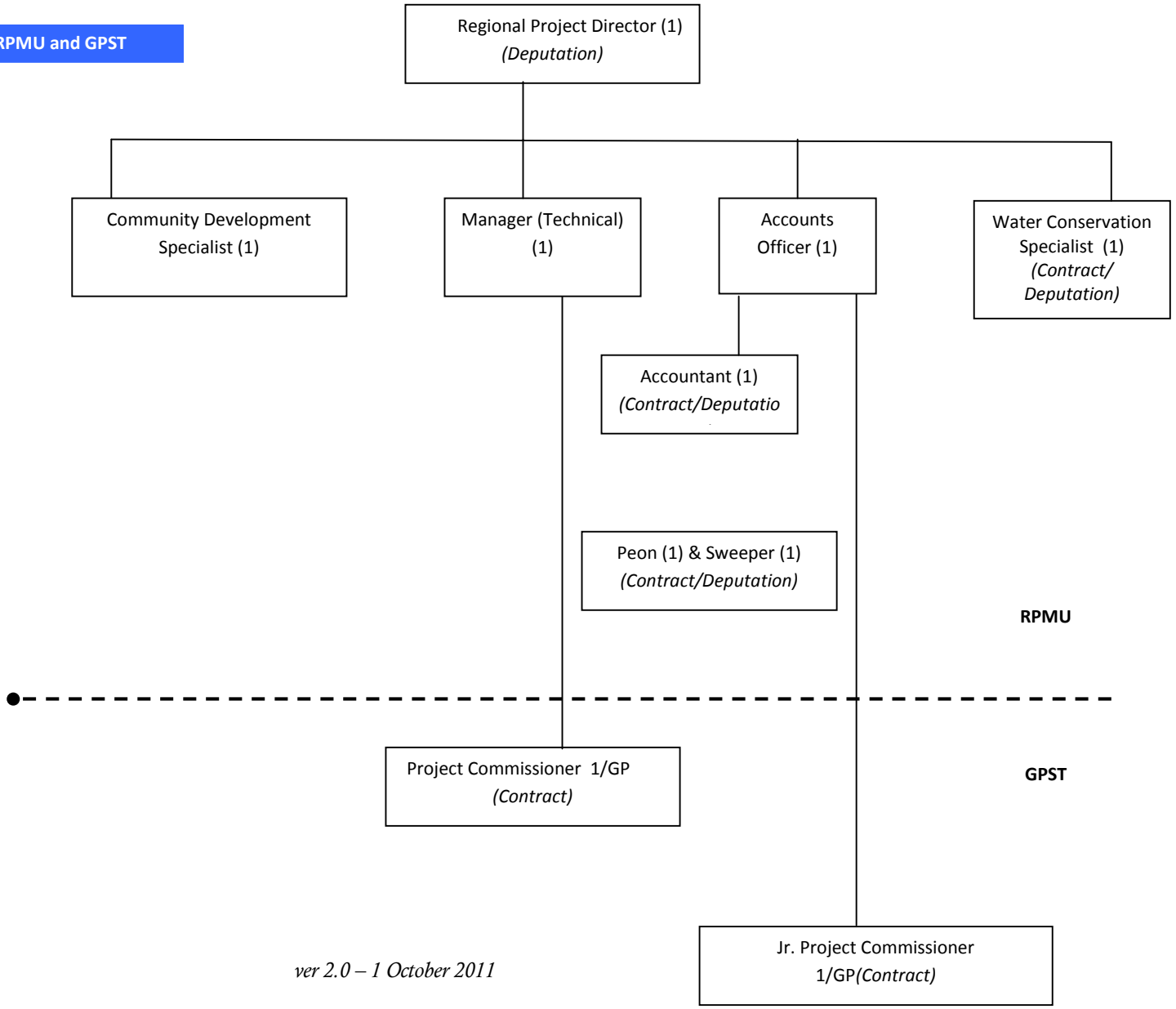


Figure 4.2: Organisational Structure of PMU



* Presently the post is upgraded to Director Level considering the rank of the present incumbent (GC decision)

Figure 4.3: Organisational Structure of RPMU and GPST



Regional Project Management Units

4.9 The KRWSA plans to extend Project activities throughout the state through Regional Project Management Units (RPMUs) set up at various locations in the state. Each RPMU will cover 3–5 districts and will be headed by a Regional Project Director, an officer not below the rank of Deputy District Collector. Initially, the KRWSA will establish three RPMUs with 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 decentralisation 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.

4.10 RPMU staff will travel to Project GPs and give advice, guidance, and on-the-spot approvals as and when needed by GP Support Teams (GPSTs). Strong linkage with grass root level institutions and effective supervision of Project activities can be ensured through this arrangement. Figure 4.3 shows the organisational chart of the RPMU.

4.11 The functions of the RPMU are:

- facilitation and implementation support to GP and GPST;
- signing of various agreements with the GP for small schemes, and with the GP and the KWA for multi-GP schemes;
- capacity building support for the GP, GPST, GPAT, and SO teams to ensure that stakeholders perform their functions effectively during Project implementation;
- maintenance of a Project bank account (an account linked to the PMU bank account), fund management at the regional level and timely transfer of these funds to the GP as per the recommendations of the GPST;
- random supervision and monitoring of various components, during Project implementation;
- ensuring timely and satisfactory completion of Project components on par with the scheme cycle; and
- completion of exit formalities at the GP level.

4.12 RPMUs are envisaged as the extended arms of the PMU. The RPMU teams are designed as mobile teams of experts that extensively travel 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

Grama Panchayat

4.13 Grama Panchayat (GP) is the focal point for the implementation of the Project. The GPs' capacity, evolved over 15 years of decentralised planning, will help in shouldering the responsibility of Project implementation. The GP President will be responsible for implementing Project activities, in line with Project philosophy, and according to guidelines issued from time to time. The GP board and its sub-committee on health and education will proactively support the Project. The watsan agenda at the GP level will be reviewed by the standing committee for health and education, and placed before the GP board for approval.

4.14 The chief functions of the GP will be as follows: (i) It is responsible for the implementation of the Project in a sustainable way, through appropriate institutional arrangements envisaged in the Project. (ii) It will ensure resource support for satisfactory implementation, operation and running of the Project. (iii) It will implement GP-level activities and proactively facilitate the implementation of components by the BGs. (iv) It is responsible for implementation and O&M management of large water supply schemes and multi-GP schemes, including payment of bulk water charges to the KWA.

4.15 In carrying out its functions, the GP will undertake the following tasks:

- Applying to KRWSA for seeking Project support;
- Directly implementing GP-level activities and providing implementation support to BGs;
- Recruiting the SO/GPAT, or an engineering consulting firm, to provide implementation support to the GP and its BGs;
- Preparing a GP-wide RWSS Development Plan including a Water Security Plan and a Cmmunity Empowerment Plan and seeking the necessary technical and administrative approvals from Jilla Panchayats and from the KRWSA;
- Signing bilateral MOUs with BGs empowering them to implement their schemes;
- Providing partial capital cost financing of infrastructure expenditures as per agreed Project rules;
- Transferring Project funding advances to BGs in installments, and undertaking GP-wide management of Project funds including those managed by the BGs;
- Capacity building of BGs in the O&M and management of RWSS schemes;
- Concurrent monitoring of BG performance both in implementation and sustainability of service O&M functions, and related problem solving and conflict resolution;
- 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;

- 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;
- 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
- Ensuring 100% O&M financing of water supply schemes in each GP through user charges.

4.16 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.

GP-level Water Supply Committee

4.17 A GP-level water supply committee (GPWSC) will be constituted for the effective implementation and monitoring of water supply and related components at the GP level. This committee will be chaired by the GP President and will have representation of the BGs. If the membership of the committee exceeds 20 and above, it will have an executive committee with seven members for effective and timely decision making. The following members constitute the GP-level water supply committee: GP President (Chairperson), GP Standing Committee chairperson for Health and Education (Vice-Chairperson), GP Secretary (Convener), BG representatives (if applicable) of small WSS, President/Secretary of SLC (if applicable) for large WSS, President/Secretary of SLC (if applicable) for multi-GP schemes.

4.18 The GPWSC shall perform all functions in respect of implementation of water supply and sanitation activities at GP level. The other key functions of the GPWSC are:

- ensure participation of all stakeholders in the Project;
- ensure that the SOs contracted for IEC and capacity building will deliver timely and effective IEC and capacity building support for effective community mobilisation;
- support the taking over and rehabilitation of single or multi-GP schemes at the GP level;
- provide facilitation support to BGs for deciding appropriate technology options that are cost effective and technically feasible;
- ensure that BGs have mobilised the required capital contribution for time-bound Project implementation.
- ensure timely approvals by competent bodies;
- coordinate all Project implementation activities at the GP level;

- monitor and review the progress of Project implementation at the GP level;
- monitor and supervise the activities of SOs and GPATs;
- review performance of stakeholders (including GPSTs) on delivering required outputs;
- provide implementation support to GP-level Project components;
- ensure timely and required fund flow from GP to BGs and SLCs;
- liaise with other departments for implementation support;
- facilitate land procurement by BGs and SLCs;
- ensure timely completion of Project activities within the period specified in the scheme cycle;
- provide post-implementation support to schemes including required O&M backup support;
- facilitate timely exit of schemes;
- ensure that BGs manage schemes as per design specifications, and with proper O&M arrangements;
- undertake conflict resolution;
- take over defunct schemes and ensure sustainability support; and
- ensure institutional, financial and technical sustainability support to BGs and SLCs to manage the schemes.

GP-level Support Team

4.19 Over 70 per cent of Project expenditure will be incurred by GPs and BGs within the administrative areas of the GPs—mainly on RWSS infrastructure development. GP-level Support Team (GPST) consists of RPMU staff placed in a GP to support Project implementation activities (see Figure 4.3). The GPST will consist of one senior engineer and an accountant. The GPST will ensure timely, high quality Project implementation, including smooth fund flow, transparency, accountability, check measurement, and concurrent monitoring.

4.20 The main functions of GPSTs include:

(i) providing continuous guidance to the GP, and its BGs and SOs/GPATs;
(ii) providing on-site clearances and quick approvals to the GP, BGs and SOa/GPATs, that are needed from the KRWSA from time to time during various phases of Project implementation (including concurrent valuations of completed works);
(iii) ensure that BGs are formed and registered with proper capacity building;
(iv) ensure that BGs are ready for social action;
(v) ensure that BGs are informed of various technology options;
(vi) undertake concurrent monitoring, and check measurements of physical works;
(vii) solve problems that can be tackled at the GP level;
(viii) troubleshoot, and send early warning signals to the KRWSA's PMU if something is going wrong;
(ix) submit progress reports as required for Project monitoring;
(x) facilitate independent audits conducted by the PMU and the RPMU; and

(xi) maintain hard copies of all Project documents and files and send only electronic copies to the RPMU and the PMU for their records.

Support Organisations (SO) recruited by GPs

4.21 (a) ***SOs***: The first category will be SOs that will be recruited by the GPs to assist the GPs, and BGs, on a day-to-day basis, in engineering, community development and fiduciary functions—during planning and implementation of Project activities—and providing brief post-implementation support to BGs in stabilising scheme operations. These SOs could be NGOs, government-supported SOs like SEUF, CBOs like Kudumbashree, consulting engineering firms, or the KWA (as a technical support provider)[1].

4.22 (b) ***GPATs***: The second category of SOs will be GPATs—an institutional arrangement that Jalanidhi successfully developed as an alternative to the use of NGOs. In these cases, the GPs 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 programmes in the GP.

4.23 The efficient and scientific implementation of the Project in a GP needs an effective institutional support mechanism to address the technical and community development needs of the GP. GPs will be given the option to choose one of the two support institutional arrangements: select an SO or GPAT. An SO or GPAT will be administered through a contract signed between the GP and the concerned organisation or individuals. Criteria for selecting an SO, and mode of appointment of a GPAT are detailed in Appendix 3. An SO or GPAT will be given capacity support and training to facilitate and implement the Project at the grass roots. The roles and responsibilities of an SO and GPAT are outlined below:

- support the GP in preparing the comprehensive water development plan;
- support the GP in creating public awareness of the Project;
- conduct GP-level IEC campaigns on reform principles in rural water supply and sanitation;
- utilise appropriate social mobilisation processes, and mobilise needy sections who face acute water scarcity, to form registered BGs;
- assist the institutionalisation and capacity building of BGs, by facilitating the evolution of systems and procedures (conducting meetings, record keeping, etc.);
- undertake participatory resource mapping to identify watsan problems;
- through community participation, identify solutions to local watsan problems;

[1] SOs to be hired under the project cannot have any political affiliations.

- conduct participatory baseline surveys in BGs and process the data;
- assist BGs identify feasible and sustainable solutions to their watsan problems, adopt technology choices, and mobilise community contribution;
- undertake detailed surveys, and prepare designs and estimates for all components of the Project leading to the community action plan (CAP);
- prepare training plans for BGs and impart training as per plans;
- assist BGs in record keeping and setting up accounting systems;
- prepare CAPs and Community Empowerment Plans (CEPs) for BGs and the GP;
- support and guide BGs in procuring goods, works and services, by advising them on quality parameters, procurement methods, stores management, etc.
- ensure the quality of materials purchased by BGs;
- undertake concurrent monitoring and check measurements periodically;
- monitor construction quality in the schemes being implemented;
- support BGs in O&M arrangements, including fixing and collecting user charges;
- support BGs in setting up community-based water quality monitoring systems;
- support the GP and BGs in identifying and implementing water recharge measures for sustaining their water sources;
- undertake measurement and valuation of work done;
- support BGs and the GP in conducting social audit;
- prepare an Implementation Phase Completion Report (IPCR).
- support BGs in getting their accounts audited; and
- prepare exit reports of BGs.

SOs recruited by KRWSA

4.24 (a) ***Government Institutions/Agencies***: The third category of SO will be a range of government-supported local autonomous institutions that will be contracted by the KRWSA on a sole source basis[2]. These will include KILA for training programmes, Suchitwa Mission for developing strategy and IEC materials for sanitation and hygiene promotion, CWRDM and KAU for preparing groundwater recharge schemes, SEUF and IIM to assist with project management aspects, and KWA/WASCON for activities such as water quality monitoring, technical training programmes, consultancy support and for assisting in the transfer of KWA managed single-GP schemes to GPs and BGs.

4.25 (b) ***Private sector consulting firms***: The fourth category of SO will be private sector consulting firms or individual experts, to provide assistance in: engineering design, system efficiency improvement and construction supervision of large WSS and multi-GP schemes; preparing GP-wide Water Security Plans; implementing computerised FM systems; audits and accounts; independent construction quality monitoring; implementing and feeding MIS and M&E systems; and conducting

[2]Single source hiring will require World Bank clearance prior to inclusion for project funding.

surveys, analyses and studies to assess the adequacy and effectiveness of Project strategies, implementation experiences, processes, results, outcomes and impacts. Some of these activities may be entrusted to government institutions and agencies.

Beneficiary Group

4.26 Beneficiary Group (BG) is the association of users that evolves based on water scarcity and felt need for water. BGs formed are the grass-root institutions responsible for planning, implementing, operating and managing Project components. BGs will have legal standing as they are registered under the Travancore-Cochin, Scientific and Charitable Societies Registration Act, 1955 (Act XII of 1955). Accordingly, for renewal of registration, the BGs should submit an audited accounts statement and an annual report to the Registrar of Societies.

4.27 BGs have the mandate to plan and implement Project activities according to guidelines, and mobilise contribution towards capital cost. The full responsibility of operation and management is vested with the BGs.

4.28 Membership in a BG is limited to two adult members (usually the head of the household and the spouse) of participating households. This dual membership will ensure ownership rights for women, and 50 per cent space in decision making. A BG also has its own well-drafted bye-law which ensures participation and equity among members. The composition of BGs, its various committees, their functions, and methods of selecting members, are defined in the bye-laws.

4.29 Each BG will select a representative Beneficiary Committee (BC) consisting of a president, vice-president, secretary, joint secretary, treasurer and four to six other members. The BC will manage the day-to-day implementation of Project components. The president or secretary will be responsible for management of funds collected, including Project funds. The following are the key functions of the BCs:

- community mobilisation and BG registration as a society;
- with the support of SO and the GPAT, building of enough capacity among BG members for making informed choices on schemes and technology;
- provision of partial user financing of capital costs;
- procurement and construction services;
- BG-level exit report sign-off; and
- management and full financing of O&M, including levying and collecting sufficient user charges to cover the O&M costs.

4.30 The Project will make vigorous efforts to maximise women's representation and management roles in the BGs. BGs will be accountable to their respective GPs for all Project activities.

4.31 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 for BGs and BCs for small water supply schemes. User committees will be formed at the ward level. The head of a household and spouse will be members of such ward-level committees (WLCs), and representatives from WLCs will constitute the Scheme-level Committee (SLC). The executive arm of the SLC is the scheme level executive committee, which implements the Project at the GP level.

4.32 In the second, third and fourth batches, the Project will also implement large schemes and multi-GP schemes. They require a federal arrangement for managing water supply, even while sanitation activities are managed at the BG level. The bye-laws of the BG permit nomination of members to the federal level.

Sector Partner Institutions

Kerala Water Authority

4.33 KWA will participate in the proposed Jalanidhi–II with the objective of gaining experience and strengthening its own capacity in implementing demand-responsive and decentralised 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. KWA will also contribute to aligning sector reform in the state, in line with GOI's latest guidelines, as well contributing to the strengthening of GOK's own larger decentralisation agenda.

4.34 KWA's main functions in the Project include:

(i) designing and building common infrastructure for multi-GP water supply schemes,
(ii) providing bulk supply on a volumetric basis to the participating GPs at the GP entry points, and providing technical assistance 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;
(iii) providing the necessary cooperation and technical assistance to GPs and BGs in the transfer and rehabilitation of existing single-GP water schemes by following the model developed under Jalanidhi–I;
(iv) supporting deputation of KWA engineers to the KRWSA, as requested by the KRWSA;
(v) supporting water quality testing of new and rehabilitated water supply schemes implemented under Jalanidhi–II;
(vi) conducting studies and implementing KWA modernisation programmes in the existing multi-GP schemes to be rehabilitated, expanded and improved under the Project;
(vii) contributing towards strengthening of the existing sector management information system for the RWSS sector in Kerala; and

(viii) providing other technical assistance and capacity building support to the KRWSA and GPs as requested.

Local Self Government Department (LSGD)

4.35 LSGD will contribute in the implementation of Jalanidhi–II towards achieving the project development objectives. Since LSGD is responsible for ensuring water security at the household level and sanitation management at the local level, the key role of LSGD is to support Project activities in addition to:

(i) issuing GOK orders to empower GPs and BGs as needed;
(ii) through its Suchitwa Mission, providing technical assistance and IEC support to the Project's sanitation activities;
(iii) resolving the issues of electricity bill arrears of single-GP schemes that are to be transferred from the KWA to GPs and BGs;
(iv) helping resolve any socio-political, policy and implementation issues (since GPs are administratively accountable to the LSGD);
(v) allocating complementary funds (such as NREGS funds) for Project activities in order to implement the labor component of surface- and ground-water conservation and recharge schemes;
(vi) promoting scaling-up of the Jalanidhi approach to other GPs in the state which are not direct beneficiaries of this Project;
(vii) contribute to strengthening a statewide M&E system for the sector for prudent management of significant investments undertaken by LSGs using devolved funds; and
(viii) establishing O&M back-up support arrangements in the GPs which are not recipients of Project support.

Suchitwa Mission

4.36 Jalanidhi–II aims to, among other things, address household-level liquid and solid waste management issues. It is expected that the Project will benefit from collaboration with the Suchitwa Mission in the following areas: developing of appropriate tools for IEC, technical assistance for sanitation schemes, technical assistance for covering the uncovered living in difficult areas, and piloting community sanitation programmes such as community septic tanks and seepage management.

C. STAFFING PLAN

4.37 ***Organisation and staffing***: The overall organisational chart for Project institutions is presented Figures 4.2 and 4.3. Draft job descriptions of key officers in PMU, RPMUs and GPSTs are given in Appendix 4, while the staffing plans for PMU, RPMUs, GPSTs, SOs/GPATs are given in Appendix 5.

D. RESPONSIBILITY MATRIX

4.38 The sharing of responsibilities for implementing various tasks, as identified in the project cycle, among the institutional entities in the implementation arrangement, is summarised in Table 4.3 and Table 4.4.

Table 4.3: Responsibility Matrix for Large WSS and GP-centric Activities

Sl No	Activity	Primary Responsibility	Secondary Responsibility
1	Preparation of CAP	SO	GP/GPST
2	Approval of CEP - GP level	GPST/RPMU	SO
3	Approval of CEP by DPC	GP	GPST
4	Develop source	BG/SO	GPST
5	Conduct source yield tests	BG/SO	GPST
6	Conduct Source water quality test	BG/SO	GPST
7	Review quality & quantity reports take corrective action	ICQSC/GPST	RPMU
8	GP share mobilisation	GP	
9	GP Project Bank Account	GP	SO
10	Fund request	GP	SO/GPST
11	Preparation of GP-centric Activities' Estimate	SO	GPST
12	AS Issue	GP	
13	Approval of Estimate - TS	RPMU	GPST
14	Implementation of scheme	GP	SO
15	Accounting of transaction	GP	SO/GPST
16	Financial audit	PMU	SO/GPST
17	Technical Audit	GPST	
18	GP Exit	RPMU	SO/GPST

GP: Grama Panchayat
GPST: GP-level Support Team
PMU: Project Management Unit
RPMU: Regional Project Management Unit
SO: Support Organisation

Table 4.4: Responsibility Matrix for Small Schemes			
Sl No	**Activity / Phase**	**Primary responsibility**	**Secondary responsibility**
Preplanning			
1	GP selection	PMU	
2	SO selection		
	- Short listing	PMU	
	- Selection	GP	
3	GPAT selection	RPMU / GP	PMU
4	Launch workshop	PMU	
Planning			
5	GP board meetings and resolutions	GP	RPMU
6	Takeover of KWA single-GP scheme -GP-level entry management activities	GP	SO
7	Capacity building for GP board / SO	RPMU	PMU
8	IEC campaign	SO	GP
9	Special Grama Sabha	GP	SO
10	Cluster meeting	SO	GP
11	KRWSA—GP Agreement	RPMU/GP	SO
12	GP bank account opening	GP	SO
13	GP share mobilisation into GP Project account	GP	
14	Water security plan preparation	RPMU	GP
15	GP board meeting	GP	
16	GPAT / SO positioning	RPMU	GP
17	GP–SO Agreement	GP / SO	
18	Formation of BG	SO	GP
19	BG registration	BG	SO
20	Agree-to-participate meeting	BG	SO
21	Agreement between BG & GP	BG / GP	SO
22	Bank account opening	BG	SO
23	BG trainings	SO	GPST
24	BG share mobilisation into Project account of BG	BG	SO
25	Formation of BG Federation / GPWSC	GP	SO /BG
26	BG Federation bank account opening	GP	SO
27	Identifying technology options, conducting feasibility analysis	SO	GPST
28	Agree-to-do meeting of BGs	BG	SO
29	Decide on source after geophysical survey	BG	SO
30	Yield survey	SO/BG	GPST
31	Conduct field survey	SO	GPST
32	Decide location of OHT	BG/SO	GPST
33	Preparation of DPRs	SO	GPST

Table 4.4: Responsibility Matrix for Small Schemes			
Sl No	**Activity / Phase**	**Primary responsibility**	**Secondary responsibility**
34	Approval of DPRs	RPMU/GPST	GPST/SO
35	Preparation of Community Empowerment Plan (CEP)	SO/BG	GPST
36	Issue of AS	GP	RPMU
37	Issue of TS	GPST/RPMU	
38	Approval of CEP (GP level)	SO	GP/GPST
39	Approval of CEP by DPC	GP	GPST
40	Agree-to-implement meeting	BG	SO
Implementation			
	Activities under Community Contracting		
41	Fund flow as per norms to GP / BG	GPST	RPMU
42	Land purchase in joint name	BG / GP	SO/GPST
43	Develop source	BG/SO	GPST
44	Conduct source water quality tests	BG/SO	GPST
45	Conduct source yield tests	BG/SO	GPST
46	Review quality and quantity reports and take corrective action as required	ICQSC/GPST	RPMU
47	Preparation of list of materials to be procured	BG/SO	GPST
48	Preparation of list of labour contracts to be procured	BG/SO	GPST
49	Recruitment of independent construction quality surveillance consultants	RPMU	GPST
50	Recruitment of auditors	PMU	RPMU
51	Inviting quotations from firms for procurement of materials	BG	SO/GPST
52	Contract award for procurement of materials	BG	SO/GPST
53	Procure materials	BG	SO/GPST
54	Ensure quality of materials	BG/SO/ICQSC	GPST
55	Arrange for testing of materials where required	BG/SO	GPST
56	Review test reports of materials and take corrective actions	ICQSC	RPMU
57	Authorize payments to firms / suppliers of materials	BG	
58	Make payments to suppliers	BG	
59	Accounting of transactions on daily basis	BG	SO/GPST
60	Inviting quotations for procurement of labour contracts	BG	SO/GPST
61	Deciding agency for labour contracts and issue work orders	BG	SO/GPST
62	Implement works—day-to-day construction quality monitoring	BG/SO	GPST
63	Ensure quality of supervision by BG/SO engineers	GPST	RPMU /PMU
64	Prepare bills of labour contractors	BG	SO
65	Authorize payments to labour/ labour contractors	BG	
66	Make payments to labour / labour contractors	BG	
67	Financial audits as prescribed in FM manual	BG/SO	GPST
68	Obtain power connection	BG/GP/SO	GPST

Table 4.4: Responsibility Matrix for Small Schemes			
Sl No	**Activity / Phase**	**Primary responsibility**	**Secondary responsibility**
69	Commissioning of scheme and taking corrective actions as/ wherever required	BG/SO	GPST
70	Ensure equitable distribution of water	BG/SO	GPST
71	Technical audit	SO/GPST	
72	Final financial audit	BG/SO	GPST
73	O&M training and O&M arrangements	GPST	RPMU
74	Preparation of O&M plan	BG/SO	GPST
75	Prepare as built drawings	SO	GPST
76	Commissioning of scheme	BG/SO/GP	GPST/RPMU
77	BG-level ICR preparation	BG/SO	GPST
78	Settlement of accounts	SO/BG	GPST
79	ICR approval of BG	BG/SO	GPST
80	BG exit	GPST	RPMU
81	Updation of GP asset register to include BG assets	GP	
82	GP-level ICR preparation	SO/GP	GPST/RPMU
83	ICR approval	GP	RPMU
84	SO exit	GPST	RPMU
85	GP exit	RPMU	
86	Post implementation	GP	BG Federation
GP: Grama Panchayat GPAT: GP Action Team GPST: GP-level Support Team GPWSC: GP-level Water Supply Committee		PMU: Project Management Unit RPMU: Regional Project Management Unit SO: Support Organisation	

E. CAPACITY BUILDING PLANS

4.39 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. Four levels (policy/apex, strategic, intermediary, and grass roots) identified in Jalanidhi–I will be retained for capacity building in the Project. Figure 4.6 illustrates the various levels of stakeholders, and their different requirements. Figure 4.7 outlines the proposed content for each level of stakeholders. Content of training modules will be finalised after consultations between the KRWSA and SOs/GPATs.

4.40 The training of trainers (TOT) method will be used to address the capacity building needs of the intermediary level and grass-roots-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/National Literacy Mission 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 respective SO 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 the Project, along with the SO/GPAT core staff. Following the exit of SO or withdrawal of the GPAT, the GP level resource team can remain in place, reporting to the GP with support either from the GP or the BG Federation. This arrangement will thus address the follow-up capacity building requirements of the BGs. The services of expert resource persons from the sector will also be utilised. Project- and programme-level actors will be sent to national and international training institutions for improving skills and competencies. The Project's capacity building requirements are summarised in Table 4.5.

Table 4.5: Capacity Building Requirements

Level	No. of Programmes	No. of persons to be trained	Estimated cost (INR)
Policy/apex level	13	493	6,559,199
Strategic level (KRWSA PMU, RPMUs and GPSTs)	132	2,062	18,294,035
Intermediary level (GP, SO, GPAT, etc.)	1,490	63,056	35,123,915
Grassroots level (BG, WLC, SLC, SLC, etc.)	13,544	536,540	40,723,100
Total	15,179	602,151	100,700,249

4.41 Based on Jalanidhi–I experience, it is proposed to retain the evolutionary, learning mode approach to capacity building, to ensure responsiveness to field realities and needs. New and innovative methods such as distance education and application of electronic media (Web, mobile, etc.) will supplement capacity development initiatives.

4.42 In Jalanidhi–I, a separate training cell (CapCell), with adequate financial powers and administrative autonomy was established, to cater to capacity building needs. TOT-type method was used—the SOs was given training, and they in turn cascaded the knowledge and skills to the BGs, GPs and their own team members. In Jalanidhi–II too, KRWSA will have an HRD division consisting of a Director, a manager, and training specialists in accounts, community development, and technical. (See Figure 4.4 for structure, and Figure 4.5 for implementation arrangement.) The division will handle the initial batches in Project implementation. Later the Communication and Capacity Development Unit (CCDU) will be used for capacity building of stakeholders at intermediary and grass-root level. For this, the CCDU will be strengthened with adequate staff support. Within the CCDU, a special cell—consisting of a manager and consultants for IEC and training—will be in charge of the capacity building of intermediary and grass-root level stakeholders in the Project. Funds will be transferred to CCDU as per proposals from the HRD division. The impact and effectiveness of this arrangement will be evaluated during the course of the Project, and suitable modifications made based on feedback from users.

Communication Strategy and Action Plan

4.43 A communication strategy has been developed to bring changes in knowledge, attitudes and practices among key stakeholders, and to provide information and educate stakeholders so as to create a conducive environment for the Project. The communication strategy and action plan is presented in Appendix 6.

4.44 The media centre in the PMU will monitor, measure and record the IEC activities implemented state-wide, periodically present the outcome before the Directors, and make necessary alterations as per suggestions. The Director (HRD) will lead Project communication with the support of the communication strategist placed.

Figure 4.4: KRWSA Structure for Capacity Building

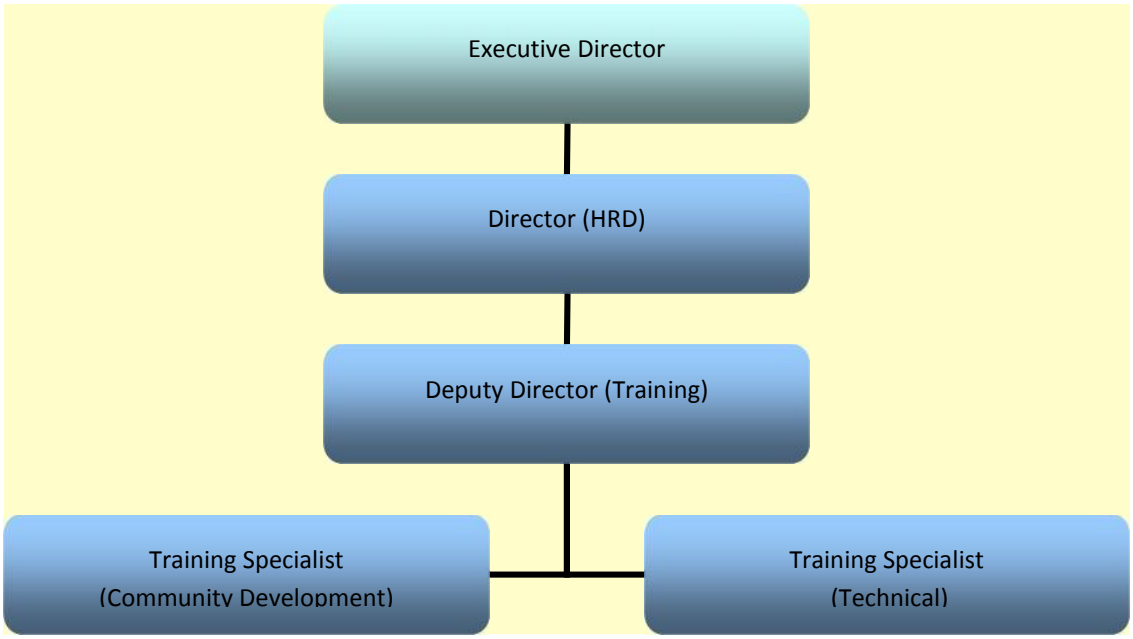


Figure 4.5: Implementation Arrangement for Capacity Building

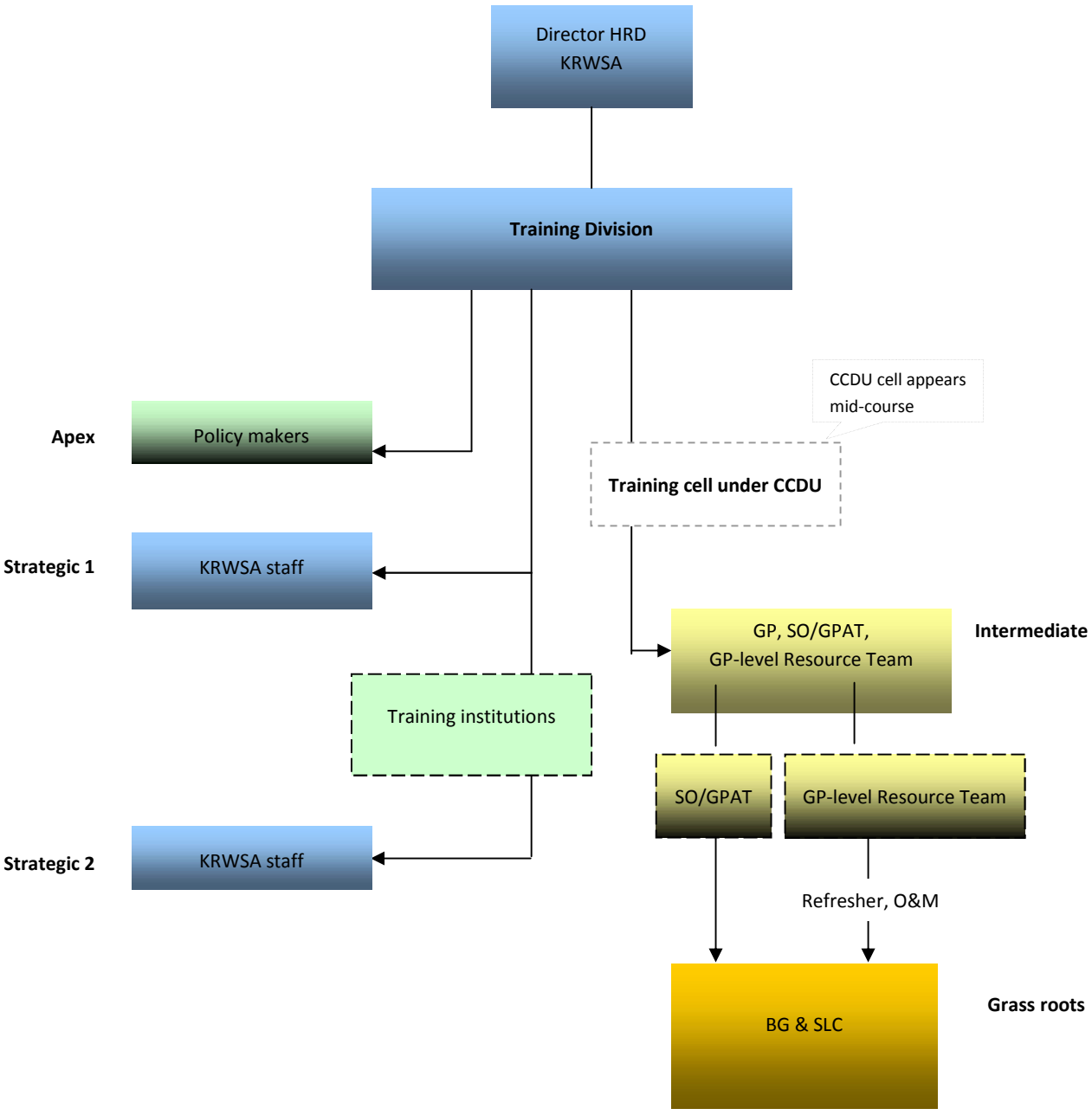


Figure 4.6: Four Levels of Capacity Building

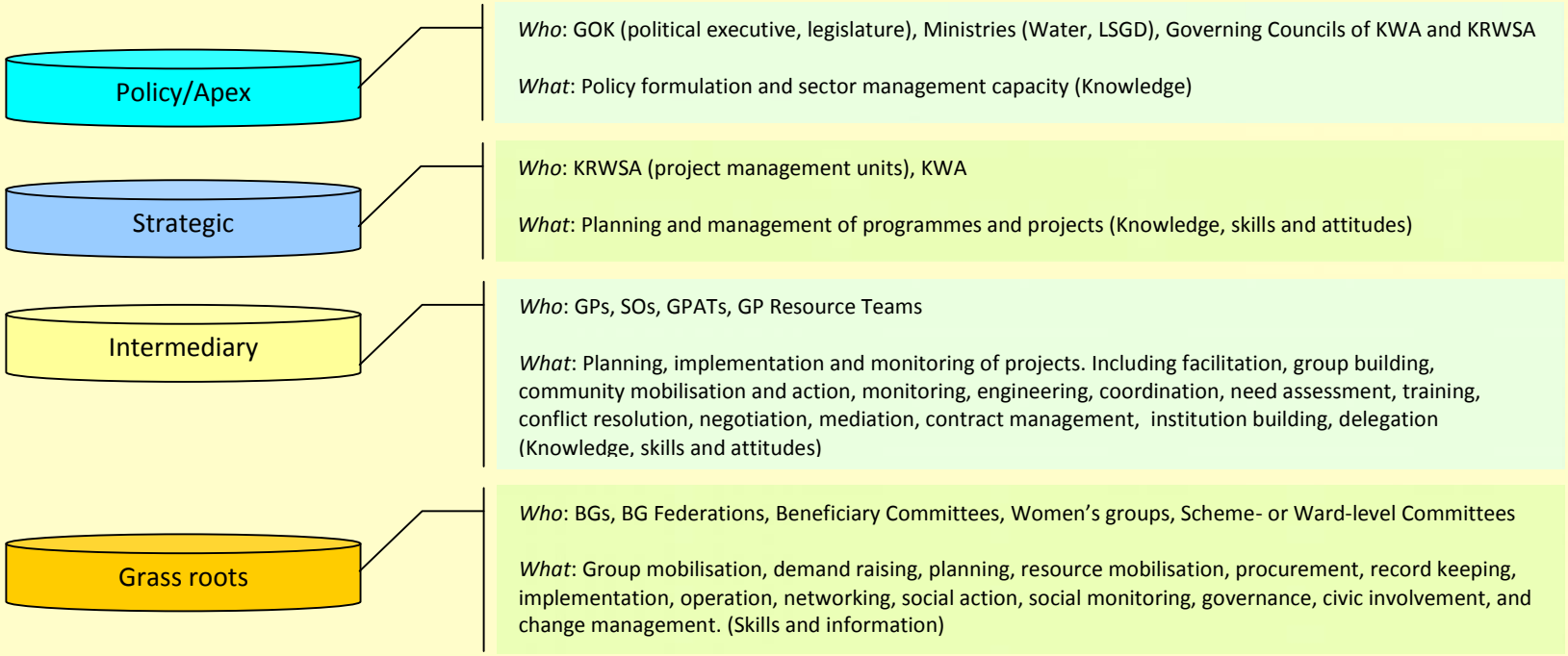
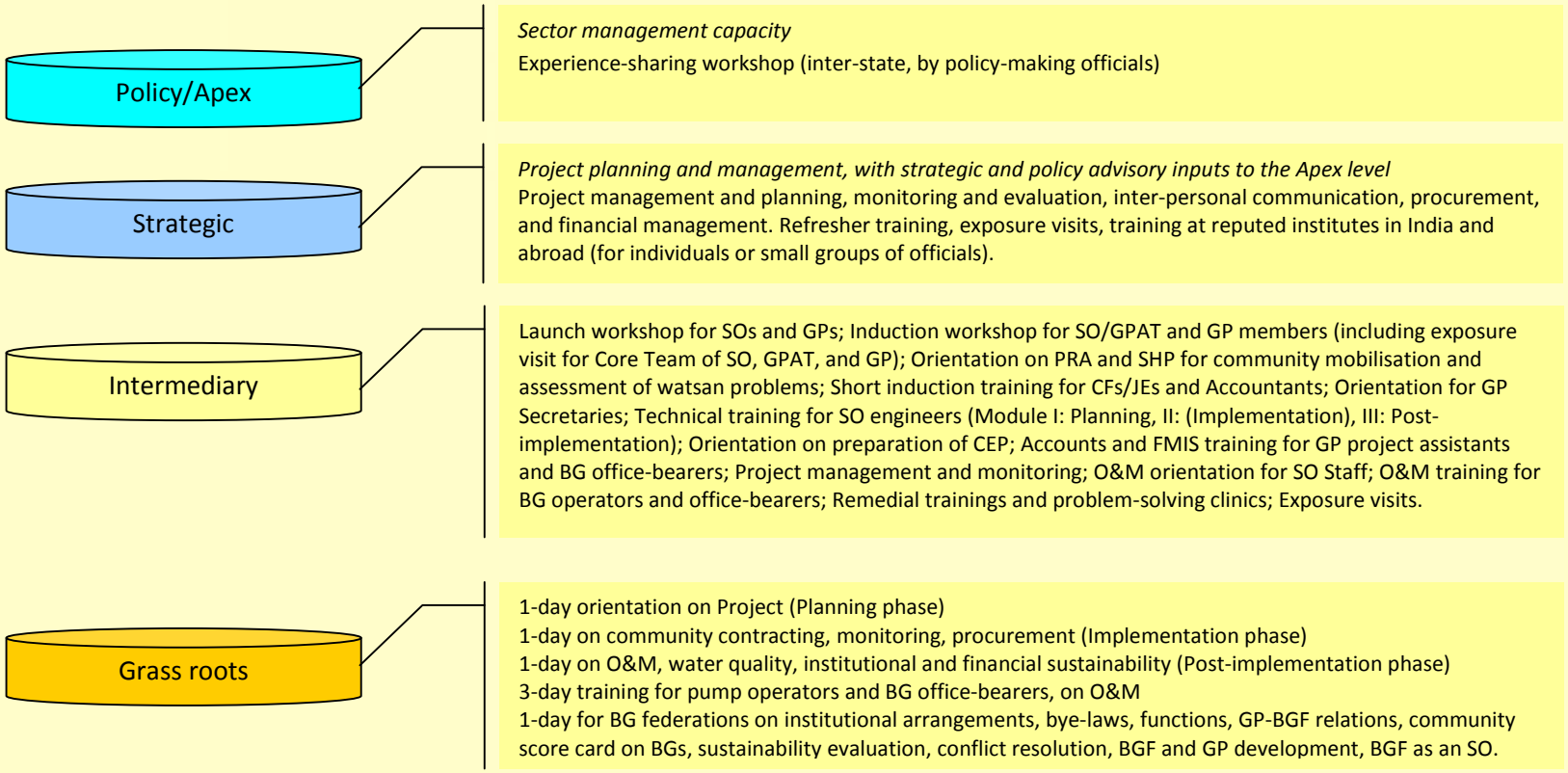


Figure 4.7: Proposed Content of Training And Capacity Building



CHAPTER 5: TECHNICAL

A. TECHNICAL ASPECTS

5.1 ***New small water supply schemes:*** About 4,000 small piped water systems covering about 40 households in each scheme are proposed to be financed under the project. 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 2km 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.

5.2 ***New large water supply schemes***: Approximately 10 large water supply schemes covering between 1,000-2,000 households in each 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.

5.3 ***Transfer and 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.

5.4 ***Water Security Maps***: To assist in scientific selection of sources, GP-wise ground water prospects maps will be prepared using the corresponding survey of India topo sheet covering all the habitations. The map shows estimation of groundwater recharge and draft, demarcation of ground water and surface potential areas, details of existing water supply scheme, water quality problem areas, future water demand projection and scope for water conservation and artificial recharge. The information provided in the ground water prospects maps will form a suitable database for narrowing down the target zones and systematic selection sites for selection of water sources after conducting follow-up ground water surveys to establish drinking water sources to all the non covered and partially covered habitations within the GP. These maps also provide information for selection of sites for construction of

recharge structures to improve the sustainability of drinking water sources, wherever required. For selection of sites, follow-up ground surveys and hydrogeological/geophysical investigations will be carried out in the prospective zones. The Technical Manual contains details of the methodology for preparation and use of these maps.

5.5 ***Specific treatment plants for 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. The treatment process will include Multi Media Filter (MMF), Activated Carbon Filter (ACF), 5 and 1 micron cartridge filters, RO membranes and the ultra violet UVW disinfection unit. Feasibility will be reviewed for supply of drinking water through cans, to the households at cost fixed by the BG with subsidized cost to SC & ST households.

5.6 ***Tribal Development Programme***: The project proposes a separate tribal development programme covering 22 Grama Panchayats selected as a special case instead of the self selection process. The components include preparation of GP wise water security map showing water resources, small water supply schemes, and specific treatment plants for quality affected habitations and ground water recharge measures identified in the water security plan.

5.7 ***Rehabilitation and modernisation 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:

- 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;
- KWA will design, implement and manage the bulk water supply system from the source to the GP entry points;
- KWA will collect bulk water tariffs from the GPs, as determined by GOK guidelines;
- the GPs will collect user tariffs from the beneficiary households;
- 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.
- GPs will upfront take over the ownership and management of internal distribution system adopting the guidelines. KWA will be responsible for providing Technical sanction for engineering designs, drawings and cost

estimates for bulk supply and internal distribution system designs will be vetted by KWA.

5.8 Technical assistance will be provided by KRWSA to prepare the proposals for Internal distribution system including reduction of non revenue water by installation of bulk flow meters, district meters and consumer meters.

5.9 ***Groundwater recharge (GWR)***: Based on the experience of Jalanidhi-I, the KRWSA considers GWR an important component for the sustainability of rural water supply schemes both for source and quality. 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 percolation 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. This is expected to increase the efficiency of ground water development and management.

5.10 ***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 programmes 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.

5.11 ***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:

- revised designs of overhead water tanks to conform to the latest IS codes;
- preparation of water security maps for each GP;
- 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;
- disinfection with on-site generation of hypo-solution with small capacity plants; and
- the use of standard software for the design of distribution systems.

5.12 The use of the technical manual is designed to result in good quality construction and to maximise the sustainability of the resultant water supply schemes. The Technical Manual is enclosed herewith as Annex 4 to this PIP.

5.13 ***Quality assurance***: The SO 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. Sample checklists to be followed by engineers are provided in the Technical Manual.

5.14 ***Water quality monitoring***: Water quality testing of Jalanidhi-II schemes during project implementation will be carried out by. BG members who will collect water samples and take them to the nearest 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 field test kits. In either case, the water tariffs should also include the cost of water sampling, collection and testing. The state wide component supports a programme for water quality surveillance of samples of all drinking water sources in the GPs of the eight project districts.

5.15 ***Post Implementation Technical support for O&M of PRI Schemes***: In the MOU between GP and KRWSA the assets created in Jalanidhi II will be in the GP assets register and GP will ensure that these assets are maintained in a sustainable manner.

5.16 ***Engineering Support Activities***: Technical inputs at pre-planning stage involves identifying a source with community concurrence, identifying a site for overhead reservoir, determining service level and arriving at approximate estimate cost for installation and O&M. Community will discuss the proposals and if they agree to the project proposals and principles, the project will go to the next stage of planning. The planning phase involves technical inputs including detailed survey, designing, preparation of drawings and estimates and bid documents and entrustment of works to appropriate agencies . In the implementation stage, technical support to be provided to the community includes day to- day supervision, ensuring quality of construction and materials and regulating payments and contract management to prevent cost and time overruns. In the post-implementation phase, technical support will be required to train the community in the O&M of the scheme, fixing of appropriate tariff and ensuring sustainability of the water supply scheme. The project engineers will require refresher courses on the use of computer-oriented tools for survey, design, preparation of designs, drawings and estimates for water supply schemes.

5.17 ***Capacity Building for Engineers***: Both SO engineers and KRWSA engineers employed in the project will require capacity building in the use of computer-oriented tools for survey, design, preparation of designs, drawings and cost estimates for the water supply schemes. Capacity building will also be provided to the engineers for using the GIS based MIS including usage of GPS enabled hand held devices for collection and up-dation of sector information.

B. IMPLEMENTATION ARRANGEMENTS

5.18 ***Small Water Supply Schemes***: Implementation of Small water supply Schemes including small KWA rehabilitation schemes up to Rs 22.5 lakhs will be procured by community through "local shopping" wherein KRWSA shall act, as 'facilitator' and responsibility for execution of works shall be mainly that of BG. The technical and professional support shall be provided to the BG by KRWSA at all stages including procurement of materials and implementation of works and financial and technical audit. The BG will also have the option to procure the pipes (for water supply pumping and distribution system) at their own level and either install them using the community labour or award the labour contract to the contractor. In respect of Boring and installation of borewell and Supply and installation of pumping machinery in case of bore well based water supply system BG shall implement either by community procurement or by awarding contract. However for the works of OHSR / GLSR & civil works, the community will procure supply cement, steel, construction materials etc and will award the construction to a labour contractor.

5.19 ***Works beyond Rs 22.5 lakhs***: The following principles shall be followed for procurement of works costing for all works beyond Rs 22.5 lakhs by KRWSA under the project:

1. The BG/SLC will have the option to invite bids in a single contract for all the components of the scheme or separate contracts for each of the above components.

2. The KRWSA shall compare and prepare an evaluation of the bids received and make a recommendation to the GP for forwarding to the BG/SLC for award of the contract. BG/SLC shall award the contract. Contract Agreement will be prepared by the SO and approved by the KRWSA and will be signed by Contractor and BG/SLC.

3. Wherever required engineering works like excavation in earthwork, laying of pipe line for water supply distribution etc. may also be executed by the BC/SLC by engaging skilled and unskilled labour as well as skilled workers on daily wages on muster roll at rates as prescribed by Schedule of rates, which shall be explained to BG by the GP Engineer. The Community shall carry out the work directly by local technician like mason, plumber, blacksmith etc. and procuring materials as per procedure described in the procurement plan and supervise the construction work and ensure its quality and quantity with the assistance of Engineers of SO & GP.

4. In respect of GWR works, GP will invite tenders. Technical and professional support shall be provided to the GP by KRWSA at all stages including invitation of bids, issuing notice inviting tenders, receipt & evaluation of tenders, award of contracts, procurement of materials, implementation of works and financial & technical audit.

5.20 ***Works costing beyond Rs 3 crores***: In the case of works costing above Rs 3crores, tenders will be invited by SLC with the help of KRWSA and contracts awarded with approval of KRWSA. The contractors' bills will be recommended by the GPST engineer and certified by the RPMU engineer. On the basis of the certification by RPMU engineer the BC/SLC shall pass a resolution for making payment on the basis of which a cheque or draft will be drawn in favour of the contractor from the bank account of BC/SLC. The cheque will be signed by the authorized signatories.

5.21 ***Payments***: The contractors' bills will be recommended by the GPST engineer and certified by the RPMU engineer. On the basis of the certification by RPMU engineer the GP shall make payment on the basis of which a cheque or draft will be drawn in favour of the contractor from the bank account of BC/SLC. The cheque will be signed by the authorized signatories. For works costing upto Rs 3crores, the contractors' bills will be certified by the GPST engineer. On the basis of the verification certificate by GPST engineer the BC/SLC shall pass a resolution for making payment on the basis of which a cheque or draft will be drawn in favour of the contractor from the bank account of BC/SLC. The cheque will be signed by the authorized signatories.

5.22 ***Technical assistance for the project components***: The technical assistance for the infrastructure building in the project includes among others the following: (i) Preparation of Water Security maps for each Project GP, (ii) Hiring of SO s for small and large water supply schemes, (iii) Technical support for ground water recharge, (iv) preparing specifications of specific treatment plants and (v) Technical support to GP s for design, implementation and commissioning of rehabilitation of intra GP facilities including the internal water distribution system including installation of bulk flow meters, district meters and consumer meters to reduce non revenue water, (vi) Independent Construction quality Surveillance of works.

5.23 ***Statewide Sector Development***: Support to statewide sector development efforts include:

1. statewide water resources studies;
2. development of an MIS designed for the rural water supply sector for the whole state and based on GIS, initially implemented for the project GPs, with a view to its subsequent roll-out to all the GPs in the state's;
3. statewide sector policy analyses/studies;
4. development of a medium-term plan for the sector;
5. performance assessments of all existing multi-GP schemes in the state;
6. performance assessments of a sample of existing single-GP schemes;
7. sector institutional development studies,

8. statewide independent monitoring and evaluation of RWSS schemes (eg, through consumer household surveys);

9. the setting-up of a state level sector development unit and project appraisal unit; and

10. a programme for water quality surveillance of samples of all drinking water sources in the GPs of the eight project districts.

5.24 ***PPP proposal for providing safe drinking water to quality-affected habitations***: As an alternative to transmit safe water over long distances, locally available unsafe water shall be treated to provide drinking water. The treatment plant will consist of RO followed by UV disinfection, and its capacity will be based on drinking water requirements of households. KRWSA will review the PPP model prevailing in other states. Treated water will be packed into 20-litre cans and collected at the RO plant or delivered at the consumer's doorstep. The Operator will be selected by through bidding, and cost sharing will be finalized from a menu of options (co-financing by operator, co-financing by GP, etc.) The Operator will construct the room (4 m x 6 m) for housing the RO plant, install the plant, and run it for 10–15 years. The KRWSA will arrange to carry out surveillance of drinking water quality provided by the Operator.

5.25 ***Responsibility matrix for engineering activities***: SO - GPAT will be appointed by the GP. The SO can be either a NGO who will provide engineers in the team or the SO can also be an engineering firm who will provide required Community development staff. The SO will provide one engineer for each GP for assisting the BG s in preparation, implementation and O&M of the schemes. The KRWSA will also place one engineer in each GP who will be concurrently supervising the SO engineer's work and ensuring the quality of the works and report to RPMU on a day to day basis. RPMU will also provide guidance to the SO engineers and GP Engineers. Table 5.1 gives the responsibility matrix prepared for engineering activities for preparation, approval, technical sanction, of DPR s, quality monitoring and authorizing payments, completion reporting, O&M, and post implementation support, etc., for quick reference.

Table 5.1: Jalanidhi-II - Engineering Activities Responsibility matrix											
Description	**Proc. Cat**	**Doc.Type**	**Issue of AS**	**Issue of TS**	**Appl of Bid Doc**	**IFB**	**Eval. Of Bids**	**Acceptance of Bid**	**Award of Work**	**Certification of Bills**	**Payment of Bills**
SWSS <= Rs 22.5 Lakh	CC (local Shopping)	Quotation/ W5	GP	GPST	GPST	BC	BC/SO/GPST	BC	BC	GPST	BC
SWSS > Rs 22.5Lakh	NCB	W1	GP	RPMU	RPMU	BC	BC/SO /GPST	BC/SLC	BC/SLC	RPMU	BC
LWSS & SWSS > Rs 22.5Lakh <Rs 45 lakh	NCB	W1	GP	RPMU	RPMU	BC/SLC	BC/SLC/SO /GPST	BC/SLC	BC/SLC	RPMU	BC/SLC
LWSS > Rs 45 Lakh <Rs 3 Cr	NCB	W2	GP	RPMU	RPMU	RPMU	RPMU/SLC	RPMU/SLC	SLC	RPMU	SLC
LWSS & MGP> Rs 3 Cr	NCB	W2	GP	PMU	PMU	PMU/RPMU	PMU/SLC	PMU/SLC	SLC	RPMU	SLC/GP
Transfer & Rehab of KWA & GP schemes by KRWSA	Local Shopping/ NSP/NCB	Qtn/ W5/ W1/ W2	GP	GPST/ RPMU	GPST /RPMU	BC/SLC /RPMU	BC/SLC/ GPST/RPMU	BC/ /SLC	BC/SLC	GPST/RPMU	BC/SLC
Transfer & Rehab of KWA schemes by KWA	Local Shopping /NSP/NCB	Qtn/ W5/ W1 /W2	GP	KWA	KWA	KWA	BC/SLC/ KWA	KWA/BC /SLC	KWA/BC /SLC	KWA	KWA
GWR Measures >22.5 Lakh	NCB	W1/W2	GP	RPMU	RPMU	GPWSC	RPMU/ GPWSC	RPMU/GP	GPWSC	RPMU	GPWSC
GWR Measures (others)<22.5 lakh	CC (local Shopping)	Quotation/ W5	GP	RPMU	RPMU	GPWSC	RPMU	RPMU/GPWSC	GPWSC	GPST	GPWSC
Supply & Installation, O &M for 5 yrs of STPs (Rs 116 Lakh)	NCB	W2	GP	RPMU	RPMU	RPMU/ GP	RPMU	GP	GP	RPMU	GP
			Works	NSP	<=22.5 lak		W5				
				NCB	>22.5 and = 45 lakhs		W1				
				NCB	>45 lakhs upto 45 crores		W2				
				ICB	Above 45 Crores						

GPWSC: Grama Panchayat-level Water Supply Committee

CHAPTER 6: PROCUREMENT ARRANGEMENTS

A. PROCUREMENT RESPONSIBILITY

6.1 BGs, SLCs, GPWSCs, GPs and the KRWSA will be the authority for all types of procurement—goods, works and consulting services—to implement the Project. Procurement will be undertaken in accordance with January 2011 guidelines on procurement, of the World Bank and the KRWSA. KRWSA will guide the implementing agencies (the GPs, BGs and SLCs) in their procurement activities through the Regional Project Management Units (RPMUs), and will ensure that all procurement is carried out in accordance with the Bank's procurement guidelines.

6.2 The aim of procurement is to obtain right quality of goods, works and services at reasonable and competitive price. The procurement policy is based on the following principles:

- Economy and efficiency in Project implementation.
- Economy and efficiency in the procurement of goods, works and services involved.
- Equal opportunity to all eligible bidders in providing goods and works, by providing timely and adequate notification of bid documents.
- Encouragement to development of domestic contracting, manufacture industries and consulting firms.
- Transparency in procurement process.

B. PROCUREMENT ARRANGEMENTS

6.3 ***Procurement arrangements***: All goods, works and 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. A Procurement Manual, based on above guidelines has been developed for the Project which shall be followed by all IAs to ensure consistency in procurement processed followed in the Project. The Procurement Manual is attached herewith as Annex 6. The Procurement Manual will be followed by all IAs for all procurement activities to be carried out under the Project. In case there is an inconsistency between the procurement manual and the World Bank procurement Guideline January 2011, the latter shall prevail. For each contract to be financed different procurement method, estimated cost, prior review requirement and time frame are agreed between the Borrower and the Bank in the procurement plan.

6.4 In order to ensure consistent application of the processes and procedures across all Implementing Agencies (IAs), KRWSA developed a Procurement Manual for works, goods and services for the Project – detailing, inter alia, the procurement

rules and regulations, clear definitions of roles and responsibilities and functional process flows, standard bidding documents, various formats for tendering and evaluation, grievance handling mechanisms, and a monitoring and evaluation framework – to be used for all procurement under the project.

6.5 Adherence by all IAs to the agreed procurement arrangements to be undertaken under the project will be the responsibility of KRWSA. Since the bulk of the procurement is to be undertaken by the beneficiary communities, KRWSA will guide the GPs, the Scheme Level Committees (SLCs) and the Beneficiary Groups (BGs) in their procurement activities through three Regional Project Management Units (RPMUs). The RPMUs will be staffed with an engineer (in addition to other staff) who will provide technical and professional support for procurement to the GPs/GPSTs and the KRWSA will be responsible for the training of the engineers who will be part of the GPSTs. The GPST engineers will provide hand-holding support and procurement guidance to GPs and BGs. SLCs and KWA will be engaged on behalf of KRWSA for the implementation of 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.

C. PROCUREMENT METHODS

6.6 The main procurement methods to be used in the project will be:

1. Community Contracting for small water supply and sanitation schemes;
2. National Competitive Bidding (NCB) for large water supply and sanitation schemes;
3. national shopping procedures for the purchasing of goods, equipment and materials; and
4. consultancies (national and international) for the hiring of SOs, and individual consultants and firms for sector policy and other major studies.

6.7 KRWSA has prepared a Procurement Plan and Procurement Manual which provide guidance on all the procurement processes to be carried out and the procedures to be followed under the Project.

6.8 For procuring goods, works and services (other than consultancy services) the following methods will be used:

- International competitive bidding
- national competitive bidding;
- shopping;
- direct contracting; and
- force account.

6.9 For procuring consultancy services, the following methods will be used:

- quality- and cost-based selection;
- quality-based selection;
- selection under a fixed budget;
- least-cost selection;
- selection based on consultant's qualification;
- single source selection; and
- individual consultants.

6.10 For procurement of skilled or unskilled labour, the methods will be:

- on daily wages (muster roll); and
- Community labour.

6.11 Community procurement will be through:

- market survey (shopping); and
- beneficiaries.

6.12 The choice of appropriate method of procurement is related to the nature, size, complexity, likely impact of the assignment, technical and financial considerations, and particular circumstances of the assigned job. It is necessary to define the assignment, the objectives and scope of goods, works and services before deciding the selection process.

D. PROCUREMENT PROCESSES

6.13 ***Procurement of Works***: Major Civil Works to be procured and implemented under the Project will include SWSS, LWSS, Intra- and Multi-GP schemes, and sanitation works. None of the contracts for civil work is expected to exceed USD 10 million. All civil works below USD 10 million will be procured following NCB procedures. Implementation of main categories is as follows:

1. ***Small water supply schemes*** (SWSS) 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 and SLCs 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, shall be procured by the BCs based on a standard schedule of rates. The BCs and SLCs, with technical and professional support from KRWSA and RPMU, will be implementing all Small WSS and Large WSS interventions and all intra-GP elements of the multi-GP schemes. The BCs and SLCs shall have the option to spilt up or slice

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 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 of the process in doing so. The rates for the materials and their quantities will be closely monitored both by the GPs and KRWSA, as per the provisions of the contract agreements for implementation of the schemes.

2. ***Large water supply schemes*** (LWSS) will be procured on a single responsibility basis to include procurement of pipes and basic construction materials, under the responsibility of the contractor. The largest of these schemes, however, is not expected to cost more than equivalent of USD 3 million. These schemes would be procured following paragraphs 3.3 and 3.4 of the Bank Procurement Guidelines for NCB procurement. 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.

3. ***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 (such as cement and pipes) shall be entrusted to the contractor on a single responsibility basis and the SLCs will not then procure them separately.

4. ***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 standard bidding documents.

5. ***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 these interventions, 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. The schemes will be procured using community contracting procedures. The septage treatment plant will be implemented directly by the KRWSA following NCB procedures. Detailed guidelines and implementation arrangements are given in Annex 5.

6.14 Technical and professional support for all the above procurement will be provided to the SLCs and GPs by the KRWSA and the SOs/GPATs, at all stages from the

preparation of bidding documents to the implementation of the corresponding works.

6.15 ***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 USD100 equivalent per contract, may be procured through direct contracting.

6.16 ***Consultancy Services***: For selection of individual consultants and consulting firms for providing services under the Project, the following procedures shall 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, Bank's standard bidding documents will be used. The contracts with SOs for providing community development and technical support to communities shall 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.

E. PROCUREMENT THRESHOLDS

6.17 ***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. Table 6.1 and Table 6.2 detail the Procurement Thresholds for the project.

Table 6.1: Procurement Methods and Thresholds – Goods, Works and Non-Consulting Services			
Sl No	**Method of Procurement**	**Threshold (USD Equivalent) for Goods**	**Threshold (USD Equivalent) for Works**
A	International Competitive Bidding	> USD 300,000	> USD 10 Million
B	National Competitive Bidding (as per para 3.3 and 3.4 of Bank Guidelines)	> USD 50,000 and less than USD 300,000.	> USD 50,000 and less than USD 10 Million
C	Shopping (as per para 3.5 of Bank Guidelines)	Up to USD 50,000	Up to USD 50,000
D	Direct Contracting	As per para 3.7 and 3.8 of Bank Guideline	As per para 3.7 and 3.8 of Bank Guideline
E	Community Participation in procurement (as per para 3.19 of Bank Guidelines)	Up to USD 50,000	Up to USD 50,000
F	Force Account	Not applicable	As per para 3.9 of Bank Guidelines

Table 6.2: Procurement Methods and Thresholds for Consultancy Services				
		Selection Method	**Threshold (USD Equivalent)**	**Prior Review Threshold (USD Equivalent)**
1	Competitive Methods (Firms): a) QCBS b) QBS c) Least Cost Selection d) Fixed Budget Selection	No threshold	First contract irrespective of value and subsequently all contracts estimated to cost USD 100,000 or more	All other contracts will be subject to Post Review
	e) Consultant Qualification	< USD 100,000		
2	Single Source (Firms/individuals)	As per para 3.8 to 3.11 of the Guideline	All Single source contracts require appropriate justification and shall be prior reviewed.	
3	Individual consultants (competitive)	In accordance with the Section V of the Guideline	All contracts estimated to cost USD 50,000 or more	All other contracts will be subject to Post Review

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

F. OVERALL PROCUREMENT PLAN

6.19 The Project's Procurement Plan for the first 18 months of implementation has been prepared. Once cleared by the Bank, it will define the thresholds for the procurement methods to be followed and for when Bank prior review will be required. The Procurement Plan shall be updated as and when required but at least annually.

6.20 For ICB contracts for goods and works, Bank standard bidding documents will be used. National Competitive Bidding (NCB) for goods and works will be conducted in accordance with the bidding documents agreed with the Bank and 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;
- 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. 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.

6.21 The Procurement Plan shall be furnished to the World Bank for its review and approval. The Procurement Plan, method of procurement, and categories of goods, works and services to which they apply are specified in the credit agreement, which shall govern the legal relationship between the World Bank and the borrower (Government of Kerala, through Government of India).

6.22 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 to be followed by all IAs for any procurement under the Project. This will help address any Project deficiencies regarding inconsistency in use of procurement procedures.
- ***Staffing*** Adequate staffing and capacity building of procurement staff in KRWSA, through appropriate training courses, will ensure procurement is carried out in accordance with agreed procedures.

- ***Enhancing Competition***: To address the issue of insufficient competition in procurement, the KRWSA website will publish procurement notices in addition to the national newspapers. Also publishing of information/documents as specified under Disclosure will help in enhancing 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 cleared by the Bank these documents shall be used as model documents for all procurement under the project.
- ***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.
- ***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 all contracting agencies 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 the Water Resources Department website. This will include disclosure of: (i) procurement plan and updates, (ii) specification for goods and equipment as soon as these are prepared, (iii) IFB/EOI for goods and works and selection/hiring of consulting services, (iii) contract awards of all procurement, and (iv) action taken report on the complaints received on a half-yearly basis.
- ***Record keeping*** The KRWSA, the GPs and the BCs/SLCs will maintain all procurement records duly catalogued and indexed in a manner and form which facilitates complete and timely information availability.
- ***Complaint redressal mechanism*** A robust complaints redressal mechanism will be put in place to ensure all complaints are received, and promptly and appropriately addressed.

6.23 ***Third party review of decentralised procurement*** This may be done by a standalone procurement auditor or will be included in the TOR of the internal auditor.

6.24 The PMU will prepare an Annual Procurement Plan. Appendix 7 outlines the procurement plan for the first 18 months.

G. TRANSPARENCY AND ACCOUNTABILITY

6.25 In accordance with the Right to Information Act, 2005, the Project will establish transparency and accountability measures to enhance disclosure of information and facilitate civil society oversight. Enhanced disclosure, requiring changes in mindset and behaviour, will be encouraged through incentives and remedies. To develop a creditable system that handles comments, suggestions and grievances, the Project

will (a) clearly define incentives and remedies available; and (b) develop monitoring indicators for compliance and impact on outcomes.

6.26 Community procurement guidelines will be translated into the regional language and supplied to all BGs. Open sharing of guidelines will promote transparency and accountability, and also help in training members of BGs/SLCs and its procurement sub-committee, on community procurement.

6.27 To ensure transparency and accountability at the GP level, key procurement information will be displayed. Procurement records will be available for scrutiny to all members of the community.

CHAPTER 7: FINANCIAL MANAGEMENT

A. FINANCIAL MANAGEMENT FRAMEWORK

7.1 The KRWSA will be responsible for the Project's overall financial management arrangements. A separate finance division will work in the PMU, to undertake these functions, with support from finance staff in regional (RPMU) and grass roots (GPST) project management units.

7.2 The financial powers of the officers of the PMU and RPMU are defined in the Finance and Accounting Rules of the KRWSA. In the PMU, the Director (Finance and Administration) will be the drawing and disbursing officer.

B. FUND FLOW AND DISBURSEMENT ARRANGEMENT

7.3 ***GOK budget line item and fund releases***: GOK's finance department has opened a separate head 2215-01-800-67 "Add on project of Jalanidhi", in WRD's 'Demands for Grants', for the year 2011-12, for the purpose of releasing funds to KRWSA under this project. KRWSA shall further release funds to the RPMUs who will thereon release funds to the GPs/BGs. During supervision missions, the Bank will review the system of utilisation of these funds as per agreed project guidelines.

7.4 ***FM and fund flow arrangements***: The project will be pre-financed by GOK through the above said dedicated budget line. Funds will be transferred from GOK's consolidated fund to a treasury account of KRWSA and thereon to the KRWSA/PMU bank account. The PMU will incur expenditure from this account for project .

7.5 ***PMU to RPMU***: PMU shall transfer funds from its account to the bank accounts of the respective RPMU, based on the forecast in the Annual Action Plan and will be replenished from time to time based on the expenditures submitted.

7.6 ***RPMUs to GPs***: RPMUs will transfer funds to the respective GPs under their jurisdiction, based on reviewing fund requests from the GPs in the prescribed format. Funds will be transferred from the RPMU's bank account to the GP's project bank account. Further, for a GP to receive Project funds, the minimum eligibility criteria are:

- The GP accounts are up to date;
- The GP should have a clean financial audit opinion (that is, 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;

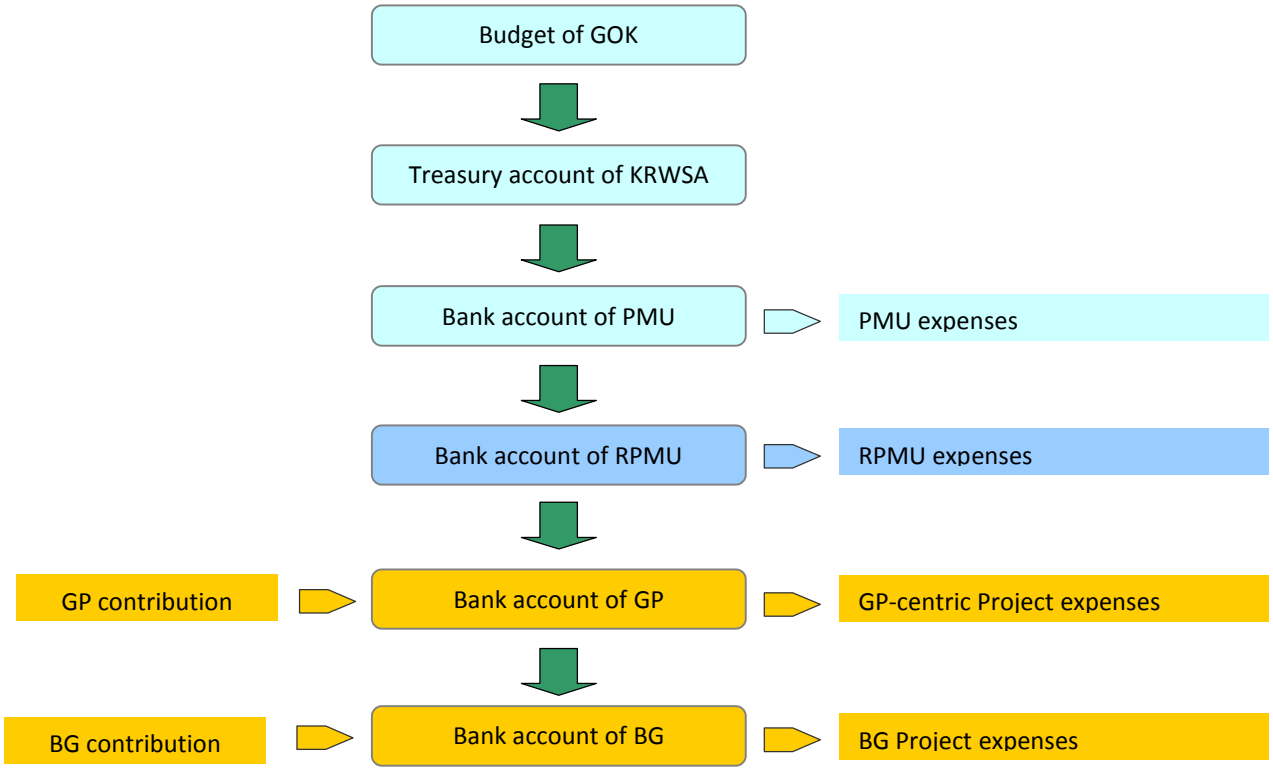
- The Panchayat Project Assistant has been engaged and is in place; and
- At least 50% of the GP's contribution to the subproject has been mobilised and deposited into the GP project bank account.

7.7 ***GPs to BGs***: In addition to the society bank account, each BG will maintain a project bank account. Funds will flow from GPs to BGs, based on defined and pre-agreed criteria. The GPs will use part of the funds for subprojects/activities that are implemented by the GPs and shall transfer the funds required 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's project costs).

7.8 For a BG to receive Project funds, the pre-requisites are: (i) The BG should be registered under a Societies Act of Kerala; (ii) the BG should have opened a Project bank account in a scheduled bank; and (iii) At least 50 per cent of the BG's own contribution has been mobilised and deposited into the BG's project bank account.

7.9 The funds flow arrangements for the project are depicted in Figure 7.1.

Figure 7.1: Fund-flow Arrangement



7.10 ***KRWSA and FM arrangements***: KRWSA, as the principal implementing entity, will be responsible for overall implementation and monitoring of all project components. The GPs will transfer funds to the BGs in tranches for small water supply schemes (less than INR 22.5 lakhs, or USD 50,000). The GPs will also utilise 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 GP/BG 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 Interim Unaudited Financial Reports (IUFRs) and will be the basis for disbursement.

7.11 ***KWA fund flow***: KWA, the statewide authority for water supply, will be one of GOK's agencies responsible for handling common infrastructure facility components of large WSS. 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. KWA will need to identify dedicated staff for managing the FM aspects of all the activities they undertake on behalf of KRWSA.

7.12 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 the KWA Accounts Member, and will be submitted to KRWSA to allow for the adjustment of the amount of the advance. KWA will ensure regular reporting (monthly) to KRWSA of the actual expenditure, and this figure will go into the 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.

Disbursement Arrangement

7.13 GOK will pre-finance all the project expenditure through its own funds (through the plan budget) and report the 'actual expenditure' incurred through the IUFRs. 'Actual expenditure' incurred by the BGs/GPs will be verified by the GP/BG Project auditors based on the expenditure vouchers available at the respective entities, and discrepancy, if any, will be rectified in the subsequent IUFRs. Disbursement percentage will be applied on the total project expenditure reported (the total expenditure incurred would include Bank's share, GOK's share and the GP and beneficiary contributions). A Designated Account (DA) would be opened in the Reserve Bank of India (RBI) for the purpose of receiving disbursement based on the "actual expenditure" incurred and the claims submitted by KRWSA.

KRWSA will send the disbursement claims to the Bank through the office of the Controller of Aid Accounts and Audit (CAAA) for its approval and reimbursement.

C. ACCOUNTING AND FINANCIAL REPORTING

7.14 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. A new accounting and financial reporting system will be introduced suit the needs of the current project (to batch-capture GP and BG level actual expenditure data and include it in the IUFRs). 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 over 3,600 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.).

7.15 A computerised Financial Management Information System (FMIS) will capture the monthly actual expenditure information at all levels—BG, GP, RPMU and PMU—and this data will go into preparing the IUFRs. The FMIS will be implemented up to the GP level, and data transfer will be monthly and in batches. Web-based FMIS will be considered once this arrangement stabilizes.

7.16 Until the FMIS is in place, internal reports will be prepared as per Table 7.1. The external reports are summarised in Table 7.2.

Table 7.1: Financial Reports – Internal Reports					
Sl no	**Title of report**	**Periodicity**	**By when**	**Prepared by**	**Submitted to**
1	Fund Reconciliation Statement	Need-based	Before release of tranche and on completion of implementation phase	BG	GPST
2	Activity-wise statement of expenditure	Need-based	- do -	BG	GPST
3	Trial balance for the period	Need-based	- do -	BG	GPST
4	Fund reconciliation statement	Quarterly	6th of following month	GPST	RPMU
5	Activity-wise statement of expenditure	Quarterly	6th of following month	GPST	RPMU
6	Fund reconciliation statement	Quarterly	6th of following month	RPMU	PMU
7	Source and application of funds	Quarterly	15th of following month	RPMU	PMU
8	Activity-wise statement of expenditure	Quarterly	15th of following month	RPMU	PMU
9	Project trial balance	Quarterly	15th of following month	RPMU	PMU

Table 7.2: Financial Reports – External Reports			
Sl no	**Title of report**	**Periodicity**	**By when**
1	Consolidate sources and utilisation of funds	Quarterly	30th of following month
2	Consolidate activity-wise statement	Quarterly	30th of following month
3	Source and application funds for each component	Quarterly	30th of following month
4	Activity-wise statement of expenditure for each component	Quarterly	30th of following month
5	Consolidated annual financial statement	Annual	30th August of following year
6	Component-wise annual financial statement	Annual	30th August of following year
7	Expenditure by subcomponent (consolidated)	Annual	30th August of following year
8	Statement of reconciliation of reimbursements	Annual	30th August of following year

D. INTERNAL CONTROL MECHANISM

7.17 Some of the key control parameters are:

- timely release of Project funds by GOI to GOK
- control of funds released to the GP
- internal audit at the PMU and RPMUs to ensure compliance with laid-down systems and procedures, and effective utilisation of Project funds
- adequate authorization and approval of Project expenditure
- monthly bank reconciliation at GPs
- monthly management information system to ensure regular reporting on Project expenditure and funding

- concurrent audit of the tranche request as a basis for release of installments to GPs to ensure efficient fund utilisation prior to next tranche release
- At GPs, public display of financial information, access to accounting records and social audit procedures to ensure transparency and oversight functions

E. AUDIT ARRANGEMENTS

7.18 ***Internal audit arrangements***: The project's internal audits will be conducted byan in-house team of KRWSA staff. 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 PMU, RPMU, 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.

7.19 Project 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 utilisation 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 them, and share the same with the Bank.

7.20 ***Statutory audit arrangements***: The statutory audit of the project financial statements (PFS) will be conducted by a reputed firm of Chartered Accountants under the agreed TOR 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. They will also undertake the claim audits.

F. RETROACTIVE FINANCING

7.21 A separate withdrawal application claiming reimbursement, for expenditures incurred before the loan signing date, will be submitted to the World Bank after loan effectiveness. It is proposed that the loan agreement contain a retroactive financing provision authorizing payments to finance eligible expenditure.

G. USER COST SHARING PRINCIPLES

7.22 ***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 Table 7.3.

Table 7.3: Component wise Percentage of Project Cost to be shared by GP and BC		
Component	**Contribution as % of construction costs estimated at market prices as contained in the Detailed Scheme Reports and agreed to by the beneficiaries and GPs**	
	Beneficiary households	**GP**
I. Capital Costs of Schemes*		
1. Drinking water schemes (up to 70 lpcd)^ – small/large & rehabilitation	10% for General (5% for SC/ST/Fishers HHs)	15%
2. Drinking water schemes (multi-GP rehabilitation)		
(i) Common Infrastructure	Nil	Nil
(ii) Intra Distribution Works	10% for General (5% for SC/ST/Fishers HHs)	15%
3. Groundwater recharge measures	Nil	20%
4. Environmental Management schemes		
(i) Community-level schemes	Nil	20%
(ii) Household-level schemes	50%	Nil
II. Operation and maintenance costs		
1. Operation and maintenance of water supply, GWR schemes (recurrent costs, minor repairs and replacement, etc.)		
For BG- and GP-level schemes	100%	Nil[#]
For Multi GP schemes[#]	100 % of local Dist O&M cost + 100 % of bulk charges payable to KWA – by levying and collecting sufficient user charges	Nil[#]
2. Environmental management schemes		
(i) Community-level schemes	Nil	100%
(ii) Household-level schemes	100%	Nil

* upper ceiling of capital cost of WS schemes = Rs 25,000 per Household

^ full capital cost of Single-BG/GP schemes including Single-GP KWA / GP schemes transferred to GPs/BGs and for intra GP capital cost of Multi-GP schemes. This will include the cost of consumer connection up to a maximum length of 10.5 metres from the distribution main or up to the boundary of the premises, whichever is less, and the cost of water meter.

[#] SLC will be responsible for O&M of large WS schemes and intra GP part of Multi-GP WS schemes and for collection of user charges sufficient for 100% O&M expenditure.

7.23 ***Administration of cost recovery***: The above cost sharing contributions will be provided during different phases of the respective scheme cycles as detailed in Table 7.4.

Table 7.4: Administration of cost recovery* (figures in %)								
1. Capital Cost	BC		GP		GOK			
	PP	IP	PP	IP1	PP	IP		
						IP1	IP2	IP3
Community Schemes Water Supply								
Cash/pvt. Land Labour **	5.00	0 **5.0	7.50	7.50	00	300	300	150
Water Supply (SC/ST/Fishers)								
Cash/pvt. Land Labour **	1.00	0 **4.0	7.50	7.50	00	320	320	160
GP-wide GWR Schemes	0	0	10	10	0	32	32	16
Sanitation								
Cash	0	0	10	10	0	32	32	16
2. O&M (100% to be paid by beneficiaries)	0	50	0	50	0	0	0	0
* for SC/ST/Fishers community contribution will be at least 1% in cash and rest can be in labour ** see detailed notes in "Labour Contribution Accounting" in main text BC: Beneficiary Committee; GP: Grama Panchayat; PP: Planning Phase; IP: Implementation Phase								

- The upfront cash payment for water supply and GWR works shall be minimum 50% of the beneficiary cash contribution.
- The entire contribution by GPs shall be in cash
- 50% of the O&M costs shall be collected during the implementation phase itself
- 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.

7.24 *Labour contribution accounting*

- The labor contribution for any beneficiary cannot exceed 50% of the contribution amount arrived at as per DSR.
- 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.

7.25 The labor contribution shall be valued as per the rates in the DSR and as per the measurement of the output of the works.

H. STAFFING AND CAPACITY BUILDING

7.26 The KRWSA PMU will have a Finance Manager who is a Chartered Accountant. The RPMUs, each of which will be responsible for 2-3 districts, shall be set up with appropriate FM staff to allow them to collect all the necessary information from the GPs/BGs, to prepare IUFRs, and to follow-up on the disbursement process. There will be an accountant at the GPST 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 Agreement between the KRWSA and GP.

7.27 The personnel for financial management in KRWSA are summarised in Table 7.5.

Table 7.5: Personnel for Financial Management

Designation	Number of Positions	Remarks
PMU		
Director (Finance and Accounts)	1	On deputation from Finance Department (GOK)
Deputy Director (Project Finance)	1	To be appointed on contract basis
Deputy Manager (Accounts)	1	
Accounts Assistants	2	To be appointed on contract basis
RPMU		
Accounts Officer	1	
Finance Assistant	1	To be appointed on contract basis
GPST		
Junior Project Commissioner	1	
Others		
Auditor	1	To be appointed by KRWSA

7.28 The PMU will be headed by a senior official (of the level of Joint Secretary, GOK) to build the capacity of the Agency in handling the funding proposed under the Project. The PMU will have a Deputy Director (chartered accountant) and adequate accounts staff, to collect information from RPMUs and GPs, prepare IUFRs, and

follow-up the disbursement process. Each RPMU will have an accounts officer, supported by accounts staff. At the grass roots level, in the GPST, there will be a Junior Project Commissioner (accountant) who will coordinate and collect expenditure information from BGs.

7.29 Training programmes for financial management capacity building are included in the Project's capacity building plan. Training in accounts and audit, and financial management has been envisaged for strategic level officials of the KRWSA. For actors at the intermediary level, like staff of SOs and GPATs, short induction and accounts training has been envisaged. Accounts training will be held at the grass roots level to BGs.

CHAPTER 8: SOCIAL AND ENVIRONMENTAL SAFEGUARDS

A. SOCIAL SAFEGUARDS

8.1 In Kerala, there are four dimensions to the water scarcity problem: (i) spatial, (ii) social, (iii) economic, and (iv) political. Communities facing chronic and acute water shortages are likely to: be located away from water sources; belong to SC, ST or backward communities; live on uncertain incomes; and be politically powerless or unorganised.

8.2 The Project design incorporates the main findings of social assessment which emphasises 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 hydrogeological/topographical considerations, there is a need to provide RWSS coverage to vulnerable groups, who normally live in the high/hilly areas or coastal regions of the state – through small water supply schemes that cater to small clusters of excluded households.

8.3 In a social assessment study commissioned by the KRWSA, 26 stakeholders were identified (Table 8.1), and their importance to the Project and influence in decision-making were analysed (Figure 8.1). Quadrant A shows that tribal communities have low influence. The Tribal Development Plan under Jalanidhi–II will give attention to not only spatial coverage but also factors that influence tribal participation. Stakeholder analyses will be conducted at different stages of the Project to yield a comparative perspective that charts improvement or decline in importance and influence.

8.4 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 this 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:

8.5 Improving GP accountability and responsibilities for long-term support to the services provided once the Project has exited a GP;

- Linking the structure of BG federations within the corresponding local government structures;
- Providing post-implementation back-up arrangements for RWSS service provision;
- Providing additional capacity building in specific areas;
- Designing simpler and more appropriate technologies in tribal areas; and
- Providing prolonged community 'hand-holding', particularly in the case of schemes in tribal areas.

8.6 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

Figure 8.1: Stakeholder Analysis of Importance and Influence

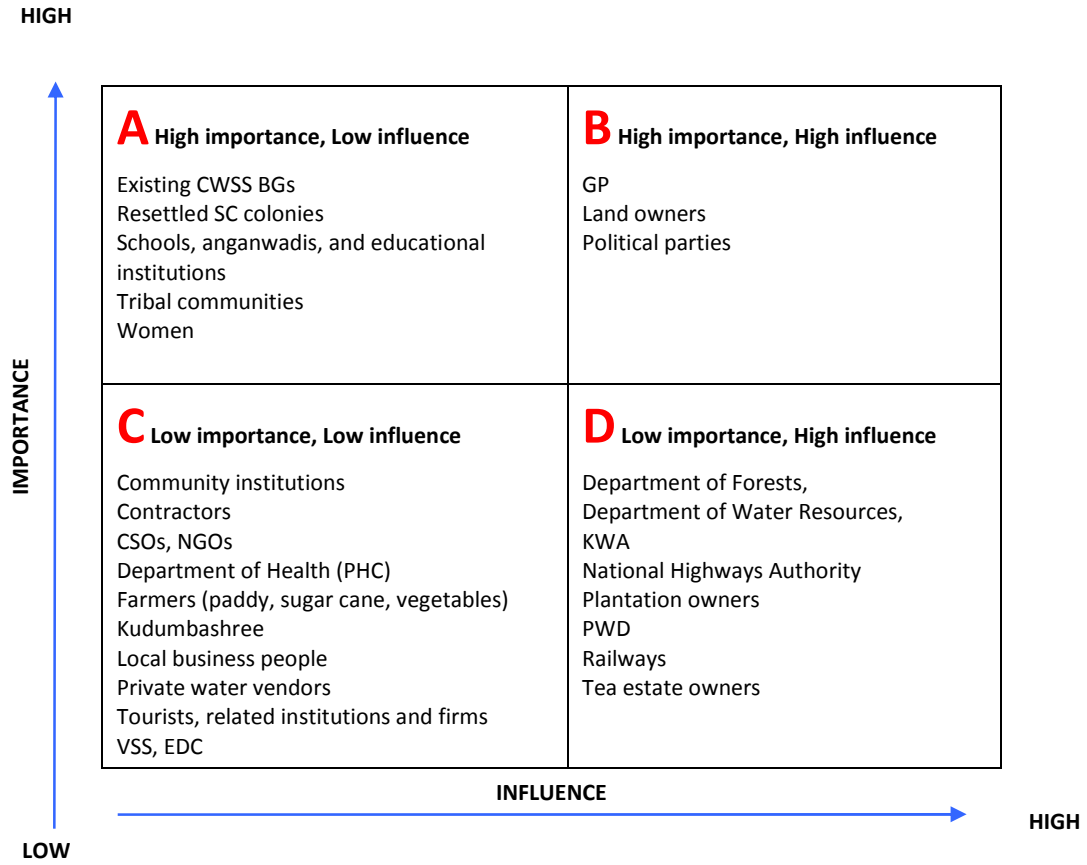


Table 8.1: Stakeholder Analysis						
Sl No	**Stakeholder**	**Type**	**Interests**	**Likely impact of the Project**	**Likely impact on the Project**	**Impact type**
1	GP	P	Constitutional mandate to provide drinking water and manage solid waste	Political – welfare measure; Economic - GP saves funds.	5	P
2	Farmers (paddy, sugar-cane, vegetables)	P	Irrigation water drawn from the same source used for drinking water supply schemes	Conflict of interest- competing for the same resources	1	P/N
3	Household women	P	Drinking water need-collecting and utilising water.	Drinking water availability (livelihood, health, leisure improvement)	5	P
4	KWA	P	Owns, Runs and maintains the existing water supply schemes	Inconvenience to lower level staff- potential location shift; saving on O&M, revenue loss)	3	P/N
5	Department of Forests	P	Ownership of water sources in the forest land.	No significant impact	4	P
6	Department of Water Resources	P	Ownership of water sources like rivers in the GP. GWD etc	No significant impact	2	P
7	Tribal communities (*muthuvas* and *hill pulayas*),	P	Direct users of water supply service.	Drinking water availability (livelihood, health, leisure improvement)	5	P
8	Re-settled SC communities	P	Direct users of water supply service	Drinking water availability (livelihood, health, leisure improvement)	5	P
9	Local business people	P	Generates waste which can pollute water sources	Social and political pressure to adhere to Rules and regulations	2	P/N
10	Tea estate owners	P	Causes pollution of water sources through application of pesticides and chemicals	Beyond the scope of the project	4	N
11	Schools, anganwadis and educational institutions	P	Beneficiary of water supply schemes.	Drinking water availability (improved performance & health)	3	P
12	Private water vendors	P	Likely to loose business opportunity	Revenue loss	3	N
13	Tourists, related institutions, and firms	S	Potential source of waste generation	Social and political pressure to adhere to Rules and regulations	3	N
14	Existing CWSS BGs	P	Service level improvement from rehabilitation.	Improvement in human capital, better service delivery	5	P
15	Contractors	S	Work execution of water supply schemes	Revenue loss	3	N
16	Department of Health (PHC)	S	IEC for improved health of people	Improved performance through realisation of objectives	2	P

Sl No	Stakeholder	Type	Interests	Likely impact of the Project	Likely impact on the Project	Impact type
17	Political parties	S	Can support the project through its community mobilisation skills and capacities	Improved credibility	3	P/N
18	Kudumbasree	S	Supply of social capital and leadership for CWSS	Opportunity to involve in development interventions and entrepreneurship	3	P
19	VSS, EDC	S	Supply of social capital and leadership for CWSS	Opportunity to involve in development interventions and entrepreneurship	3	P
20	PWD	S	Owns roads that may have to be crossed for taking water pipes	No significant impact	3	N/P
21	CSOs, NGOs	S	Can support the project through its community mobilisation skills and capacities	Opportunity to involve in development interventions	3	P
22	Plantation owners	S	Extraction of water for irrigation	Beyond the scope of the project	4	N
23	Religious institutions	S	Help in mobilising community	No significant impact	3	P
24	Land owners	P	Appreciation of land value	Appreciation of land value	4	N
25	Railways	S	Railway line has to be crossed	Significant impact	4	N
26	National Highways Authority	S	National highway has to be crossed	Significant impact	4	N

8.7 Table 8.2 classifies various stakeholders according to their roles in different stages of the Project.

Table 8.2: Participation Matrix of Stakeholders				
Project Stage	**Type of Participation**			
	Inform	**Consult**	**Partner**	**Control**
Pre-planning	Existing CWSS BGs, Firms, Local business people, Political parties, Private water vendors, Schools, anganwadis and educational institutions, Tourists and related institutions, Tribal communities, Resettled SC colonies, Women	Department of Health (PHC)	Community institutions, CSOs, NGOs, Kudumbashree, VSS, EDC	GP, KWA
Planning	Farmers (paddy, sugar cane, vegetables), Political parties, Schools, anganwadis and educational institutions,	Dept of Forests, Dept of Water Resources, Existing CWSS BGs, Land owners, National Highways Authority, PWD, Railways, Resettled SC colonies, Tribal communities, Women	Community Institutions, CSOs, NGOs GP, Kudumbashree, VSS, EDC	Dept of Forests, Dept of Water Resources, KWA, National Highways Authority, PWD, Railways
Implementation	Political parties	CSOs, NGOs, Dept of Forests, Dept of Water Resources, Farmers (paddy, sugar cane, vegetables), Community institutions, Kudumbashree, National Highways Authority, PWD, Railways, VSS, EDC	GP, KWA, Land owners, NGOs, Schools, anganwadis and educational institutions,	Existing CWSS BGs, Resettled SC colonies, Tribal communities, Women
Monitoring and Evaluation	NGOs	KWA	GP, Schools, anganwadis, and educational institutions,	Existing CWSS BGs, Resettled SC colonies, Tribal communities, Women

8.8 ***Involuntary resettlement***: The project will not employ involuntary resettlement. 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/modernisation of existing schemes. Any required land will be procured outright at market rates, as was successfully done under the predecessor project. The water supply schemes are mostly very small in size, catering to a small group of 30-40 HHS – the land requirement for the construction of the corresponding water source intake and the

overhead tanks (OHTs) is very small3. Involuntary land acquisition under the Project must be consciously avoided. All facilities will be located either on public land or will be procured at market rates from willing sellers. In rare cases, voluntary land donation may be resorted to, provided it meets the guidelines4. Mechanisms have been developed to ensure that, in these cases, there will be no significant adverse impact on incomes or physical displacement. 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 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. KRWSA will arrange for an independent agency to examine all land purchases before approving the plans in each intervention batch. Land donation will be discouraged, particularly from small land holders.

8.9 ***Indigenous Peoples (OP 4.10)***: A full-fledged Tribal Development Plan (TDP) has been prepared after extensive consultations with tribal groups. The proposed approach to providing RWSS interventions in tribal communities under the Project, provides for the free and prior informed consent of the involved tribal populations. Special provisions have been made in the Project's cost-sharing rules to enable them to fully participate in the Project. All lessons learnt from the predecessor Jalanidhi-I project have been suitably incorporated in the design of this follow-up project. The TDP has been finalized after consultations with key stakeholders in a series of workshops. The TDP is attached as Annex 8 to this document. The TDP provides details of the tribal programme content, coverage, costs, schedule, public consultations and institutional arrangements. In order to improve the effectiveness of Project implementation, several additional modifications have been introduced into the design based on lessons learnt, including:

[3]The land requirement arises for two purposes, one for the water source and the other for the construction of overhead tanks (OHTs), amounting to around 1000 sq. ft. per scheme. These facilities are normally located on public land or on private land purchased outright at market rates. For the 4,000-plus schemes to be constructed, the total land requirement will be less than 43 hectares. After considering availability of public land for locating the facilities, it is estimated that the net requirement to be procured from the open market will be less than 25 Ha.

[4]Voluntary land donations: the Project will discourage land donations by poor families and vulnerable groups. The guidelines to be followed for voluntary land donations will include the following principles: (i) impacts are minor (loss of land less than 10% of holdings), (ii) no physical relocation; (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.

- Having an exclusive division to manage the tribal component – focusing on those districts (Idukki and Waynad) with significant tribal populations;
- Introducing a menu of flexible technological options which are appropriate to the local culture;
- Better collaborating with traditional tribal leadership;
- Using more stringent criteria for selecting support organisations for the tribal component;
- Increasing the scheme cycle to allow adequate post-implementation hand-holding support;
- Enlisting local tribal promoters as part of the mobilisation team and providing suitable capacity building for post-project support; and
- Engaging government entities and procedures involved with tribal affairs, and thus gaining from their local presence for long-term support.

8.10 ***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 Organisations 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 annually 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.

B. ENVIRONMENTAL SAFEGUARDS

8.11 The KRWSA carried out an Environmental Impact Assessment to study the baseline environment situation and identify the Project's potential environment risks and impacts. The study also suggested a methodology for planning, designing and implementing investment in rural water supply and sanitation by preventing, minimising or mitigating adverse environmental effects, and enhancing positive impacts.

8.12 Most schemes are small and environment mitigation measures will be integrated into the schemes during technical design, appraisal of DSRs, construction, and operation and maintenance of the schemes.

B.1 CURRENT REGULATORY FRAMEWORK

8.13 GOI and GOK regulations do not require environmental clearance or public consultations for every water supply scheme. Among the provisions in central and state legislation, those relevant to the Project will be adhered to in Project implementation. Annex 9 includes the regulatory requirements that are applicable to the Project.

8.14 The proposed Project does not fall under any of the project categories listed in Schedule–I of GOI's Environmental Impact Assessment Notification and hence does not require any formal environmental clearance of the Ministry of Environment and Forests. The Project area has not been notified as ecologically sensitive or fragile under the Environment Protection Act, 1986.

B.2 BASELINE ENVIRONMENT SITUATION

8.15 The main source of water for Kerala is rainfall, estimated to be 3,000 mm yearly on average. Kerala has 44 rivers with a total annual discharge of 77,900 mm3. The net

ground water availability in the state is 6,229.55 million cubic metres. Based on an analysis of the baseline environmental situation, observations during site visits, discussions with officials (at state, district and GP levels) and focused group discussions, the following have been identified as the key environmental issues:

- inadequate or disrupted water supply;
- bacteriological contamination of surface and ground water;
- presence of salinity, iron and fluoride concentrations exceeding permissible levels, in drinking water; and
- lack of sanitation facilities.

8.16 ***Water Availability***: Ground water is the major source of water for drinking, irrigation and industrial purposes in Kerala. Due to large-scale extraction of ground water for irrigation, combined with increasing demands in other sectors due to population and industrial growth, the aquifers are under stress. For a large number of rural households that are dependent on dug wells, water supply is adversely affected by the decline and fluctuation in ground water levels. Some sources go dry during summer (dry period) and public supply from various sources is inadequate. The problem is acute in coastal areas, where traditional dug well sources are saline and the service level from existing water supply schemes is meager. Declining water table is an emerging phenomenon in some parts of the state. Where water supply is from river or canal, it is adversely affected during periods of non-flow and maintenance shutdown. The decline in water level has been confirmed in parts of all districts of Kerala. Increase in ground water draft is the major cause for this phenomenon. It is also observed that competing demands for agricultural and domestic purpose are leading to increased use of 'pumps' for lifting water from traditional sources, in addition to bore wells. This increased pressure on demand for water does not keep pace with the annual replenishable recharge of ground water reserves.

8.17 ***Water Quality***: The fast-flowing, monsoon-fed rivers of Kerala are short and often encounter salinity intrusion into their lower stretches during summer months. When fresh water flow is reduced, two major problems occur in these water bodies: (i) salinity propagates into the river's interior; and (ii) the flushing of the system becomes less effective. The pollution of rivers is more severe downstream. Bacteriological contamination is a major water quality problem. Iron and fluoride concentration also have been found to exceed permissible levels in drinking water.

8.18 ***Sanitation practices***: Kerala is renowned for achievements in public health, but the last few years have witnessed an increase in prevalence and incidence of communicable and non-communicable diseases. Morbidity analysis shows increasing and high prevalence of diarrhoeal diseases, hepatitis, pulmonary tuberculosis, malaria, dengue, and Japanese encephalitis. In 2009, the water-borne diseases reported in the state included cholera (22 cases), acute watery diarrhoea (444,037), persistent diarrhea (166), and dysentery (5,620). Many of these problems can be traced to inadequate sanitation arrangements and practices.

8.19 Urbanisation of rural areas, high density of population, and fast-changing lifestyle have posed challenges for solid and liquid waste management, which the state has not been able to tackle successfully. Unsafe disposal of septage (collected from septic tanks of households and institutions) is widespread because private operators dump the waste mostly in water bodies. The high level of bacteriological contamination of drinking water sources is thus rooted in poor sanitation. There are also areas where sanitation coverage (with household toilets) is difficult to achieve—for example in the high water table areas on the coast, low lying areas like Kuttanad in Alappuzha district, tribal areas in forests, and densely populated colonies that house the landless and small land-holders.

B.3 ENVIRONMENT MANAGEMENT FRAMEWORK

8.20 The key elements of the EMF, as applicable to schemes to be included in the Project, are summarised in this section. The environmental code of practices and other guidelines for the Project are presented in Annex 9.

Collection of Basic Environmental Data

8.21 Environmental Data Sheets (EDS) for schemes on water supply, sanitation and solid and liquid waste management have been formulated (for formats, see Annex 9). EDS will be compiled at the field data collection stage of a proposed scheme. The Project Commissioner in the GPST will fill out the EDS in consultation with SO engineers and the BG. Later, it will be approved by the Manager (Technical) of the RPMU.

Environmental Categorisation of Schemes

8.22 The DSR for water supply or drainage schemes will be accompanied by the EDS, and supported with a detailed note on items listed in the data sheet. At the DSR preparation stage, the available environmental information will be evaluated. Based on the level of expected environmental and public health impacts, the proposed scheme will be categorised as Category I (low impact), Category II (medium impact), or Category III (high impact). The screening tool for environmental categorisation of schemes is presented in Annex 9.

8.23 The Project includes rehabilitation of KWA water supply schemes. These schemes are in place and environmental impact due to rehabilitation is not expected to be significant. Hence they are considered low impact schemes. Nevertheless, if any significant impacts are identified, they will be addressed suitably with an environment management plan.

Environmental Appraisal and Approval

8.24 Based on the category under which a scheme is classified, suitable and commensurate environmental assessment and mitigation planning procedures will be applied.

- For low impact category (Category I), a set of simple mitigation steps will be incorporated in the scheme plan, based on the environmental codes of practice and technical guidelines.
- For medium impact category (Category II), a limited environmental appraisal will be undertaken either by the RPMU or an independent consultant. (The format for limited environmental appraisal is given in Annex 9.)
- For high impact category (Category III), a full-fledged environmental appraisal will be conducted by an independent consultant. (For draft ToR, see Annex 9).

8.25 Environmental appraisal study for any category of water supply scheme as specified by the KRWSA shall be conducted and reported to the respective RPMU within a month from the date of awarding the contract (see timeline).

8.26 For Category I schemes, the Project Commissioner will ensure that the Detailed Project Report (DPR) is accompanied by the EDSs. For Category II & III schemes, the Manager (Technical) in the RPMU will ensure that the DPRs are accompanied by the EDSs as well as the environmental appraisal.

8.27 Figure 8.2 and Figure 8.3 show the processes for different categories of schemes.

Environmental Compliance Monitoring

8.28 During implementation, and O&M of schemes, the PMU will ensure that:

- the prescribed environmental mitigation measures (including construction stage measures) are adequately implemented;
- supervision, monitoring and evaluation of water quality and environmental indicators are conducted, as part of overall Project monitoring; and
- IEC activities are undertaken for awareness raising and sensitisation—regarding personal and public hygiene, environmental sanitation, and water conservation—as an integral component of the Project's IEC activities.

8.29 The Environment Management Framework (EMF) is summarised in Table 8.4, showing key EMF activities, stage of scheme cycle and responsibility.

B.4 ENVIRONMENTAL MONITORING PLAN

8.30 The proposed environmental monitoring is summarised in Table 8.3. The KRWSA will entrust the KWA with monitoring water quality in water supply schemes. KWA will collect water samples at least twice a year and analyse water quality at district level in KWA labs and inform the BGs and the GP to take corrective actions where required.

8.31 Considering the poor surveillance experience of the KWA, the Project also envisages water quality monitoring by local health workers. GOK's Anganwadi or ASHA workers will check daily for residual chlorine at the local level, and the health department will monitor it at the district level.

Table 8.3: Environmental Monitoring Plan

Sl No	Monitoring	Monitoring Agency	Frequency
1	Environmental Audit (External)	Independent agency	In Year 2 and Year 4
2	Internal Supervision	KWA	Twice a year
3	Water Quality Monitoring and Surveillance	BGs / RC – residual chlorine; using kits ASHA workers, Kudumbasree units, women's groups – physical and chemical parameters; trained by CCDU and using field-test kits supplied by CCDU Accredited district labs – surveillance KRWSA state resource centre – advanced analysis, data entry, and coordination;	Once every 2 months Once every 6 months One sample per year Throughout the year

Figure 8.2: Process Flow Diagram for Low- and Medium-Impact Categories

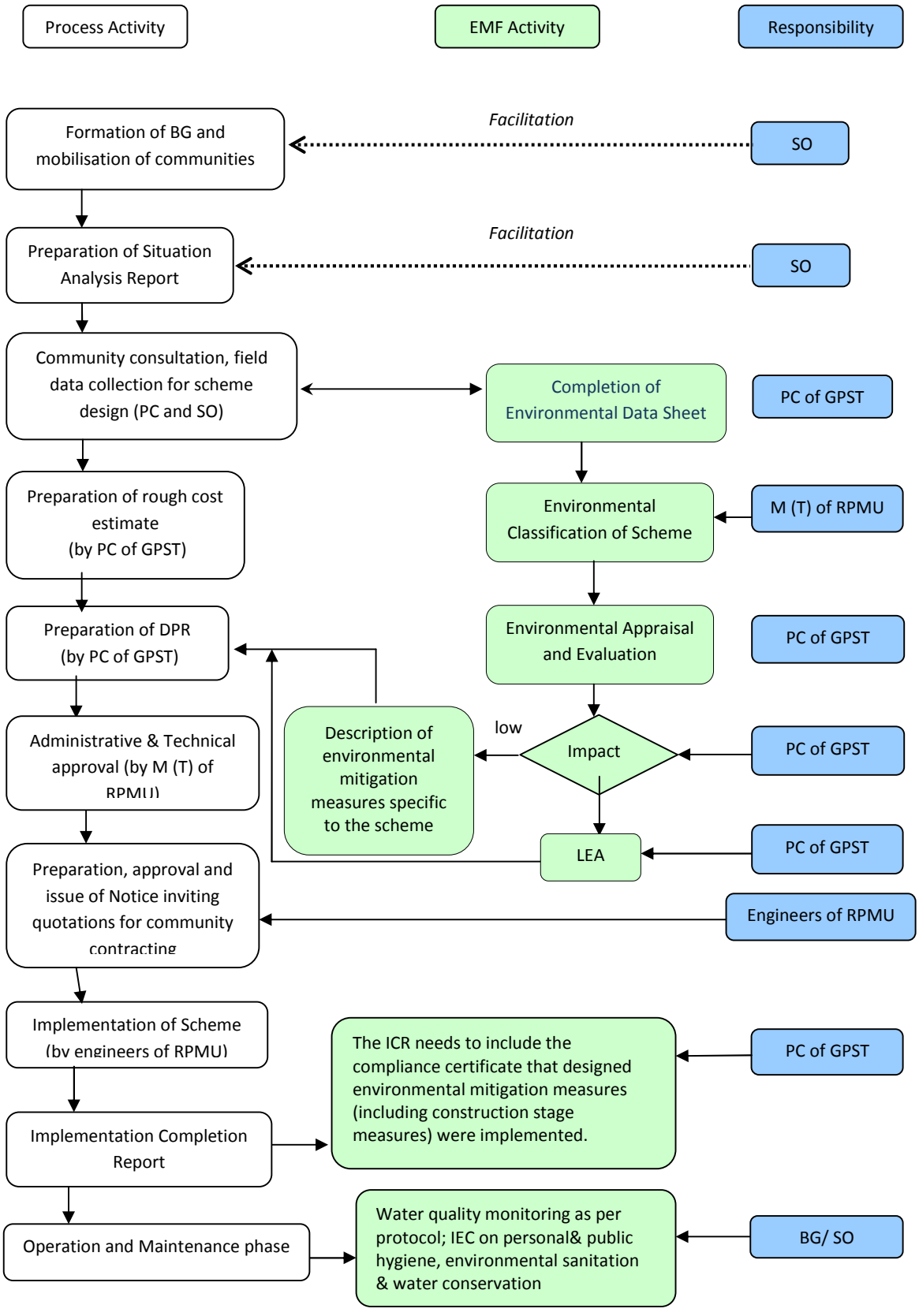


Figure 8.3: Process Flow Diagram for High-Impact Category

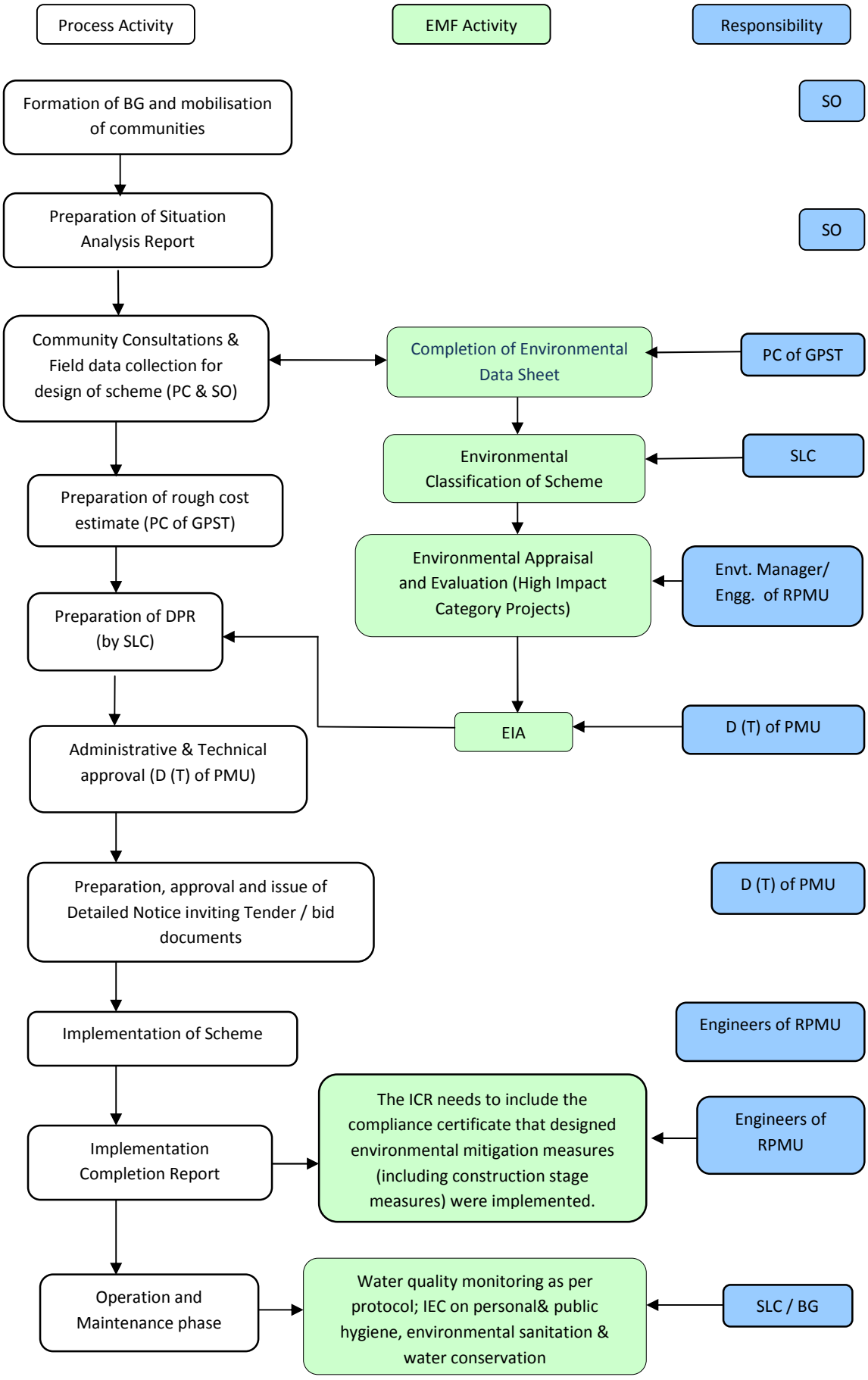


Table 8.4: Environment Management Framework – Summary					
Phase	**EMF Activity**	**Objectives**	**Process**	**Responsibility**	**Result**
Pre-Planning / Planning	Environmental Data Sheet (EDS)	To collect basic information on environmental aspects of the proposed scheme	Discuss scheme with community and identify environmental issues of concern	SO, with assistance of GPST and RPMU	Environmental data sheet furnished, and attached to Detailed Project Report (DPR)
			Complete EDS with supplementary notes, if required	Compiled by GPST and approved by M (T) of RPMU.	
	Environmental Classification of Scheme	To ensure that schemes with potentially significant environmental or public health issues are identified at an early stage, for independent environmental appraisal	Evaluate all available information on environmental aspects as provided in the EDS, and based on the level of expected environmental and public health impacts, assess whether the proposed scheme is Category I (low impact), Category II (medium impact) or Category III (high impact)	GPE and M (T) of RPMU.	Scheme classified as Category I, Category II or Category III
	Environmental Appraisal and Approval	To ensure that relevant environmental issues have been identified and appropriate mitigation measures have been designed to address them	• For category I schemes, simple mitigation measures will be implemented • For category II schemes, limited Environmental Assessment procedures will be required • For category III schemes, full-fledged environmental assessment has to be prepared by environmental experts selected by RPMU	GPST for Category I; RPMU for category II and for category III, services of environmental consultants will be availed by inviting tenders through PMU / KRWSA.	Environmental appraisal and approval of proposed scheme of Category I, II or III is made using the checklist
		To ensure that mitigation measures and their costs are integrated in scheme design and implementation plans	Technical Approval for the scheme will not be accorded without Environmental Clearance from RPMU / PMU.	Director (Operations) of the KRWSA	Technical approval for scheme with environmental mitigation measures and costs are integrated in scheme design and implementation plans
Implementation	Implementation of schemes with due attention to environmental mitigation measures	To ensure that the prescribed environmental mitigation measures (including construction stage) are implemented	Implementation Completion Report (ICR) for scheme will need to include compliance certificate that all prescribed environmental mitigation measures (including construction stage) have been complied with	GPST for single-GP schemes; GPST and M (T) of RPMU for multi-GP schemes	ICR with environmental compliance information

Table 8.4: Environment Management Framework – Summary					
Phase	**EMF Activity**	**Objectives**	**Process**	**Responsibility**	**Result**
O&M	Environmental supervision, monitoring, and evaluation IEC and capacity building on hygiene and environmental health issues	To ensure that environmental aspects are integrated in the O&M phase	Environmental Audit for water availability and water quality through external agency will be conducted once in a year by selecting 10 % of schemes completed. Water quality monitoring will be done by KWA twice a year.	Supervision will be done by M (T) of RPMU at district level, and by D (T) of KRWSA / PMU at State level	Water quality monitoring reports, periodic environmental supervision, monitoring and audit reports; Training and IEC activity reports.

Table 8.5: Institutional Arrangement for EMF Implementation			
Level	**Institution**	**Functions**	**Responsibility**
State	Kerala Rural Water Supply and Sanitation Agency (KRWSA)	• Ensure overall implementation of the EMF in the Project. • Arrange funds and human resources required for implementing the EMF. • Ensure that recommendations from supervision and monitoring are integrated into the Project and that the EMF is updated periodically, as necessary. • Recruit external experts for conducting Environmental Audit and ensure that the relevant recommendations are integrated into the Project. • Select suitable expert for conducting detailed appraisal for Category III schemes, preparing Detailed Appraisal Sheet with the help of RPMU to identify environmental impacts, and designing mitigation measures.	Director (Technical) of PMU

Table 8.5: Institutional Arrangement for EMF Implementation			
Level	**Institution**	**Functions**	**Responsibility**
Region	Regional Project Management Unit (RPMU)	• Carry out regular monitoring and supervision of EMF implementation through appropriate mechanisms (and report the same to KRWSA and RPMU as necessary) • Supervising the accuracy of the environmental appraisal conducted by SOE, GPE of RPMU as part of the scrutiny of the schemes including checking if the screening is accurate, if the Environmental Data Sheet (EDS) has been filled in as required. • Evaluation of EDS and categorise the scheme into one of the categories I, II or III • Conduct supervision visits to 20 % of the completed schemes twice in a year (in coordination with the SO / GPE) • Provide technical advice and guidance on environmental management and environmental policies to SO, GPs & BGs • Ensure capacity building of all stakeholders in environmental management • Design and implement IEC campaigns on environmental management • Maintain a database consisting of relevant baseline environmental information of the district, environmental appraisal of the various ongoing and completed schemes, findings of supervision etc., • Coordinate with institutions, agencies and individuals relating to environmental management including the regional offices of the KRWSA, Forest Department etc., • Collect, collate and publish data on EMF implementation in the project. • Environmental management and monitoring of sector projects at the GP level • Sensitizing the public representatives, officials and the general public about the provisions of the EMF	Manager (Technical of RPMU), District-level environmental expert
Grama Panchayat	Supporting Organisation (SO), RPMU	• Participation in preparation of Environmental Data Sheet (EDS) to be enclosed with DPR. • Deliberate on environmental safeguards relevant to the schemes and adopt the same during construction and implementation. • Certifying the implementation of the environmental mitigation measures as part of the Implementation Completion Report (ICR) • Facilitate IEC activities regarding water conservation, sanitation and hygiene among he villagers • Liaison with forest department, KSPCB and other related departments at scheme level for ensuring implementation of identified mitigation measures (permissions, technical support etc.,) • Provide support to the RPMU in the supervision, monitoring and audit activities of the EMF • Training should to be given in conforming to the EMF requirements in operation and maintenance of Water Supply Schemes	President of GP/GPST, SO, PC of GPST, M (T) of RPMU

Table 8.6: Training Programme for EMF Implementation					
Sl No	**Training**	**Purpose of the Training**	**Participants**	**Schedule**	**Course content**
T1	Introduction to Environmental Management in Jalanidhi–II, including EMF	• Filling of EDS, procedural and technical aspects of Environmental Assessment • To equip with knowledge and skills necessary for undertaking environmental appraisal as per the requirements of the EMF • To undertake periodic supervision of environmental performance of schemes • To prepare for planning and monitoring implementation of environmental mitigation measures identified through the appraisal process • To equip with skills necessary for water quality testing using the field kits under the community-based system for water quality monitoring and surveillance	Engineers from SO Project Commissioner from GPST Manager (Technical) of RPMU Resource personnel	Orientation (1 day) Main and Refresher Training (3 days)	Environment aspects pertaining to sustainability of water sources, water quality, treatment technologies, protection of sources for SWSS, and multi-GP schemes; Sanitation facilities; Environmental appraisal; Water quality monitoring, prevention of pollution, and surveillance;

B.5 INSTITUTIONAL ARRANGEMENT FOR ENVIRONMENTAL MANAGEMENT

8.32 The institutional arrangement for EMF implementation is presented in Table 8.5.

B.6 CAPACITY BUILDING

8.33 The state currently has limited capacity for environmental management. The training and capacity building programmme developed for the Project aims at building environmental awareness and environmental management capacity among Project officials as well as in beneficiary communities.

8.34 The objectives of the capacity building programme are to:

- build and strengthen the capability of rural water and sanitation agency institutions (the KRWSA, the KWA) and other partners (NGOs, contractors and SOs) to integrate sound environmental management in watsan services;
- orient the service delivery of staff and GP representatives to the requirements of the Project's Environment Management Framework;

Table 8.7: Number of Training Events for EMF Implementation

Sl No	Topics	Number of Training Events	No of Years	Total No of Trainings
T1	Introduction to Environmental Management in Jalanidhi–II, including EMF	6 in Year 1 4 per year from Year 2 to Year 5	5	22
T2	Thematic Training	3 training events and an equal number of refresher training per year	3	18

8.35 Capacity building for environment management will be integrated with the overall capacity building component of the Project. Training events will be organised for staff at various levels in Project agencies as well as for village communities. Systematic capacity building initiatives will be introduced after training needs assessment. Training will be in cascade mode—trained staff and others will in turn conduct further trainings at state, district and GP levels.

8.36 A specific training programme for key officials of the Project will be developed (see Table 8.6). Thematic training programmes too will be conducted, focusing on 'Solid Waste Management and Sanitation', 'Water Quality' and 'O&M'. Three-day training will be conducted for limited number of engineers (about 60 engineers for each theme per year). The proposed number of programmes is in Table 8.7.

8.37 Apart from the KRWSA and the KWA, specialised institutions identified for training include the: CWRDM; Central Ground Water Board; Department of Science, Technology and Environment (GOK); Ground Water Department (GOK); and Kerala State Pollution Control Board.

CHAPTER 9: MONITORING AND EVALUATION

9.1 The Project's monitoring and evaluation (M&E) system is designed to ensure effective monitoring of inputs, outputs, sustainability and outcomes of state-wide decentralised and demand-responsive approach to rural water supply and sanitation. A key feature of the system will be speedy and efficient Project monitoring using computer network-based MIS, so that a model for the sector can be developed for state-wide scaling up.

A. OBJECTIVES

9.2 The objectives of the M&E system for the Project will be to monitor Project implementation and to evaluate the Project for continuously feeding into learning during implementation. The M&E system will enable the KRWSA to undertake timely assessments of the decentralised, demand-responsive model for service delivery, and identify bottlenecks to intervene appropriately.

9.3 The M&E system will thus aim to:

- track progress (physical and financial) to determine whether the Project is achieving the targets set;
- track effectiveness (of processes) to ensure that results comply with Project objectives; and
- track issues relating to sustainability and use feedback to improve the model.

B. COMPONENTS

9.4 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. The M&E system for the Project has three components: the performance monitoring system (quantitative progress), the process monitoring system (qualitative progress), and the impact evaluation system (achievement of objectives).

9.5 ***Performance Monitoring System***: Performance monitoring involves assessment (self-assessment and others' assessment) and quick, decisive action of quantitative progress. It relies on input and output indicators, as well as intermediate result indicators, to measure Project performance. It tracks the progress of works—against time and costs specified—and provides timely feedback to Project partners, so that budgeted targets are met. The system also assesses contract compliance (of inputs, outputs, and activities) and financial management (record-keeping, procurement, and asset management).

9.6 ***Process Monitoring System***: Process monitoring involves selecting processes, systematically observing them, comparing them with the ideal, and communicating how to achieve maximum efficiency. It is used to continuously improve institutional arrangements (procedures, norms, instruments, training, communication, and other interventions), as well as feed into long-term, strategic evaluation. It is guided by the Project's values or carrying concepts (demand responsiveness; cost recovery; decentralisation of service delivery, through strengthening of local organisations; asset ownership-management by village communities; role of government in human resource development, monitoring and regulation; and participatory decision-making, with greater role for women).

9.7 ***Impact Evaluation System***: Impact Evaluation involves assessing the extent to which the schemes and processes of the Project actually promote the Project objectives. It includes to what degree the Project has delivered sustainable health benefits through improvements in water and sanitation services; improved rural incomes through time savings and income-earning opportunities for women; and promoted greater awareness and local management capacity regarding gender, sanitation and environmental management. Impact evaluation uses outcome indicators and feeds into long-term, policy-level assessments in strategic 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 feed into the government policy making process for water sector/RWSS service provisions in Kerala.

9.8 To support the above processes, the following activities will be carried out in the project area to firm up the baseline indicators followed by surveys and analysis at pre-agreed intervals:

- ***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 mobilisation 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

9.9 In addition to the above, 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 system will include procurement contract management functionality, and will be web-based to ensure integration and better monitoring (of project implementation, financial inputs, outputs and outcomes). Monitoring activities will be fully computerised 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.

9.10 ***Management of the M&E system*** will be carried out by KRWSA, who shall 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. For planning and analysis, the M&E system will draw information from the GIS located in the Sector Development Unit.

C. RESULT FRAMEWORK

9.11 A result framework has been developed to monitor results during Project implementation. It comprises outcome indicators for Project development objectives, intermediate result indicators to measure performance of all three Project components, and information on how M&E information will be used. The preliminary result framework matrix is presented below.

Table 9.1: Results Framework													
Result Indicators	**Core**	**Unit**	**Baseline**	**Cumulative Target Values**						**Data Collection and Reporting**			
				YR 1	**YR 2**	**YR3**	**YR 4**	**YR 5**	**YR6**	**Frequency**	**Data Source, Method**	**Respons-ibility**	**Description**
Project Development Objective (PDO) To assist GoK in increasing rural communities' access to improved and sustainable water supply and sanitation services in Kerala, using a decentralised, demand-responsive approach													
Indicator One Direct project beneficiaries [5]	☒	Number	0		2,05,520	616,560	927,600	1,498,848	1,841,848	Annual	Baseline survey	KRWSA	
Indicator Two Number of people provided with access to improved water sources under the project[6]	☒	Number	0		105,520	316,560	527,600	998,848	1,150,848	Annual	Project MIS	KRWSA	Core indicator as defined in footnote

[5]Direct project beneficiaries are people or groups who directly derive benefits from an intervention (i.e., children who benefit from an immunization programme, families that have a new piped water connection). Based on the assessment and definition of direct project beneficiaries, specify the number of beneficiaries who are female, and the number who represent scheduled castes as defined by GoI.

[6]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.

Table 9.1: Results Framework													
Result Indicators	**Core**	**Unit**	**Baseline**	**Cumulative Target Values**						**Data Collection and Reporting**			
				YR 1	**YR 2**	**YR3**	**YR 4**	**YR 5**	**YR6**	**Frequency**	**Data Source, Method**	**Respons-ibility**	**Description**
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 decentralised, demand responsive projects in rural WSS	☐	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 decentralised, demand responsive project in rural WSS

Table 9.1: Results Framework													
Result Indicators	**Core**	**Unit**	**Baseline**	**Cumulative Target Values**						**Data Collection and Reporting**			
				YR 1	**YR 2**	**YR3**	**YR 4**	**YR 5**	**YR6**	**Frequency**	**Data Source, Method**	**Respons-ibility**	**Description**
Indicator Five Number of operational water schemes for which KRWSA's sustainability index is >80%[7]	☐	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													
Component One: Institution Building													
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	

[7]KRWSA's sustainability index is a weightage index of source assessment, technical assessment, financial assessment, and institutional assessment of water supply schemes.

Table 9.1: Results Framework													
Result Indicators	**Core**	**Unit**	**Baseline**	**Cumulative Target Values**						**Data Collection and Reporting**			
				YR 1	**YR 2**	**YR3**	**YR 4**	**YR 5**	**YR6**	**Frequency**	**Data Source, Method**	**Respons-ibility**	**Description**
Indicator Two Number of sector development studies successfully completed (cumulative)	☐	Number	0	NA	2	4	7	9	9	Annual	Project MIS	KRWSA	
Component Two: Technical Assistance to Implementing Agencies													
Indicator Three Number of project GPs benefiting from technical assistance and capacity building (cumulative)	☐	Number	0	25	84	140	200	200	200	Annual	Project MIS	KRWSA	
Indicator Four Number of water utilities that the project is supporting	☒	Number	0	1	1	1	1	1					

Table 9.1: Results Framework													
Result Indicators	**Core**	**Unit**	**Baseline**	**Cumulative Target Values**						**Data Collection and Reporting**			
				YR 1	**YR 2**	**YR3**	**YR 4**	**YR 5**	**YR6**	**Frequency**	**Data Source, Method**	**Respons-ibility**	**Description**
Indicator Five Number of other water service providers, i.e. BGs and GPs, that the project is supporting (cumulative)[8]	☒	Number	0	553	2,017	3,384	4,713	4,713	4,713	Annual	Project MIS	KRWSA	Core indicator as defined in footnote
Component Three: Infrastructure development													
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	
Indicator Seven Total number of multi-GP schemes partially transferred to GPs and rehabilitated/modernised (cumulative)		Number	0	0	3	5	5	5	5	Annual	Project MIS	KRWSA	

[8] 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 organisations (including water committees), small-scale providers, NGOs, etc.

Table 9.1: Results Framework													
Result Indicators	**Core**	**Unit**	**Baseline**	**Cumulative Target Values**						**Data Collection and Reporting**			
				YR 1	**YR 2**	**YR3**	**YR 4**	**YR 5**	**YR6**	**Frequency**	**Data Source, Method**	**Respons-ibility**	**Description**
Indicator Eight Number of GPs where interventions for safe disposal of solid waste successfully implemented and managed (cumulative)		Number			20	40	60	75	75				
Indicator Nine Number of piped household water connections affected by rehabilitation works under the project (cumulative)	☒	Number		NA	12,688	117,264	195,440	225,891	225,891	Annual	Project MIS	KRWSA	

D. IMPLEMENTATION ARRANGEMENT

9.12 In Jalanidhi–II, a Project Management Information System (PMIS) will track progress, identify bottlenecks for mid-course correction, and evaluate success. For this, a web-based software will be developed.

Reporting

9.13 Table 9.2 and Table 9.3 summarise the various reports that will be sent from the field (GPs, SOs or GPAT) to the KRWSA, and other reports through KRWSA. The information flows for reporting requirements of the Project are illustrated in Figure 9.1 and Figure 9.2.

9.14 ***Quarterly Progress Report*** will be the main reporting mechanism of the PMU to the GOK, GOI and the World Bank. These reports, covering all operations, will review emerging trends in the Project, and help guide decision-making. They will provide information on the physical and financial progress of the Project, and list the major activities undertaken during the quarter. These reports will be a summary compilation of the different reports generated in performance and process monitoring. Results of impact evaluation, if any in that period, will also be included. Table 9.4 outlines the contents of the quarterly progress report.

9.15 A Monitoring and Evaluation Manual has been developed for the project to guide the process for M&E. The Manual is attached to this document as Annex 10.

Project Management Information System

9.16 In Jalanidhi–II, a web-based software that integrates MIS and financial management information system (FMIS) will be developed. The software will capture data from the field on all aspects of the Project—physical, financial, procurement, technical, ground water recharge, and capacity building. Data will be entered at the panchayat level by the Grama Panchayat-level Support Team (GPST), with the support of the Support Organisation (SO) or the Grama Panchayat Action Team (GPAT). It is proposed to have a Web-based data entry interface, which will enable Web-based standard reporting, with management dashboards, for SO, GP, Regional Project Management Unit (RPMU), and Project Management Unit (PMU). The software will be developed and field-tested before implementation.

9.17 It is proposed to have the integrated MIS operational by the beginning of the Implementation phase.

E. ANNUAL PERFORMANCE AWARDS

9.18 To motivate and incentivise successful implementation of key Project principles, the Project will introduce annual performance awards for GPs and GPATs. Using indicators included in the result framework (Table 9.1), details of award criteria and methodology of selecting awardees will be developed. In addition to supporting successful GPs and GPATs, the awards will be useful for benchmarking and demonstration effect.

F. REPORTING

Physical Progress Report of GPs and other Supporting Entities

9.19 For "upward" accountability, a system of quarterly administrative reporting to the State Government on physical progress and asset creation funded from the project funds. This will expand to include other expenditures over the life of the project. The subproject progress report will be prepared by the respective BG and submitted to the GP, which in turn will consolidate the reports subproject wise and submit to the PMU. Similarly, implementation status reports from KWA, and other supporting entities will also be submitted by the respective institutions to the PMU, on a quarterly basis. This report will provide estimates of actual physical and financial progress with individual investment projects. This report is applicable for all activities financed under Jalanidhi-2 and must be submitted in the prescribed format given in Table 9.4. Every other quarterly report will serve as a semi-annual report.

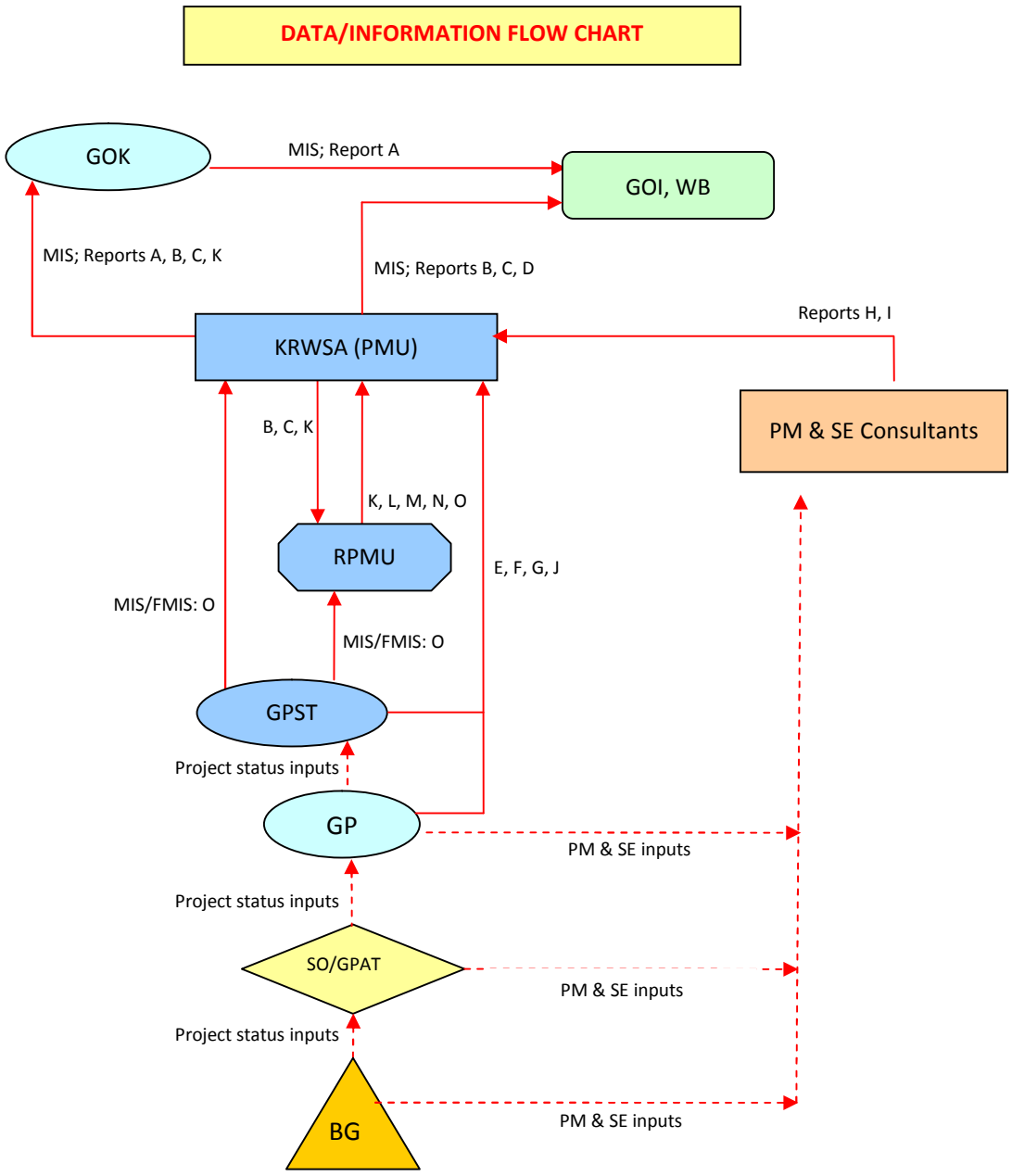
9.20 PMU will extract the required reports from this system for compilation of information for its quarterly progress report submitted along with IUFRs to The World Bank.

9.21 Mid Term Review: To evaluate the project, there will be formal mid-term and evaluation of the project. Separate independent evaluations will also be commissioned to examine overall impacts on GPs and BGs institutional performance, service delivery and governance issues, and training.

9.22 Implementation Completion Report : At the end of the project, a final evaluation of the project will be conducted. An Implementation Completion Report (ICR) will be prepared by the Government on their own assessment of the performance of the project which will be incorporated into the ICR.

Table 9.2: Reports from Grama Panchayats, SOs or GPATs to the KRWSA				
Sl No	**Format**	**Data Collected**	**Periodicity**	**Mode of Collection**
1	GP-level Baseline Survey	• Demographic • Socio-economic profile • Coverage (water, sanitation)	One-time report	• Transect walk • Resource mapping • Secondary data
2	BG-level Baseline Survey	• Demographic details • Socio-economic profile • Coverage (water, sanitation)	One-time report	• Transect Walk • Resource Mapping • Survey
3	Time Utilisation Analysis	Usage of time, with focus on time spent collecting water; stratified by season (summer/rains), occupation (housewives/employed)	• One-time base report • Evaluation	Focus group discussions (FGDs)
4	Healthy Home Survey	Health indicators	Once in six months	• FGDs • Pocket chart method • Other PRA tools
5	Land Utilisation	Details of land purchased, utilised for the construction of source or tank	One-time report	Verification of records
6	Monthly Report		Monthly	Records maintained at BG, SO, GPAT, GPST levels

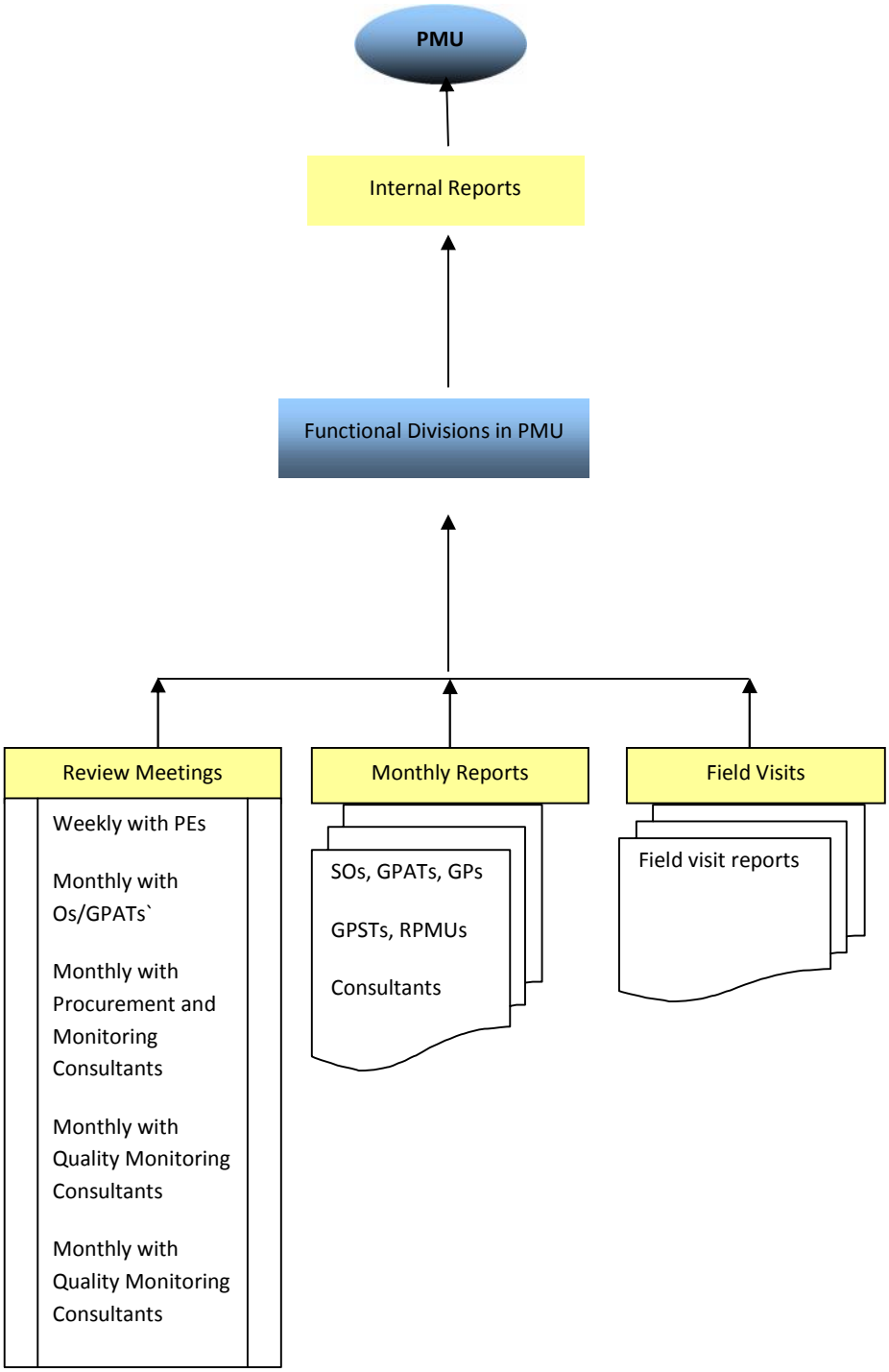
Figure 9.1: Information Flows in Monitoring and Evaluation



BG	Beneficiary Group	PM	Process Monitoring
GOK	Government of Kerala	SE	Sustainability Evaluation
GP	Grama Panchayat	SO	Supporting Organisation
GPAT	Grama Panchayat Action Team	WB	World Bank
GPST	Grama Panchayat Support Team		

Table 9.3: Summary of Monitoring Reports					
Index	**Data Flow**		**Report Details**	**Frequency**	**Inputs**
	From	*To*			*From*
A	GOK	GOI, WB	Project status (physical, financial)	Monthly	KRWSA
B	KRWSA	GOK, WB, RPMU	Project status (physical, financial)	Monthly	RPMU, GPST
C	KRWSA	GOK, GOI, WB, RPMU	Quarterly Progress Report	Quarterly	RPMU, GPST
D	KRWSA	WB	Report to Review Mission	Half-yearly	RPMU, SO
E	RPMU, GPST	KRWSA (M&E)	Baseline Survey (GP, BG)	One-time for each Batch	GP
F	RPMU, GPST	KRWSA (M&E)	Time Utilisation (Baseline)	One-time for each Batch	GP
G	RPMU, GPST	KRWSA (M&E)	Time Utilisation (Post-implementation)	One-time for each Batch	GP
H	Consultant	KRWSA (M&E)	Process Monitoring	Concurrent	BG, SO/GPAT, GP
I	Consultant	KRWSA (M&E)	Sustainability Evaluation	Half-yearly	BG, SO/GPAT, GP
J	RPMU, GPST	KRWSA (M&E)	Healthy Home Survey	Half-yearly	GP
K	KRWSA	GOK, RPMU	Annual Action Plan	Annual	RPMU
L	GPST, RPMU	KRWSA (HRD)	Sanitation Hygiene Promotion Activities	Monthly	GP
M	GPST, RPMU	KRWSA (HRD)	BG Training	Monthly	GP
N	GPST, RPMU	KRWSA (M&E)	Project status, SO activities	Monthly	GP
O	GPST, RPMU	KRWSA	FMIS, MIS data	Monthly	GP

Figure 9.2: Information Flows Within KRWSA



Quarterly Progress Reports

	Table 9.4: Proposed Contents of the Quarterly Progress Report
1	Thumbnail sketch of the Project (Project details, Project finance data, Consolidated physical achievement, Demography, Water supply, Other components, Cost analysis, Pre- and post-quarter watsan coverage)
2	Executive Summary
3	Cumulative Project Achievements
4	Project Coverage, Benefits
5	Financial Performance
6	Financial Analysis on Capital, O&M Expenditure
7	Pre- and Post-quarter Coverage Details
8	Component A: Institution Building A1: Institutional Building • Operation of KRWSA (operation and staffing) A2: Project Management • Monitoring and Evaluation (progress monitoring, process monitoring, sustainability evaluation, Impact assessment); • Independence Construction Quality Surveillance • Audit • Water Quality Monitoring • IEC A3: Capacity Building • Strategy in Capacity Development • Achievements in Capacity Building • Achievements of Training Division • Case Study and Documentation • Media Activities • Exposure Visits; and • Documentation of Success Stories A4: State Sector Development Programmes • Sector Management Information System- Resource Centre • GIS & other activities • State water quality surveillance lab Technical Assistance • State wide studies • Design of MIS
9	Component B: Capacity Support to Implementing Agencies B1: Capacity Support to Implementing Agencies • Intra GP RWS schemes and water security plans Tribal Development Schemes B2: Multi-GP scheme rehabilitation and modernisation B3: Technical Assistance for Sanitation scheme B4: GP Incentive Fund Water Security Plan

10	Component C: Infrastructure Development
	C1: New and Rehabilitated Intra-GP Rural Water Supply Schemes
	• Intra GP RWS schemes
	  • Small WSS (a. Openwell; b. Borewell; c. Tubewell; d. Filter point tube well; e. Spring & gravity; f. Surface water (river); g. RWH; h. Desalination (Specific treatment plants for water quality affected habitations; Other schemes))
	  • Large WSS
	  • RWH
	• Rehabilitation schemes (GP schemes, KWA schemes)

	Table 9.4: Proposed Contents of the Quarterly Progress Report
	• GWR Status • Tribal development plan (WSS, GWR, Sanitation) C2: Pilot Rehabilitation and Modernization of Multi-GP Water Supply Schemes and transfer of internal distribution to GPs C3: Sanitation schemes • Solid waste • Liquid waste
	Appendices
A1	Key Development Objective Indicators
A2	Key Performance Indicators—Physical
A3	Key Performance Indicators—Financial
A4	Key Performance Indicators—Tribal
A5	Sustainability Evaluation Indicators
A6	Batch-wise Details of Capital Cost Analysis
A7	Key Staff
A8	List of Jalanidhi GPs that won Nirmal Gram Puraskar
A9	List of GPs and SOs (batch-wise)

CHAPTER 10: RISKS AND MITIGATION FRAMEWORK

A. OPERATIONAL RISK ASSESSMENT FRAMEWORK

Table 10.1: Jalanidhi-II Operational Risk Assessment Framework
Project Development Objective(s)
To increase the access of rural communities to improved and sustainable water supply and sanitation services in Kerala, using a decentralised, 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 decentralised, demand-responsive projects in rural WSS 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. Implementing Agency Risks (including FM & PR Risks)					
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	KRWSA as the implementing agency for Jalanidhi-I was successful, but 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	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	NYD NYD Ongoing

[9]A large successful network of women Self Help Groups (SHGs) in the State covered under the State programme titled "Kudumbashree" meaning family women.

[10]A Special Education programme 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 programme 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
		- 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 being attributed to the high degree of community participation in implementation	- Lack of provision of adequate capacity support to GPs and BGs -Poor Maintenance of books of accounts, internal audits and delayed external audits Potential accountability weaknesses in project implementation	late preparation and early implementation phases. - The strong capacity building plan developed and implemented under Jalanidhi I will be broadened and strengthened. Capacity building programme will be expanded by creating specific modules to increase the scope of training Kudumbashree9 and Akshaya10 members to enhance local capacities to facilitate project management, O&M of assets, billing, collection of user charges, etc. Certification audits up to FY 2009-10 have been completed and FY 2010-11 audits are in progress, and will be a mandatory conditions for access of funds from Jalanidhi-II. Establishment of satisfactory fiduciary and procurement systems during project preparation including robust	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
				oversight and supervision during implementation	Ongoing NYD
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 & responsibilities for all project actors, and corresponding job descriptions - Annual assessments of implementation progress and performance of the different actors	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 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 -Risk associated with management of a decentralised structure with procurement at BG/BC level	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 bye-laws of KRWSA and its powers revised and enhanced to increase their role in activities relating to water supply and sanitation sector. The revisions to be approved by the General Council for systematic implementation Only those GPs that accept accountability and oversight responsibility for all project activities, including those by BGs	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
			General weaknesses in oversight and internal controls	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 programmes 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.	NYD
		- Audited financial statements of KWA are in arrears for 2-3 years 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.		KWA will be under closely ring-fenced arrangements and close monitoring by KRWSA with regular reporting. Start up funds up to 10% of annual requirements will be provided to KWA in a dedicated bank account. It will	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
				also identify dedicated staff for the Bank project and the project expenditure will be subject to internal/external audit by auditors appointed by KRWSA. Development and roll out of web-based contract MIS. Development of a robust complaint handling mechanism. Providing the public easy access to documents relating to the project through KRWSA project website. Project design incorporates adequate third party review of procurement and financial management at all levels.	
Fraud & Corruption Prevalence of F&C Transparency and Controls	3 (high impact, low likelihood)	Given the design of the Jalanidhi approach and the positive transparency and high social capital environment in Kerala, no fraud and corruption issues came to light during the preparation and implementation of Jalanidhi-I	There is a risk that GPs, BGs and Support Organisations will resort to collusive practices in procurement by, for example, compromising on quality of equipment, materials and construction. There is also the risk that GPs will not disclose the details of procurement and accounting to beneficiaries and civil society	Fraud and corruption mitigation measures include: - Providing data on current market prices and supply chains - Implementing independent and concurrent monitoring on technical and fiduciary aspects of project design	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
				- Designing and implementing Generally Accepted Accounting Principles (GAAP) and continuing to use existing Jalanidhi website for disclosures. Ensure compliance to public disclosure of GP's annually approved activities with its budget, expenditure, progress, etc, made compulsory for GPs, irrespective of the source of funds, under the Bank-financed KLGSD project (under Credit 4872-IN)	Ongoing Ongoing
2. Project Risks					
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 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	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	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
			- M&E arrangements could be complex as implementation is spread out over large geographic areas - KWA may not fulfill its role under the agreed institutional/implementation arrangements. - Community sanitation schemes may pose environmental hazards if not properly designed, implemented and managed	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 stratigically located in areas of concentration of the target GPs to facilitate project implementation. In addition to the PMU and RMPUs, services of Support Organisations 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 be providing 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.	NYD NYD 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
				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.	
Social & Environmental Environmental Social Other	1 (low impact and low likelihood)	Jalanidhi I proved a successful experience in effectively managing 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 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.	An Environment Management Framework (EMF) has been prepared and will be implemented and monitored during project execution. The successful implementation of the Environment Management Framework and the Tribal Development Plan will be monitored and adjusted as necessary throughout implementation. A comprehensive information, education and communication campaign has been designed and will commence soon after negotiation and board approval. GP selection criteria will be adopted that favor the inclusion of poor and SC/ST/fisher populations.	Completed NYD 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
				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. These rules will be issued through a formal government order to ensure that GPs and other agencies/bodies/personnel in the State administrative set-up follows and applies the rules during and after project implementation.	Partially completed
Programme & Donor Programme dependencies Donor Collaboration Donor Delivery	1 (low impact and low likelihood)	The programme 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 management unit 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	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
				motivate commitment and improve technical competency.	
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 contract could disrupt the implementation cycle	The important tools to mitigate these delivery quality risks are: - Effective implementation of the approved Environment Management Framework - Upfront preparation of GP-wide Water Security Plans and groundwater recharge interventions to allow proper planning of RWSS services and minimise water scarictiy and water quality risks. - Implementation of capacity building programmes - Provision of external capacity/TA support to the BGs and GPs in different aspects and tailor training modules and programmes to suit their needs Procurement plan timeline is to be adhered to. Enhancing procurement and contract management capacity in PMU by hiring the required skill set	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
Other (max 2) Lack of alignment by KWA with the project	1 (low impact and low likelihood)	Although KWA did not always fully support on the principles of the Jalanidhi-1 project, having to embrace the polcies of GOI and GOK, the acceptance of 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 Further KWA's role as a bulk water supply provider only and consolidation of water resources and supply infrastructure management is on the rise	Based on the experience of Jaladinhi-I it is possible that KWA may not fully participate in supporting the consolidation of the Jalanidhi model in the state	This risk will be mitigated by that fact that: - KWA will have to follow GOI and GOK guidelines that call for scaling up the principles of Jalanidhi-I through Jalanidhi-II The Bank and KRWSA teams will continue to build on the working partnership established and consolidate it through KWA's engagement in the project through the rehabilaitaiton and modernisation of multi–GP schemes and 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	Ongoing Ongoing NYD

CHAPTER 11: GOVERNANCE AND ACCOUNTABILITY POLICY

A. ANTI-CORRUPTION GUIDELINES

11.1 This section provides the reader with a non-technical explanation of the World Bank's Guidelines on Preventing and Combating Corruption in Projects financed by IBRD loans and IDA Credits and Grants (*Anti-Corruption Guidelines*). It is intended primarily for Borrowers and other recipients of World Bank loan proceeds to facilitate their understanding of the Guidelines. It is not intended to substitute for the *Anti-Corruption Guidelines.* For a full treatment of this subject, please refer to the attached Anti-Corruption Guidelines

Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants (dated October 15, 2006)

Purpose and General Principles

11.2 These Guidelines are designed to prevent and combat fraud and corruption that may occur in connection with the use of proceeds of financing from the International Bank for Reconstruction and Development (IBRD) or the International Development Association (IDA) during the preparation and/or implementation of IBRD/IDA-financed investment projects. They set out the general principles, requirements and sanctions applicable to persons and entities which receive, are responsible for the deposit or transfer of, or take or influence decisions regarding the use of, such proceeds.

11.3 All persons and entities referred to in paragraph 1 above must observe the highest standard of ethics. Specifically, all such persons and entities must take all appropriate measures to prevent and combat fraud and corruption, and refrain from engaging in, fraud and corruption in connection with the use of the proceeds of IBRD or IDA financing.

Legal Considerations

11.1 The Loan Agreement[11] providing for a Loan[12] governs the legal relationships between the Borrower[13] and the Bank[14] with respect to the particular project for

[11] References in these Guidelines to "Loan Agreement" include any Guarantee Agreement providing for a guarantee by the Member Country of an IBRD Loan, Financing Agreement providing for an IDA Credit or IDA Grant, agreement providing for a project preparation advance, or Institutional Development Fund (IDF) Grant, Trust Fund Grant Agreement providing for a recipient-executed trust fund Grant in cases

which the Loan is made. The responsibility for the implementation of the project[15] under the Loan.

11.2 Agreement, including the use of Loan proceeds, rest with the Borrower. The Bank, for its part, has a fiduciary duty under its Articles of Agreement to "make arrangements to ensure that the proceeds of any loan are used only for the purposes for which the loan was granted, with due attention to considerations of economy and efficiency and without regard to political or other non-economic influences or considerations."[16] These Guidelines constitute an important element of those arrangements and are made applicable to the preparation and implementation of the project as provided in the Loan Agreement.

Scope of Application

11.3 The following provisions of these Guidelines cover fraud and corruption that may occur in connection with the use of Loan proceeds during the preparation and implementation of a project financed, in whole or in part, by the Bank. These Guidelines cover fraud and corruption in the direct diversion of Loan proceeds for ineligible expenditures, as well as fraud and corruption engaged in for the purpose of influencing any decision as to the use of Loan proceeds. All such fraud and corruption is deemed, for purposes of these Guidelines, to occur "in connection with the use of Loan proceeds."

11.4 These Guidelines apply to the Borrower and all other persons or entities which either receive Loan proceeds for their own use (e.g., "end users"), persons or entities such as fiscal agents which are responsible for the deposit or transfer of Loan proceeds (whether or not they are beneficiaries of such proceeds), and persons or entities which take or influence decisions regarding the use of Loan proceeds. All

---

where these Guidelines are made applicable to such agreement, and the Project Agreement with a Project Implementing Entity related to an IBRD loan or IDA credit or grant.

[12] References to "Loans" include IBRD loans as well as IDA credits and grants, project preparation advances, IDF grants and recipient-executed trust fund grants for projects to which these Guidelines are made applicable under the agreement providing for such grant, but excludes development policy lending, unless the Bank agrees with the Borrower on specified purposes for which loan proceeds may be used.

[13] References in these Guidelines to the "Borrower" include the recipient of a grant. In some cases, an IBRD Loan may be made to an entity other than the Member Country. In such cases, references in these Guidelines to "Borrower" include the Member Country as Guarantor of the Loan, unless the context requires otherwise. In some cases, the project, or a part of the project, is carried out by a Project Implementing Entity with which the Bank has entered into a Project Agreement. In such cases, references in these Guidelines to the "Borrower" include the Project Implementing Entity, as defined in the Loan Agreement.

[14] References in these Guidelines to the "Bank" include both IBRD and IDA

[15] References in these Guidelines to the "project" means the Project as defined in the Loan Agreement.

[16] IBRD's Articles of Agreement, Article III, Section 5(b); IDA's Articles of Agreement, Article V, Section 1(g).

such persons and entities are referred to in these Guidelines as "recipients of Loan proceeds," whether or not they are in physical possession of such proceeds[17].

11.5 The Bank's specific policy requirements on fraud and corruption in connection with the procurement or execution of contracts for goods, works or services financed out of the proceeds of a Loan from the Bank, are covered in the Guidelines: Procurement under IBRD Loans and IDA Credits, May 2004, as revised October 2006 ("Procurement Guidelines") and the Guidelines: the Selection and Employment of Consultants by World Bank Borrowers, May 2004, as revised October 2006 ("Consultant Guidelines").

Definitions of Practices Constituting Fraud and Corruption

11.6 These Guidelines address the following defined practices when engaged in by recipients of Loan proceeds in connection with the use of such proceeds[18:]

a. A "corrupt practice" is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party[19].

b. A "fraudulent practice" is any act or omission, including a misrepresentation, that knowingly or recklessly[20] misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation.

c. A "collusive practice" is an arrangement between two or more parties designed to achieve an improper purpose, including to influencing improperly the actions of another party.

d. A "coercive practice" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party.

e. An "obstructive practice" is (i) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false

[17] Certain persons or entities may fall under more than one category identified in paragraph A financial intermediary, for example, may receive payment for its services, will transfer funds to end users and will make or influence decisions regarding the use of loan proceeds

[18] Unless otherwise specified in the Loan Agreement, whenever these terms are used in the Loan Agreement, including in the applicable General Conditions, they have the meanings set out in paragraph 7 of these Guidelines

[19] Typical examples of corrupt practice include bribery and "kickbacks."

[20] To act "knowingly or recklessly," the fraudulent actor must either know that the information or impression being conveyed is false, or be recklessly indifferent as to whether it is true or false. Mere inaccuracy in such information or impression, committed through simple negligence, is not enough to constitute fraudulent practice.

statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or (ii) acts intended to materially impede the exercise of the Bank's contractual rights of audit or access to information[21].

11.7 The above practices, as so defined, are sometimes referred to collectively in these Guidelines as "fraud and corruption."

Borrower Actions to Prevent and Combat Fraud and Corruption in connection with the Use of Loan Proceeds

11.8 In furtherance of the above-stated purpose and general principles, the Borrower will take all appropriate measures to prevent corrupt, fraudulent, collusive, coercive and obstructive practices in connection with the use of Loan proceeds, including (but not limited to)

(a) adopting appropriate fiduciary and administrative practices and institutional arrangements to ensure that the proceeds of the Loan are used only for the purposes for which the Loan was granted, and

(b) ensuring that all of its representatives[22] involved with the project, and all recipients of Loan proceeds with which it enters into an agreement related to the Project, receive a copy of these Guidelines and are made aware of its contents;

(c) immediately report to the Bank any allegations of fraud and corruption in connection with the use of Loan proceeds that come to its attention;

(d) if the Bank determines that any person or entity referred to in (a) above has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in connection with the use of Loan proceeds, take timely and appropriate action, satisfactory to the Bank, to address such practices when they occur;

(e) include such provisions in its agreements with each recipient of Loan proceeds as the Bank may require to give full effect to these Guidelines, including (but not limited to) provisions (i) requiring such recipient to abide by paragraph 10 of these Guidelines, (ii) requiring such recipient to permit the Bank to inspect all of their accounts and records and other documents relating to the project required to be maintained pursuant to the Loan Agreement and to have them

[21] References in these Guidelines to "representatives" of an entity also include its officials, officers, employees and agents

[22] Such rights include those provided for, *inter alia*, in paragraph 9(d) below

audited by, or on behalf of, the Bank, (iii) providing for the early termination or suspension by the Borrower of the agreement if such recipient is declared ineligible by the Bank under paragraph 11 below; and (iv) requiring restitution by such recipient of any amount of the loan with respect to which fraud and corruption has occurred;

(f) cooperate fully with representatives of the Bank in any investigation into allegations of fraud and corruption in connection with the use of loan proceeds; and

(g) in the event that the Bank declares any recipient of Loan proceeds ineligible as described in paragraph 11 below, take all necessary and appropriate action to give full effect to such declaration by, among other things, (i) exercising the Borrower's right to terminate early or suspend the agreement between the Borrower and such recipient and/or (ii) seeking restitution.

Other Recipients of Loan Proceeds

11.9 In furtherance of the above-stated purpose and general principles, each recipient of Loan proceeds which enters into an agreement with the Borrower (or with another recipient of Loan proceeds) relating to the Project will:

(a) carry out its project-related activities in accordance with the above-stated general principles and the provisions of its agreement with the Borrower referred to in paragraph 9 (d) above; and include similar provisions in any agreements related to the Project into which it may enter with other recipients of Loan proceeds;

(b) immediately report to the Bank any allegations of fraud and corruption in connection with the use of loan proceeds that come to its attention;

(c) cooperate fully with representatives of the Bank in any investigation into allegations of fraud and corruption in connection with the use of loan proceeds;

(d) take all appropriate measures to prevent corrupt, fraudulent, collusive, coercive and obstructive practices by its representatives (if any) in connection with the use of loan proceeds, including (but not limited to): (i) adopting appropriate fiduciary and administrative practices and institutional arrangements to ensure that the proceeds of the loan are used only for the purposes for which the loan was granted, and (ii) ensuring that all its representatives receive a copy of these Guidelines and are made aware of its contents;

(e) in the event that any representative of such recipient is declared ineligible as described in paragraph 11 below, take all necessary and appropriate action to give full effect to such declaration by, among other things, either removing

such representative from all duties and responsibilities in connection with the project or, when requested by the Bank or otherwise appropriate, terminating its contractual relationship with such representative; and

(f) in the event that it has entered into a project-related agreement with another person or entity which is declared ineligible as described in paragraph 11 below, take all necessary and appropriate action to give full effect to such declaration by, among other things, (i) exercising its right to terminate early or suspend such agreement and/or (ii) seeking restitution.

Sanctions and Related Actions by the Bank in Cases of Fraud and Corruption

11.10 In furtherance of the above-stated purpose and general principles, the Bank will have the right to take the following actions:

a. sanction any recipient of Loan proceeds[23] other than the Member Country[24] (and/or, if such recipient is an entity rather than a natural person, any of its representatives); sanctions include (but are not limited to) declaring such person or entity ineligible to receive the proceeds of any loan made by the Bank or otherwise to participate further in the preparation or implementation of the project or any other project financed, in whole or in part by the Bank, if at any time the Bank determines[25] that such person or entity has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in connection with the use of loan proceeds[26];

b. if the Bank determines that any such recipient of Loan proceeds is also a potential provider of goods, works or services, declare it ineligible under paragraph 1.8 (d) of the Procurement Guidelines or paragraph 1.11 (e) of the Consultant Guidelines (as appropriate); and

c. declare a firm, consultant or individual ineligible under paragraph 11 (a) above if such firm, consultant or individual has been declared ineligible

[23] As in the case for bidders in the procurement context, the Bank may also sanction persons and entities which engage in fraud or corruption in the course of applying to become a recipient of Loan proceeds (e.g., a bank which provides false documentation so as to qualify as a financial intermediary in a Bank-financed project) irrespective of whether they are successful

[24] Member Country includes officials and employees of the national government or of any of its political or administrative subdivisions, and government owned enterprises and agencies that are not eligible to bid under paragraph 1.8(b) of the Procurement Guidelines or participate under paragraph1.11(c) of the Consultant Guidelines.

[25] The Bank has established a Sanctions Board, and related procedures, for the purpose of making such determinations. The procedures of the Sanctions Board sets forth the full set of sanctions available to the Bank

[26] The sanction may, without limitation, also include restitution conduct has occurred. The Bank may publish the identity of any entity declared ineligible under paragraph 11.

under paragraph 1.14 of the Procurement Guidelines or under paragraph 1.22 of the Consultant Guidelines.

Miscellaneous

11.11 The provisions of these Guidelines do not limit any other rights, remedies[27] or obligations of the Bank or the Borrower under the Loan Agreement or any other document to which the Bank and the Borrower are both parties.

B. GOVERNANCE ARRANGEMENTS

11.12 In order to most effectively manage the risks, governance measures within project design have been carefully developed to align with the existing institutional arrangements. These measures includes:

(i) All implementing agencies are governed by RTI law as reflected in the reporting and disclosure framework established under the project and elaborated in the PAD;

(ii) Risks have been addressed as integral elements of project design in order to most effectively mitigate them, and indicators set out in the results framework to a large extent serve as monitors of governance and accountability issues inherent in the project;

(iii) The management and reporting arrangements for the project given below will enhance governance arrangements of the project:

a. The PMU will be responsible for the decisions of KRWSA, GPs and BGs which would receive financial assistance and supporting resources from the project.

b. All major contracts, and in particular, the selection of the independent consultants will require KRWSA approval.

c. The PMU will have the responsibility of reporting on these contracts to KRWSA and Water Resources Department. (WRD)

d. The PMU will have significant governance responsibilities, including overseeing the implementation of project activities carried out by other project support entities (e.g. KWA, GPs and BGs). In other words, these entities are accountable to and report regularly to the PMU.

[27] The Loan Agreement provides the Bank with certain right and remedies which it may exercise with respect to the Loan in the event of fraud and corruption in connection with the use of Loan proceeds, in the circumstances described therein.

11.13 The day-to-day management of the project will be undertaken by the PMU, however since overall responsibility for project implementation resides with KRWSA, all decisions that have significant governance implications will require prior approval by KRWSA.

11.14 The Project Director, PMU reports to the Secretary, WRD, and will be jointly accountable, monitor implementation and compliance with sound practices and service delivery systems introduced in the Project. All major contracts including the selection of independent consultants and consulting firms for various services as detailed in the procurement plan, will require KRWSA and World Bank approval.

C. GOVERNANCE ACCOUNTABILITY AND ACTION PLAN

11.15 The project will strengthen and accelerate the ongoing process decentralisation and devolvement of governance to Gram Panchayats through supporting decentralised 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 for multi-source water supply schemes and local/internal water supply schemes to meet their needs and ensure equitable supply of water to all.

11.16 The objective of the Governance and Accountability Action Plan (GAAP) is to strengthen overall governance of the project to minimise the risks related to deviation from agreed processes and utilisation of project funds. The GAAP arrangements for the project have ensured that the demand for the project assistance will based on the bottom-up approach to ensure: the Stakeholders are actively engaged in the development of the subprojects; implementation, operation and maintenance by the BGs; can provide feedback, and air grievances (if any); redressal mechanisms are to the satisfactory to the stakeholders, for effective and efficient utilisation of project funds. The project's GAAP initiatives are centered on the following to mitigate potential governance risks that may impede the project from achieving its objectives:

(a) Bottom-up selection of the GPs and beneficiary Participation
(b) Two tier decentralised service delivery integrated bottom-up from BGs to GPs
(c) well-defined roles and responsibilities for scheme planning, design, implementation, operation and maintenance;
(d) capacity support from external agencies to stakeholders at various levels with well defined roles to help the stakeholders in implementing the project;
(e) independent construction quality surveillance;
(f) social audits and society oversight
(g) Performance assessment of works established under the project
(h) State vide beneficiary assessments through annual stratified household consumer satisfaction survey;
(i) grievance redressal measures, and public disclosures
(j) technical, procurement and financial audits;

(k) Establishment of MIS, financial management and Monitoring & Evaluation (M&E) systems;
(l) Submission of reports by the respective stakeholder at various stages of Planning and implementation;
(m) Development of policy and legal frameworks to facilitate ownership, O &M of assets by the respective stakeholders.

11.17 At every stage in the aforesaid "transaction chain," potential risks were identified and corresponding mitigation measures have been developed within the project to align with existing institutional arrangements. These measures also includes taking into account that all agencies involved in the project are governed by the Right to Information (RTI) Act. The State has agreed to the management and reporting arrangements in the project to enhance and ensure good governance of community based institutions partnering the project. All major contracts, including recruitment of consultants to undertake various studies, project management and technical support for planning, designs supervision, are executed directly by the PMU. Large works contracts are executed by KWA at the state level while the community level BGs carries out the small works in relation to their local requirements. The GPs, RMPU and KWA will have the responsibility of reporting on these contracts to PMU, KRWSA. The PMU will have significant governance responsibilities, including overseeing the implementation of project activities carried out by other project implementing agencies.

11.18 The project has prepared a detailed Project Implementation Programme (PIP) and separate operational manuals for each sub activity under the project with the rules of business for project implementation and monitoring of outputs/outcomes.

11.19 An independent agency will be appointed to assess impact evaluation of the various key activities and processes of the project will also evaluate the institutional response efficiency for grievances. A annual review of the operations on pre-decided parameters and methodologies will be carried out which should also include the following:

- Assessments of BG requirements vis-à-vis the approved proposals;
- Timely evaluation and approval of the proposals by the GPWSC/SLC, RPMU and KRWSA;
- Timely transfer of funds from KRWSA-RMPU-GPs-BGs;
- Utilization of funds for the intended/approved purpose;
- Response time and quality towards grievances/complaints and or RTI applications;
- Quality of record keeping;
- Implementation progress in line with the project's approved requirements
- State of access to all project related documentation.

11.20 The matrix (Table 11.1) summarises the risks and mitigating measures which comprise the GAAP.

Table 11.1: Governance and Accountability Action Plan				
Transaction	**Risk**	**Mitigation Measures and Indicators**	**Responsibility**	**Cost (USD million)**
a) Select universe of participating GPs	Decision on selection of GPs might be politically influenced.	GPs for Jalanidhi-2 has been selected based on the following criteria **GPs** (a) willingness of the GPs to participate in the project; (b) extent of water supply coverage in the GPs including coverage of BPL households; (c) quality of the water or ground water source; (d) poverty levels based on the total number of BPL households vis-à-vis total households in the GP; (e) population of Scheduled caste and or scheduled tribes (h) efficiency in implementing development projects; (i) GPs with clean audit certification without Any qualified opinion as required under KLGSDP project. **For Tribal GPs** In addition to the above indicators, the following have also been taken into account*:* (a) Total tribal population in the district; (b) % of Tribal concentration in the GP vis-à-vis the total population in the 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	Grant allocation (both amount and timeliness) to each GP could be politically manipulated.	Grant amounts determined by objective formula wherein allocation is 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	Supervision budget Project Management O/head (PMU) Project Management head (PMU)

Table 11.1: Governance and Accountability Action Plan				
Transaction	**Risk**	**Mitigation Measures and Indicators**	**Responsibility**	**Cost (USD million)**
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 RPMU and random audit by PMU; - external audits by chartered accountancy firms engaged under the project, - random checking of book of accounts by RPMU; - greater transparency and accountability of budget/ expenditure to community; capacity building of accounts staff in BG and GPs.	PMU/RMPU,	Annual pro-rated share of following: Systems improvements sub-component ($x.xm) External Audits : $XXXX Communication Strategy: $xxxxm Project Management and supervision (PMU) $ xxxxxx pa
d) Effective use of grant resources by GPs/BGs	Elite capture resulting in funds being prioritised for works their areas to augment supply to meet higher requirements; use of funds for purposes not in line with local needs or other than those prioritised under the community planning process..	Increased transparency of resource utilisation 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 organisations. Indicators: - Successful agreements between GPs and BGs - Implementation and operation of assets by BGs, - Numbers of GPs producing and disseminating local public reports.	PMU, RPMU and GPs. This is verified through performance assessment process.	Annual pro-rated share of following: Audits: $XXXm GPs and BGs Performance Impact Analysis: $xxx (year 2) $xxx (year 5) Project Management Unit (PMU) GP/BG service delivery assessment subcomponent:
e) Procurement of goods, works and services by	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 programme focused on strengthening procurement capacity.	PMU, KILA, RPMU,	Annual pro-rated share of following: Capacity building :

Table 11.1: Governance and Accountability Action Plan				
Transaction	**Risk**	**Mitigation Measures and Indicators**	**Responsibility**	**Cost (USD million)**

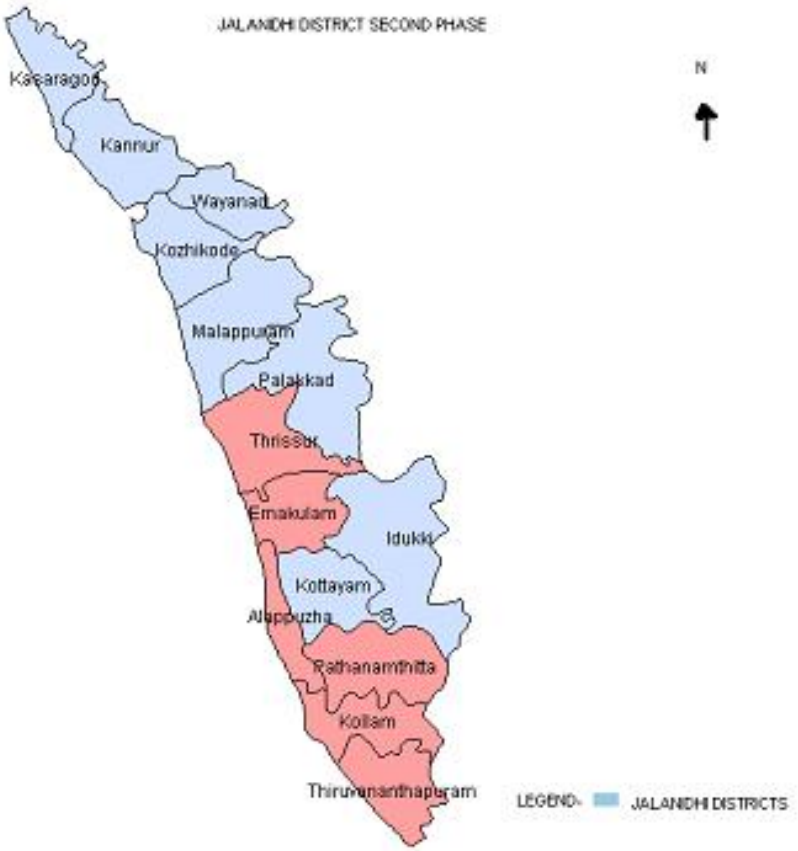
the GP/BGs level		Indicators: (a) Independent procurement and safeguards performance assessment of about 10 % random sample GPs/BGs 18 months after project effectiveness; (b) annual independent audits of GPs/BGs		$XXX
				Internal auditing process: $ xxxx m
				Interim Safeguard and Procurement Review:
				$ xxxm (end of each year)
				GP and BG Performance Impact Analysis:
				$ xxxx m (year 2)
				$ xxxxm (year 5)
				Project Management Unit (PMU)

f) Procurement of goods and services at State level (KWA) and RPMUs, GPs and BGs.	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; (iii) Project audit and (iv) processing and approval by GPWSC/SLCs as applicable Indicators: (a) results of the review processes.	GPs, SOs, RPMUs, Oversight by KRWSA, World Bank supervision Missions	Prorated share of World Bank supervision.
g) Use of funds by RPMU, GPs, BGs, KWA etc.,	Funds not used for agreed/ intended purposes	(i). Approval of expenditure; (ii)Submission of utilisation certificates to PMU; (iii). End of year audits; and (iv). Project supervision Indicators: Utilisation certificates and audit reports	KRWSA, RPMU, GP, KWA	Pro-rated share of supervision by World Bank

APPENDICES
TO PROJECT IMPLEMENTATION PLAN
OF JALANIDHI–II

List of Appendices

Appendix 1: Map of Kerala



Appendix 2: Detailed Project Cost Estimates

Sheet No.	Sheet Name	Contents	Table Nos.
Main Summary Tables			
1	Base Costs	Base cost of the Project in INR crore	1
2	PAD Table - Costs	Costs with price and physical contingencies in INR crore and USD million	2-5
3	Financing Share	Financing share and Bank assistance in INR crore and USD million	6
4	PAD Financing Tables	Year-wise financing	7-8
5	Summary	Summary of important tables	9
Component-wise Cost Estimates			
In xls	A. Institution Building	Details of year-wise units, rate and amounts for the individual line items for Component A	10
In xls	B. Technical Assistance	Details of year-wise units, rate and amounts for the individual line items for Component B	11
In xls	C. Infrastructure Building	Details of year-wise units, rate and amounts for the individual line items for Component C	12

Note : Physical contingency is taken as 5%

Physical contingency is provided for Infrastructure Building components

For all components, price contingency is provided

Project period is assumed to be 6 years

TABLE 1: JALANIDHI-II – BASE COSTS OF MAIN COMPONENTS AND SUBCOMPONENTS										
										(Amount in INR crore)
	Main Components and Subcomponents	**1st year**	**2nd year**	**3rd year**	**4th year**	**5th year**	**6th year**	**Total**	**Total incl. Contingencies (Amount)**	**% to Total**
A	**Institution** Building									
	A1. Project Management	3.8	7.8	12.4	16.2	16.4	14.6	71.2	83.9	8.2%
	A2. Capacity Building	0.9	1.4	1.9	2.0	1.7	1.0	8.9	10.2	1.0%
	A3. Sector Development Programmes	0.0	8.9	5.4	3.6	0.1	0.1	18.1	19.9	1.9%
	Total - Institution Building	**4.7**	**18.1**	**19.6**	**21.8**	**18.3**	**15.7**	**98.2**	**114.0**	**11.1%**
B	**Technical Assistance to Implementing Agencies**									
	B1. For Intra GP RWS Schemes	0.0	9.0	19.8	23.1	22.6	10.8	85.3	100.4	9.8%
	B2. For Multi GP Scheme Rehabilitation & Modernisation	0.0	0.2	0.9	1.5	1.5	0.6	4.6	5.5	0.5%
	B3. For Sanitation Schemes	0.1	1.1	2.0	2.0	1.5	1.1	7.8	9.1	0.9%
	Total - Technical Assistance	**0.2**	**10.2**	**22.7**	**26.6**	**25.6**	**12.5**	**97.7**	**115.0**	**11.2%**
C	**Infrastructure Development**									
	C1. Intra GP RWS Schemes	0.0	58.1	121.4	137.5	133.9	56.3	507.2	624.7	61.1%
	C2. Multi GP Schemes Rehabilitation & Modernisation	0.0	20.0	23.0	15.0	15.0	6.0	79.0	95.1	9.3%
	C3. Sanitation Schemes	0.0	8.9	16.7	15.7	10.6	8.4	60.1	73.6	7.2%
	Total - Infrastructure Building	**0.0**	**87.0**	**161.0**	**168.2**	**159.5**	**70.7**	**646.4**	**793.4**	**77.6%**
	TOTAL PROJECT	**4.9**	**115.3**	**203.4**	**216.6**	**203.3**	**98.8**	**842.3**	**1022.3**	**100.0%**
	Percentage	**1%**	**14%**	**24%**	**26%**	**24%**	**12%**	**100%**		

Table 2: JALANIDHI-II - MAIN COMPONENTS AND SUB-COMPONENTS - Base Costs

Price escalation - local (%)	8.38	6.13	5.00	5.00	5.00	5.00
Factor	1.00	1.06	1.11	1.17	1.23	1.29
Physical Contingencies	1.05	1.05	1.05	1.05	1.05	1.05
Exchange Rates	*4.518*	*4.428*	*4.336*	*4.238*	*4.150*	4.068
Price escalation - $ (%)	2.78	2.40	2.40	2.40	2.40	2.40
Factor	1.03	1.05	1.08	1.10	1.13	1.16

	In Current prices - with physical increases							*(Amount in INR crore)*
	Main Components	**1st year**	**2nd year**	**3rd year**	**4th year**	**5th year**	**6th Year**	**Total**	**% to Total**
A	**Institution Building**								
	A1. Project Management	3.8	7.8	12.4	16.2	16.4	14.6	71.2	8%
	A2. Capacity Building	0.9	1.4	1.9	2.0	1.7	1.0	8.9	1%
	A3. Sector development programmes	0.0	8.9	5.4	3.6	0.1	0.1	18.1	2%
	Total - Institution Building	4.7	18.1	19.6	21.8	18.3	15.7	98.2	11%
B	**Technical Assistance to Implementing Agencies**								
	B1. For Intra GP RWS Schemes	0.0	9.0	19.8	23.1	22.6	10.8	85.3	10%
	B2. For Multi GP Scheme Rehabilitation & Modernisation	0.0	0.2	0.9	1.5	1.5	0.6	4.6	1%
	B3. For Sanitation Schemes	0.1	1.1	2.0	2.0	1.5	1.1	7.8	1%
	Total - Technical Assistance	0.2	10.2	22.7	26.6	25.6	12.5	97.7	11%
C	**Infrastructure Development**								
	C1. Intra-GP RWS Schemes	0.0	61.1	127.4	144.4	140.6	59.1	532.6	61%
	C2. Multi-GP Schemes Rehabilitation & Modernisation	0.0	21.0	24.2	15.8	15.8	6.3	83.0	9%

	In Current prices - with physical increases							*(Amount in INR crore)*
	Main Components	**1st year**	**2nd year**	**3rd year**	**4th year**	**5th year**	**6th Year**	**Total**	**% to Total**
	C3. Sanitation Schemes	0.0	9.3	17.5	16.5	11.1	8.8	63.1	7%
	Total - Infrastructure Development	0.0	91.4	169.1	176.6	167.4	74.2	678.7	78%
	TOTAL PROGRAMME	**4.9**	**119.6**	**211.4**	**225.0**	**211.3**	**102.4**	**874.6**	**100%**
	Percentage	**1%**	**14%**	**24%**	**26%**	**24%**	**12%**	**100%**	

Table 3: JALANIDHI-II - MAIN COMPONENTS AND SUB-COMPONENTS - With Physical and Price Contingencies									
									(Amount in INR crore)
	Main Components	**1st year**	**2nd year**	**3rd year**	**4th year**	**5th year**	**6th Year**	**Total**	**% to Total**
A	**Institution Building**								
	A1. Project Management	3.8	8.2	13.8	19.0	20.2	18.9	**83.9**	8%
	A2. Capacity Building	0.9	1.5	2.1	2.3	2.1	1.2	**10.2**	1%
	A3. Sector development programmes	0.0	9.4	6.0	4.2	0.1	0.2	**19.9**	2%
	Total - Institution Building	**4.7**	**19.2**	**21.9**	**25.5**	**22.4**	**20.3**	**114.0**	**11%**
B	**Technical Assistance to Implementing Agencies**								
	B1. For Intra GP RWS Schemes	0.0	9.5	22.1	27.1	27.8	13.9	**100.4**	10%
	B2. For Multi GP Scheme Rehabilitation & Modernisation	0.0	0.2	1.0	1.7	1.8	0.8	**5.5**	1%
	B3. For Sanitation Schemes	0.1	1.1	2.3	2.3	1.8	1.4	**9.1**	1%
	Total - Technical Assistance	**0.2**	**10.8**	**25.3**	**31.1**	**31.4**	**16.1**	**115.0**	**11%**
C	**Infrastructure Development**								
	C1. Intra-GP RWS Schemes	0.0	64.8	142.0	168.9	172.7	76.3	**624.7**	61%
	C2. Multi-GP Schemes Rehabilitation & Modernisation	0.0	22.3	26.9	18.4	19.3	8.1	**95.1**	9%
	C3. Sanitation Schemes	0.0	9.9	19.5	19.3	13.6	11.3	**73.6**	7%
	Total - Infrastructure Development	**0.0**	**97.0**	**188.4**	**206.6**	**205.7**	**95.7**	**793.4**	**78%**
	TOTAL PROGRAMME	**4.9**	**127.0**	**235.6**	**263.3**	**259.6**	**132.1**	**1,022.3**	**100%**
	Percentage	**0%**	**12%**	**23%**	**26%**	**25%**	**13%**	**100%**	

Table 4: JALANIDHI-II - MAIN COMPONENTS AND SUB-COMPONENTS - With Price Escalation and Physical Contingency									
									(Amount in USD million)
	Main Components	**1st year**	**2nd year**	**3rd year**	**4th year**	**5th year**	**6th Year**	**Total**	**% to Total**
A	**Institution Building**								
	A1. Project Management	0.8	1.9	3.2	4.5	4.9	4.6	**19.9**	8%
	A2. Capacity Building	0.2	0.3	0.5	0.5	0.5	0.3	**2.4**	1%
	A3. Sector development programmes	0.0	2.1	1.4	1.0	0.0	0.0	**4.6**	2%
	Total - Institution Building	**1.0**	**4.3**	**5.0**	**6.0**	**5.4**	**5.0**	**26.8**	**11%**
B	**Technical Assistance to Implementing Agencies**								
	B1. For Intra GP RWS Schemes	0.0	2.2	5.1	6.4	6.7	3.4	**23.7**	10%
	B2. For Multi GP Scheme Rehabilitation & Modernisation	0.0	0.0	0.2	0.4	0.4	0.2	**1.3**	1%
	B3. For Sanitation Schemes	0.0	0.3	0.5	0.5	0.4	0.3	**2.1**	1%
	Total - Technical Assistance	**0.0**	**2.4**	**5.8**	**7.3**	**7.6**	**4.0**	**27.2**	**11%**
C	**Infrastructure Development**								
	C1. Intra-GP RWS Schemes	0.0	14.6	32.8	39.9	41.6	18.8	**147.6**	61%
	C2. Multi-GP Schemes Rehabilitation & Modernisation	0.0	5.0	6.2	4.3	4.7	2.0	**22.2**	9%
	C3. Sanitation Schemes	0.0	2.2	4.5	4.5	3.3	2.8	**17.3**	7%
	Total - Infrastructure Development	**0.0**	**21.9**	**43.5**	**48.8**	**49.6**	**23.5**	**187.2**	**78%**
	TOTAL PROGRAMME	**1.1**	**28.7**	**54.3**	**62.1**	**62.5**	**32.5**	**241.2**	**100%**
	Percentage	**0.8**	**1.9**	**3.2**	**4.5**	**4.9**	**4.6**	**19.9**	**8%**

Table 5A: JALANIDHI-II - MAIN COMPONENTS AND SUB-COMPONENTS - Base Costs + Physical Contingency									
									(Amount in USD million)
	Main Components	**1st year**	**2nd year**	**3rd year**	**4th year**	**5th year**	**6th Year**	**Total**	**% to Total**
A	**Institution Building**								
	A1. Project Management	0.8	1.8	2.9	3.8	4.0	3.6	**16.8**	8%
	A2. Capacity Building	0.2	0.3	0.4	0.5	0.4	0.2	**2.1**	1%
	A3. Sector development programmes	0.0	2.0	1.2	0.9	0.0	0.0	**4.2**	2%
	Total - Institution Building	**1.0**	**4.1**	**4.5**	**5.1**	**4.4**	**3.9**	**23.1**	**11%**
B	**Technical Assistance to Implementing Agencies**								
	B1. For Intra GP RWS Schemes	0.0	2.0	4.6	5.5	5.4	2.7	**20.2**	10%
	B2. For Multi GP Scheme Rehabilitation & Modernisation	0.0	0.0	0.2	0.3	0.4	0.1	**1.1**	1%
	B3. For Sanitation Schemes	0.0	0.2	0.5	0.5	0.4	0.3	**1.8**	1%
	Total - Technical Assistance	**0.0**	**2.3**	**5.2**	**6.3**	**6.2**	**3.1**	**23.1**	**11%**
C	**Infrastructure Development**								
	C1. Intra-GP RWS Schemes	0.0	13.8	29.4	34.1	33.9	14.5	**125.7**	60%
	C2. Multi-GP Schemes Rehabilitation & Modernisation	0.0	4.8	5.8	3.9	4.1	1.7	**20.3**	10%
	C3. Sanitation Schemes	0.0	2.1	4.2	4.1	2.9	2.4	**15.7**	8%
	Total - Infrastructure Development	**0.0**	**20.7**	**39.3**	**42.1**	**40.9**	**18.7**	**161.7**	**78%**
	TOTAL PROGRAMME	**1.1**	**27.1**	**49.1**	**53.6**	**51.5**	**25.6**	**207.9**	**100%**
	Percentage	**1%**	**13%**	**24%**	**26%**	**25%**	**12%**	**100%**	

Table 5B: JALANIDHI-II - MAIN COMPONENTS AND SUB-COMPONENTS - Base Costs									
									(Amount in USD million)
	Main Components	**1st year**	**2nd year**	**3rd year**	**4th year**	**5th year**	**6th Year**	**Total**	**% to Total**
A	**Institution Building**								
	A1. Project Management	0.8	1.8	2.9	3.8	4.0	3.6	**16.8**	8%
	A2. Capacity Building	0.2	0.3	0.4	0.5	0.4	0.2	**2.1**	1%
	A3. Sector development programmes	0.0	2.0	1.2	0.9	0.0	0.0	**4.2**	2%
	Total - Institution Building	**1.0**	**4.1**	**4.5**	**5.1**	**4.4**	**3.9**	**23.1**	**12%**
B	**Technical Assistance to Implementing Agencies**								
	B1. For Intra GP RWS Schemes	0.0	2.0	4.6	5.5	5.4	2.7	**20.2**	10%
	B2. For Multi GP Scheme Rehabilitation & Modernisation	0.0	0.0	0.2	0.3	0.4	0.1	**1.1**	1%
	B3. For Sanitation Schemes	0.0	0.2	0.5	0.5	0.4	0.3	**1.8**	1%
	Total - Technical Assistance	**0.0**	**2.3**	**5.2**	**6.3**	**6.2**	**3.1**	**23.1**	**12%**
C	**Infrastructure Development**								
	C1. Intra-GP RWS Schemes	0.0	13.1	28.0	32.4	32.3	13.8	**119.7**	60%
	C2. Multi-GP Schemes Rehabilitation & Modernisation	0.0	4.5	5.3	3.5	3.6	1.5	**18.5**	9%
	C3. Sanitation Schemes	0.0	2.0	3.8	3.7	2.5	2.1	**14.1**	7%
	Total - Infrastructure Development	**0.0**	**19.7**	**37.1**	**39.7**	**38.4**	**17.4**	**152.3**	**77%**
	TOTAL PROGRAMME	**1.1**	**26.0**	**46.9**	**51.1**	**49.0**	**24.3**	**198.4**	**100%**
	Percentage	**1%**	**13%**	**24%**	**26%**	**25%**	**12%**	**100%**	

Table 6: FINANCING SHARES AND FUNDING AMOUNT																		
	Main Components	**Stakeholder Sharing**					**Total Cost incl. Pri & Phy** *(INR crore)*	**Stakeholder Sharing**					**Total Cost incl. Pri & Phy** *(USD million)*	**Stakeholder Sharing**					**% of Total**
		Bank	**GOK**	**GP**	**BG**	**Total**		**Bank**	**GOK**	**GP**	**BG**	**Total**		**Bank**	**GOK**	**GP**	**BG**	**Total**	
A	**Institution Building**																		
	A1. Project Management	90	10	0	0	100	**83.9**	75.5	8.4	-	-	83.9	**19.9**	17.9	2.0		-	19.9	8.2%
	A2. Capacity Building	90	10	0	0	100	**10.2**	9.2	1.0	-	-	10.2	**2.4**	2.2	0.2		-	2.4	1.0%
	A3. Sector development programmes	90	10	0	0	100	**19.9**	17.9	2.0	-	-	19.9	**4.6**	4.1	0.5		-	4.6	1.9%
	Total - Institution Building	90%	10%	0%	0%	100%	**114.0**	102.6	11.4	-	-	114.0	**26.8**	24.1	2.7		-	26.8	11.1%
B	**Technical Assistance to Implementing Agencies**																		
	B1. For Intra GP RWS Schemes	90	10	0	0	100	**100.4**	90.3	10.0	-	-	100.4	**23.7**	21.4	2.4		-	23.7	9.8%
	B2. For Multi GP Scheme Rehabilitation & Modernisation	90	10	0	0	100	**5.5**	4.9	0.5	-	-	5.5	**1.3**	1.2	0.1		-	1.3	0.5%
	B3. For Sanitation Schemes	90	10	0	0	100	**9.1**	8.2	0.9	-	-	9.1	**2.1**	1.9	0.2		-	2.1	0.9%
	Total - Technical Assistance	90%	10%	0%	0%	100%	**115.0**	103.5	11.5	-	-	115.0	**27.2**	24.5	2.7		-	27.2	11.2%
C	**Infrastructure Development**																		
	C1. Intra GP RWS Schemes					0	**557.6**						**131.8**						
	GWR	57	23	20	0	100	**68.8**	39.2	15.8	13.8	-	68.8	**16.3**	9.3	3.8	3.3	-	16.3	6.7%
	All other schemes	54	23	15	8	100	**488.8**	263.9	112.4	73.3	39.1	488.8	**115.5**	62.4	26.6	17.3	9.2	115.5	47.8%
	Tribal Development Schemes						**67.1**						**15.8**						
	GWR	57	23	20	0	100	**8.1**	4.6	1.9	1.6	-	8.1	**1.9**	1.1	0.4	0.4	-	1.9	0.8%
	Sanitation	69	10	18	3	100	**0.0**	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0%
	WSS	57	23	15	5	100	**59.1**	33.7	13.6	8.9	3.0	59.1	**13.9**	7.9	3.2	2.1	0.7	13.9	5.8%

Table 6: FINANCING SHARES AND FUNDING AMOUNT																		
	Main Components	**Stakeholder Sharing**					**Total Cost incl. Pri & Phy** *(INR crore)*	**Stakeholder Sharing**					**Total Cost incl. Pri & Phy** *(USD million)*	**Stakeholder Sharing**					**% of Total**
		Bank	**GOK**	**GP**	**BG**	**Total**		**Bank**	**GOK**	**GP**	**BG**	**Total**		**Bank**	**GOK**	**GP**	**BG**	**Total**	
	C2. Multi GP Schemes Rehabilitation & Modernisation						**95.1**						**22.2**						
	Bulk	77	23			100	**34.1**	26.3	7.8	-	-	34.1	**7.8**	6.0	1.8	-	-	7.8	3.3%
	Distribution	54	23	15	8	100	**28.2**	15.2	6.5	4.2	2.3	28.2	**6.7**	3.6	1.5	1.0	0.5	6.7	2.8%
	New WSS	54	23	15	8	100	**28.2**	15.2	6.5	4.2	2.3	28.2	**6.7**	3.6	1.5	1.0	0.5	6.7	2.8%
	Reduction of non-revenue water	77	23	0	0	100	**4.6**	3.5	1.1	-	-	4.6	**1.0**	0.8	0.2	-	-	1.0	0.4%
	C3. Sanitation Schemes	69	10	18	3	100	**73.6**	50.8	7.4	13.2	2.2	73.6	**17.3**	12.0	1.7	3.1	0.5	17.3	7.2%
	Total - Infrastructure Development	57%	22%	15%	6%	100%	**793.4**	452.4	172.9	119.3	48.8	793.4	**187.2**	106.7	40.8	28.2	11.5	187.2	77.6%
	TOTAL PROGRAMME	64%	19%	12%	5%	100%	**1,022.3**	658.5	195.8	119.3	48.8	1,022.3	**241.2**	155.3	46.2	28.2	11.5	241.2	100%
	Percentage							64%	19%	12%	5%	100%		64%	19%	12%	5%	100%	
Note: BG share will be 10% of capital cost, but will be equivalent to 8% due to aggregating BG share for SC/ST/Fisherman schemes, where BG share is 5%													4.3						

Table 7A: Project Financing by Component								
Main Components		*(in INR crore)*						
		1st year	**2nd year**	**3rd year**	**4th year**	**5th year**	**6th year**	**Total**
Institution Building	Bank	4.2	17.3	19.7	23.0	20.2	18.3	102.6
	GOK	0.5	1.9	2.2	2.6	2.2	2.0	11.4
	GP	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	BG	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total	**4.7**	**19.2**	**21.9**	**25.5**	**22.4**	**20.3**	**114.0**
Technical Assistance to Implementing Agencies	Bank	0.1	9.7	22.8	28.0	28.3	14.5	103.5
	GOK	0.0	1.1	2.5	3.1	3.1	1.6	11.5
	GP	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	BG	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total	**0.2**	**10.8**	**25.3**	**31.1**	**31.4**	**16.1**	**115.0**
Infrastructure Development	Bank	0.0	55.3	107.4	117.8	117.3	54.6	452.4
	GOK	0.0	21.1	41.1	45.0	44.8	20.9	172.9
	GP	0.0	14.6	28.3	31.1	30.9	14.4	119.3
	BG	0.0	6.0	11.6	12.7	12.6	5.9	48.8
	Total	**0.0**	**97.0**	**188.4**	**206.6**	**205.7**	**95.7**	**793.4**
Total Financing	Bank	4.4	82.3	149.9	168.8	165.8	87.3	658.5
	GOK	0.5	24.1	45.8	50.7	50.2	24.5	195.8
	GP	0.0	14.6	28.3	31.1	30.9	14.4	119.3
	BG	0.0	6.0	11.6	12.7	12.6	5.9	48.8
	Total	**4.9**	**127.0**	**235.6**	**263.3**	**259.6**	**132.1**	**1,022.3**

Table 7B: Project Financing By Component								
Main Components		*(in USD million)*						
		1st year	**2nd year**	**3rd year**	**4th year**	**5th year**	**6th year**	**Total**
Institution Building	Bank	0.9	3.9	4.5	5.4	4.9	4.5	24.1
	GOK	0.1	0.4	0.5	0.6	0.5	0.5	2.7
	GP	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	BG	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total	**1.0**	**4.3**	**5.0**	**6.0**	**5.4**	**5.0**	**26.8**
Technical Assistance to Implementing Agencies	Bank	0.0	2.2	5.3	6.6	6.8	3.6	24.5
	GOK	0.0	0.2	0.6	0.7	0.8	0.4	2.7
	GP	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	BG	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total	**0.0**	**2.4**	**5.8**	**7.3**	**7.6**	**4.0**	**27.2**
Infrastructure Development	Bank	0.0	12.5	24.8	27.8	28.3	13.4	106.8
	GOK	0.0	4.8	9.5	10.6	10.8	5.1	40.8
	GP	0.0	3.3	6.5	7.3	7.5	3.5	28.1
	BG	0.0	1.3	2.7	3.0	3.0	1.4	11.5
	Total	**0.0**	**21.9**	**43.5**	**48.8**	**49.6**	**23.5**	**187.2**
Total Financing	Bank	1.0	18.6	34.6	39.8	40.0	21.5	155.4
	GOK	0.1	5.5	10.6	12.0	12.1	6.0	46.2
	GP	0.0	3.3	6.5	7.3	7.5	3.5	28.1
	BG	0.0	1.3	2.7	3.0	3.0	1.4	11.5
	Total	**1.1**	**28.7**	**54.3**	**62.1**	**62.5**	**32.5**	**241.2**

Table 8 - Project Cost By Component and/or Activity	
	USD million
Institution Building	23.1
Technical Assistance to Implementing Agencies	23.1
Infrastructure Development	152.3
Total Baseline Cost	198.4
Price Contingencies	9.4
Physical Contingencies	33.4
Total Project Costs	**241.2**
Interest during construction	0
Front-end Fee	0
Total Financing Required	241.2

TABLE 9: Summary Tables

TABLE 9A: Programme Size -With Price Variation & Physical Contingencies		
Main Components	**Total Amount**	
	INR crore	USD million
Institution Building	114.0	26.8
Technical Assistance to Implementing Agencies	115.0	27.2
Infrastructure Development	793.4	187.2
Total	**1,022.3**	**241.2**

TABLE 9B: Programme Size - Base Cost		
Main Components	**Total Amount**	
	INR crore	USD million
Institution Building	98	23
Technical Assistance to Implementing Agencies	98	23
Infrastructure Development	646	152
Total	**842**	**198**

TABLE 9C: Programme Size - With Physical Contingency		
Main Components	**Total Amount**	
	INR crore	USD million
Institution Building	98	23
Technical Assistance to Implementing Agencies	98	23
Infrastructure Development	679	162
Total	**875**	**208**

TABLE 9D: Programme Size		
Main Components	**Total Amount**	
	INR crore	USD million
Institution Building	98	23
Technical Assistance to Implementing Agencies	98	23
Infrastructure Development	646	152
Base Cost	**842**	**198**
Physical Contingency	32	9
Base Cost + Physical Contingency	**875**	**208**
Price Contingency	148	33
Total Cost	**1,022**	**241**

TABLE 9E: Financing Shares in Total Investments			
Source	**Amount** INR crore	**% share**	**Annual** INR crore
Govt of Kerala	196	19%	**33**
World Bank	658	64%	**110**
Grama Panchayat	119	12%	**20**
Beneficiary Group	49	5%	**8**
Total	**1,022**	**100%**	**170**

TABLE 9F: Financing Shares in Total Investments			
Source	**Amount** USD million	**% share**	**Annual** USD million
Govt of Kerala	46	19%	**8**
World Bank	155	64%	**26**
Grama Panchayat	28	12%	**5**
Beneficiary Group	12	5%	**2**
Total	**241**	**100%**	**40**

TABLE 9G: Year-wise Financing - Total Investments							
							INR crore
Source	**2011-12**	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**Total**
Govt of Kerala	0	24	46	51	50	24	**196**
World Bank	4	82	150	169	166	87	**658**
Grama Panchayat	0	15	28	31	31	14	**119**
Beneficiary Group	0	6	12	13	13	6	**49**
Total	**5**	**127**	**236**	**263**	**260**	**132**	**1,022**

TABLE 9H: Year-wise Financing - Total Investments							
							USD million
Source	**2011-12**	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**Total**
Govt of Kerala	0	5	11	12	12	6	**46**
World Bank	1	19	35	40	40	21	**155**
Grama Panchayat	0	3	7	7	7	4	**28**
Beneficiary Group	0	1	3	3	3	1	**12**
Total	**1**	**29**	**54**	**62**	**63**	**32**	**241**

Appendix 3: Selection of Supporting Organisation

The project proposes to enlist the services of SOs towards providing community development, technical and financial support services to the benefiting communities and GPs. SOs are one of four key actors (the other three being KRWSA, GP, benefiting community) as they will have to work throughout the scheme cycle. The designated functions of SOs include: creating awareness among and mobilizing benefiting communities for group action, enabling beneficiary groups in the preparation and implementation of CEPs comprises nine modules that involve: community mobilisation; detailed scheme-wise technical reports; community contribution mobilisation plan; O&M plan; women's development initiatives; Sanitation Hygiene Promotion (SHP); take-over, rehabilitating and O&M of existing KWA schemes; capacity building plans; implementation schedule; community monitoring; mutual obligations and responsibilities, conducting and/or facilitating in building capacity, and the liaison activities between the GP and other agencies. Support Orgnaisation will be recruited by the GPs to assist the GPs, and BGs during the planning and implementation of the project activities and providing a brief post-implementation support to BGs in stabilizing scheme operations. These SOs could be NGOs; Government supported SOs like SEUF and CBOs like Kudumbashree; a consulting engineering firm, or KWA (as technical support provider).

PILOT BATCH

It is proposed to empanel the SOs from among those associated with Phase I Jalanidhi Project who had enough experience being pilot intervention.. There are 51 NGOs associated with Jalanidhi first phase Project and shortlist of SOs prepared on exclusion criteria.

Those SOs terminated from the GP due to poor performance

SOs not recommended for other bathes due to poor performance

The shortlist thus prepared will be further screened based on the report of the District Administration

Field verification of the officers in KRWSA.

The final shortlist will be evaluated by a committee comprising the ED, DFA, DOP, DT, DHRD, Con(M&E)

SECOND BATCH ONWARDS

It is proposed to follow the same SO selection criteria followed in the First Phase of Jalanidhi and is as given below:

Eligibility Criteria
The eligibility criteria for NGOs as SOs to participate in the project are:
A legal entity: registered body under applicable state law; registration must have been made at least three years prior to the date of enlistment for each batch. Should have an organisational mandate to participate in water supply and sanitation project.
A secular organisation with no affiliation to political parties.
An independent governing body with no political/government representation. An organisation becomes eligible so long as it has no representation from project administering department (WRD).

Non-government entity. Sources of income should be either owned funds or fees related to specific activity or services and devoid of government grants. No organisation that receives (or has received in the past three years) government grants for meeting non-project tied recurring expenses will be eligible for inclusion. Similarly, staff should have been hired exclusively from the non-government sector. No organisation which has employees seconded by the government will be eligible for inclusion.
Functioning for a period of minimum of three years, at least in the state as evident by on-going activities.
A successful/proven record of intermediation services--mobilizing rural communities for group action; working with women, the landless, SCs, tribals, or other less endowed groups; and engaging in RWSS is desirable.
Staff composition should be either already endowed or be in a position to deploy appropriate staff (at least a third of should be women). Staff must know the local language.
A good record of bookkeeping as evident by audited statement of accounts at least for the last three years.
Free from litigation

Review and short-listing procedures

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

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

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

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

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

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

The selection criteria is shown below as Table 1

Table I

1. Capability to reach out and work with communities, in the spheres of: --Water supply and sanitation -- Community Civil Engineering works --Community Development --in working with Women/SHGs --in working with SCs and poor --in working with STs --in working with Gram Panchayats	Marks (100) (45) 10 10 5 5 5 5 5
2. Experience of working with government (state, center), bilateral and multilateral and international agencies	(10) 10
3. General Management/ Skills --Female/Male staff ratio -- Engineering staff --Permanent/Temporary staff ratio --FCRA permission --Geographical orientation --PRA/SARAR	(35) 10 5 5 5 5 5
4. Financial Management Overheads as % of total expenditure (The lower the ratio higher the score)	(10) 10

Appendix 4: Functions of Key Officers in Project Management Units

A. Officers in the Project Management Unit

Deputy Executive Director

1. Under the overall direction of the Executive Director, oversee all aspects of Project implementation.
2. Manage and advise the Executive Director on all operational aspects of the Project.
3. Guide, manage and monitor Project implementation activities of all components.
4. Oversee functional Directors such that they accomplish tasks in time.
5. Create a motivating and encouraging work environment in the PMU.
6. Be responsible for establishment matters in the PMU, RPMUs and GPST.
7. Make staff appointments according to the approved staff pattern of the Agency.
8. Ensure timely filling up of vacancies, transfers and postings, for optimal manpower utilisation.
9. Be responsible for benefit administration, employee welfare, leave, tour and other allowances that are due to the staff.
10. On behalf of the Executive Director, manage all staff consultancy contracts to get desired output.
11. Undertake staff performance appraisal, with the help of functional Directors.
12. Oversee the timely conduct of meetings of the General Body and the Governing Council.
13. Prepare amendments to MOA and by-law during Project implementation.
14. Act as Chief Information Officer on behalf of the Agency.
15. Manage litigation issues.
16. Serve as liaison officer, and liaise with government departments such as Water Resources, Local Self-Government, Revenue, Forest, Health, and KSEB.
17. Take appropriate financial decisions within the specified financial powers.
18. Manage state level contracts and consultancies on behalf of the Executive Director.
19. Conduct state-level review meetings if the Executive Director is absent.
20. Attend state and national Project review meetings conducted by GoK, GoI and the World Bank.
21. Liaise with the World Bank to get clearances.
22. Oversee reports sent to the World Bank by functional Directors.
23. During World Bank missions, arrange timely meetings with various secretaries, and brief them about meetings.
24. Interact with the KWA and Suchitwa Mission regarding Project implementation and ensure timely support of these agencies to GPs.

25. Develop and maintain strong relationships with key government agencies, policy-makers, and individual shapers of opinion, to ensure a conducive environment for Project implementation.
26. Provide leadership in the preparation of proposals, vetting proposals, and overseeing the budgeting process.
27. Within the delegated authority of the Deputy Eexcutive Director, approve proposals put up by functional Directors for effective Project implementation.
28. Oversee timely procurement in the Agency.
29. Conduct random field visits to support and facilitate Project implementation.
30. To complete the Project, intervene in time to regulate and coordinate the activities of various stakeholders.
31. Manage strategic media relations and coordinate the release of monthly news bulletin on Jalanidhi.
32. Oversee the timely updation of the Agency website and peruse the contents uploaded on the website.
33. Prepare media notes regarding Project implementation and circulate them among state, national and international media agencies.
34. Prepare press briefings for Hon. Minister, Chairman and Executive Director.
35. Develop proposals for effective convergence and scientific use of advanced media applications and implement them efficiently.
36. Attend state-level meetings as authorised by the Executive Director, and in the absence of the Executive Director.
37. Act as resource person for training programmes conducted by the Agency.
38. Any other duties assigned by the Executive Director from time to time.

Deputy Director (Administration)

1. Assist the Deputy Executive Director in all administrative matters and other establishment matters pertaining to the entire staff of the Project.
2. Assist the Executive Director and Deputy Executive Director in staff review committee meetings, Governing Council meetings and General Body meetings.
3. Prepare agenda notes pertaining to administrative items of Governing Council meetings, and compile agenda notes received from other units.
4. Assist in preparing amendments, if any, to the MOA and rules of the Agency.
5. Assist in timely furnishing of information relating to Assembly interpellations.
6. Provide general support to the smooth functioning of the PMU.
7. Maintain staff cars and on requisition, manage vehicles of officers and staff for discharge of official duties.
8. Assign duties to Class IV employees and security personnel during holidays and other special occasions, as required for the functioning of the PMU.
9. Act as resource person for training conducted by the Agency.
10. Be in-charge of inward and dispatch sections.
11. Any other duties assigned by the Deputy Executive Director or the Executive Director.

Database and System Administrator

1. Be in-charge of all computers and audio-visual equipment of the Agency.
2. Consolidate FMIS and MIS databases, and generate reports that are required for reporting by (or to??) various departments.
3. Receive, process and update FMIS and MIS data in the PMU.
4. Attend to all issues relating to FMIS and MIS programs, and related databases, in RPMUs.
5. Develop new FMIS reports and modules as per logistic guidelines given by the Deputy Executive Director.
6. Act as programmer in developing and testing appropriate programs and software that are required for the Project from time to time.
7. Manage servers and the computer network in the PMU, and attend to trouble shooting of the same.
8. Upgrade in-house software, protect the system from viruses, and attend to system and software complaints.
9. Manage custody of all electronic equipment and software.
10. Maintain the LAN connection in the PMU and RPMUs.
11. Serve as technical advisor for procurement of computers and peripherals in the Agency.
12. Maintain the KRWSA website, with support from the communication strategist, Deputy Executive Director, and Director (Monitoring and Evaluation) and other departments.
13. Act as resource person for the training programmes conducted by the Agency.
14. Liaise with various government agencies and other agencies on matters relating to information system management.
15. Any other duties assigned from time to time by functional Directors, the Deputy Executive Director or the Executive Director.

Communication Strategist

1. Design, implement and evaluate public communication campaigns on Project components.
2. Develop communication and publicity materials according to the needs of communities.
3. Design, and buy time and space for advertisements released by the Agency.
4. Research, script, and direct, video and radio programmes produced by the Agency.
5. Identify needs (pre-campaign), evaluate the effect of campaigns and IEC materials developed, and prepare concept and approach papers to revamp IEC materials.
6. Identify needs and opportunities for influencing key actors in Kerala and develop advocacy strategy for the Jalanidhi programme in Kerala.
7. Work with functional Directors, the Deputy Executive Director, and the Executive Director on developing advocacy positions on select priority issues identified by the Agency.

8. Cultivate, develop and maintain contacts with mediapersons, others who shape opinion, and decision-makers.
9. Provide regular information updates to key stakeholders inside the Agency, in the form of paper cuttings and newsletters, and respond to requests for specific information from the stakeholders.
10. Pro-actively respond to opportunities, requests for human-interest stories, and prepare documents to illustrate the work of the Agency.
11. Engage with mass media to raise the profile of Jalanidhi programme at the state and national levels.
12. Identify key messages and media for influencing international audience and donors, on development and humanitarian issues.
13. Act as resource person for training programmes conducted by the Agency.
14. Act as an official spokesperson on behalf of the Project, as directed by the Deputy Executive Director.
15. Any other duty assigned by the Deputy Executive Director or the Executive Director.

Senior Clerk-cum-Cashier

1. Handle all correspondence in the administration department.
2. Maintain manual cash book of the PMU.
3. Maintain custody of cash, cheques and pass books of the PMU.
4. Prepare daily cash vouchers and bank vouchers.
5. Disburse cash and cheques under proper orders.
6. Deal with files pertaining to payment of rent, and other utility charges (telephone, electricity, water, etc)
7. Deal with all files pertaining to official and personal claims.
8. Any other work assigned by the Deputy Executive Director.

Operations Department

Director (Operations)

1. Manage and advise all operational aspects of the Project.
2. Guide, manage and monitor the implementation activities of all components of the Project.
3. Report to the Executive Director, day-to-day progress and issues in Project implementation.
4. Ensure that Project partners and stakeholders fulfill Project implementation responsibilities in time, sincerely and ethically.
5. Take the lead in coordinating the Project, to achieve the desired goals.
6. Manage and coordinate Project review meetings at state, district and GP levels.
7. Manage regional- and district-level Project Management Units, and correspond with them on all operational aspects of the Project.

8. Liaise with GoK, GoI and the World Bank, on issues related to Project operations.
9. Monitor all contracts with GPs, SOs, and GPATs, and other agencies (like the KWA and the Kerala State Electricity Board) and departments, in operationalising the Project.
10. Coordinate and manage the selection of GPs and support systems, and placement.
11. Ensure that GPs have selected the support system according to the Project's selection norms, and that essential contracts are in place.
12. Advise GPs on selecting GP-level resource teams—with specific skills, qualifications and experience—to facilitate time-bound implementation of the Project.
13. Work closely with Project stakeholders, and solve in coordination with other departments, any operational problem that may arise during Project implementation.
14. Timely address any operational problems with Project stakeholders.
15. Report timely the requirements of Constitutional bodies.
16. Ensure that Project implementation is in accordance with the Project's philosophy, principles, guidelines and rules.
17. Facilitate stakeholder innovation and efficiencies in project management.
18. Visit Project sites regularly, and inspect Project sites.
19. Initiate disciplinary action with legal backup against GPs or service agencies, if any irregularities are found in Project implementation.
20. All operational duties or any other duties delegated by the Executive Director.

Deputy Director (Operations)

1. Support and facilitate the operational aspects of Project implementation.
2. Support and help the Director (Operations) in achieving desired objectives and targets in the implementation of Project components, in time.
3. Guide and monitor GPs, SOs, and GPATs in the implementation of the Project.
4. Perform all operational duties assigned from time to time, by the Director (Operations) or the Executive Director.
5. Attend all review meetings of stakeholders.
6. Ensure timely action on decisions taken in periodic review meetings.
7. In the absence of the Director (Operations), manage all operational duties.
8. Ensure timely preparation of minutes of various review meetings, and their timely communication to the concerned stakeholders.
9. Act as resource person for training programmes conducted by the Agency.
10. Any other duties assigned by the Director (Operations), the Deputy Executive Director or the Executive Director.

Deputy Director (Vigilance and Panchayat)

1. Coordinate and liaise with GPs for smooth functioning of the Project.

2. Resolve conflicts arising during Project implementation.
3. Ensure timely updating of Project implementation guidelines and government guidelines with respect to GPs.
4. Ensure full involvement and support of GPs during Project implementation.
5. Issue necessary guidelines for GP-level activities.
6. Ensure timely training for GPs in Project implementation.
7. Ensure timely fund transfer from GPs to BGs.
8. Ensure timely approval of DPRs in DPCs.
9. At random, inspect the quality of works implemented by GPs.
10. Conduct review meetings for GP-level activities.
11. Identify and investigate misappropriation of materials purchased by GPs and BGs.
12. Identify and investigate irregularities, fraudulent acts, and dereliction of duties.
13. Investigate charges of misconduct, misuse, corruption, etc. against GPSTs, GPs, GPATs, and SOs.
14. Act as resource person for training programmes conducted by the Agency.
15. Any other duties assigned from time to time by the Director (Operations), the Deputy Executive Director or the Executive Director.

Deputy Manager (Operations)

1. Perform all duties relevant to Project operations, assigned from time to time by the Director (Operations) or the Manager (Operations).
2. Support and help the Director (Operations) and Manager (Operations), in accomplishing objectives and targets in the implementation of Project components.
3. Record the minutes of periodic review meetings.
4. Maintain custody of important agreements and contracts relating to operational aspects of Project implementation.
5. Prepare and update reports required for Project authorities and other departments in the Project Management Unit.
6. Act as resource person for training programmes conducted by the Agency.
7. Other duties relating to implementation of the Project, assigned from time to time, by the Director, the Deputy Executive Director or the Executive Director.

Engineering Department

Director (Technical)

1. Advise on all engineering aspects of water supply, ground water recharge and sanitation, in Project implementation.
2. Develop technical guidelines and design criteria, for water supply and drainage schemes.
3. Ensure quality control of all engineering construction in Project implementation.

4. Guide the proper conduct of engineering surveys, technical feasibility studies, and preparation of DSR for community-based water supply schemes.
5. Ensure all technical sanctions required for Project implementation.
6. Provide guidance in technology selection by user communities, and ensure that the communities are provided technology options (with capital and O&M cost implications, and sustainability of sources).
7. Guide and supervise all engineering aspects of the works done by user communities, service agencies and GPs.
8. Ensure that community contracting guidelines are followed in Project implementation, with respect to quality of goods, works and services procured, and storage and use of materials.
9. Monitor engineering aspects of contracts with GPs, service agencies (such as CQM), SOs, BGs and BCs.
10. Develop and implement a water quality monitoring system with community participation.
11. Assume overall responsibility for implementing rain water harvesting and ground water recharge activities.
12. Issue guidelines for planning, implementation and post-implementation of water supply schemes, environmental management plans, sanitation, drainage, etc. based on general guidelines and norms as per Project Appraisal Document.
13. Facilitate and coordinate all technical studies required for Project implementation.
14. Liaise and coordinate with the KWA and other sector institutions.
15. Act as resource person for training programmes conducted by the Agency.
16. Prepare timely technical reports that are required for Project implementation.
17. Approve and sanction extra items and excess quantities as reported, as per delegation.
18. Other duties relevant to engineering in Project implementation, delegated by the Deputy Executive Director or the Executive Director.

Deputy Director (Technical)

1. Support and help the Director (Technical) in accomplishing objectives and targets in the implementation of Project components.
2. Assist the Director (Technical) in checking DSRs small and large surface-based water supply schemes.
3. In the planning phase of water supply schemes, supervise in the field.
4. Every week, monitor the progress in implementing water supply schemes.
5. Supervise and monitor consultants during planning, bidding and construction stages.
6. Check bid documents and guide consultants and SOs.
7. Liaise with BGs and SLCs in preparing DSRs and bid documents, and in their approval.
8. Manage contract agreements under National Shopping or National Competitive Bidding, on large surface-based water supply schemes.

9. Convene and attend management meetings for large surface-based water supply schemes.
10. Ensure overall quality of works, including super checking.
11. Check contractors' bills at random.
12. Ensure preparation of completion reports in implementation of project components.
13. Act as resource person for training programmes conducted by the Agency.
14. Ensure smooth and successful commissioning of schemes.
15. Any other works entrusted by the Director (Technical), the Deputy Executive Director or the Executive Director.

Deputy Director (Environment)

1. Develop appropriate partnership programmes required for sector improvement and overall sector management efficiency.
2. Oversee all partnership programmes framed and incorporated in the Project, and ensure they are implemented in accordance with partnership guidelines and MOUs signed between sector partners.
3. Work closely with the Project implementation mechanism institutionalised by the KWA for the partnership programme, and monitor programme implementation as per Project guidelines.
4. Identify issues emerging during implementation and sort them out with the support of the Director (Technical).
5. Identify broader issues and problems that prevent the progress of Project implementation, and take up issues to higher level bodies to resolve them amicably.
6. Support and help the Director (Technical) accomplish Project tasks and targets in the partnership programme.
7. Assist the Director (Technical) in checking the detailed scheme reports prepared by the KWA for sharing responsibilities in implementation.
8. Supervise and monitor consultants during planning, bidding and construction stage.
9. Ensure that all activities for preparation of environmental management plans, sanitation, drainage, etc. based on guidelines issued are implemented.
10. Assist Director (Technical) for the implementation of the EMF.
11. Clear sources, based on water quality test reports submitted by SOs or GPATs, through RPMUs.
12. Coordinate water quality monitoring and surveillance.
13. Arrange to conduct tests for water quality, as and where necessary.
14. Coordinate activities on drainage (planning, design and implementation)
15. Check BG CEPs and GP plans and suggest modifications.
16. Try to develop appropriate disinfection measures.
17. Conduct field inspection, evaluate field activities on water quality monitoring, environmental management plans and drainage, and report to the Director (Technical).

18. Assist the Director (Technical) in updating technical manual, especially on environment management and drainage.
19. Manage research and development (R&D) activities on sectoral issues, alternative delivery systems in water supply, environmental sanitation, water quality, environmental impact assessment and related issues.
20. Disseminate and transfer R&D outputs to the field.
21. Support sanitation hygiene promotion and awareness campaign, and field implementation of Project components, in coordination with the Media/IEC Specialist.
22. Develop management information system on water quality by engaging a consultant or making other institutional arrangements
23. Manage contracts and liaise with consultants employed for specific studies in environment, water supply and related issues.
24. Develop community-managed water quality monitoring system.
25. Any other duties relevant to the Project, assigned from time to time, by the Director (Technical), the Deputy Executive Director, or the Executive Director.

Deputy Director (Water Conservation)

1. Supervise and manage all water development and hydro-geological functions of the Agency.
2. Arrange procurement of consultant for preparing comprehensive water development and water security plans of GPs. Prepare the ToR and conduct technical evaluation.
3. Guide water conservation specialists of RPMUs in preparing comprehensive water development and water security plans of GPs.
4. Provide technical and scientific inputs to water conservation specialists to conduct ground water investigations as per the Technical Manual.
5. Issue technical guidelines to water conservation specialists of RPMUs to propose appropriate ground water recharge measures for sustainability of sources.
6. Arrange water conservation specialists of RPMUs to conduct pumping test for open wells and bore wells, to arrive at the safe yield.
7. Apply knowledge of fundamental geology to develop an understanding of how rock types and soil condition structure in an area impact ground water, and give appropriate recommendations to water conservation specialists for source development.
8. Understand and interpret ground water prospect maps, geographical data, historical evidence and models, to assess ground water potential in an area, and suggest appropriate technology for the development of ground water.
9. Conduct field inspection and supervise the work of water conservation specialists. Monitor ground water development and recharge of ground water, and guide GPATs and GPs.
10. Undertake environment impact assessments of ground water abstraction and management activities.

11. Analyse collected information to assess and predict the impact of activities such as landfills, construction, mining and agriculture, on ground water quality and resource availability.
12. Liaise with hydro-geologists, hydrologists, ecologists, engineers and other professionals in related fields.
13. Ensure compliance with environmental legislation and keep up-to-date with technological and legislative developments.
14. Write reports for submission to GoK and the World Bank.
15. Answer technical queries and provide advice to water conservation specialists, RPMUs, GPs, GPATs and the public, in writing or over telephone.
16. Develop geographical information system on ground water activities by making institutional arrangements in the resource centre.
17. Disseminate and transfer research and development outputs to the field.
18. Act as resource person for training programmes conducted by the Agency.
19. Any other duties assigned by the Director (Technical), the Deputy Executive Director, or the Executive Director.

Project Engineer

1. Conduct field inspections and evaluate field activities on water quality monitoring, environmental management plans and drainage as directed by Director (Technical).
2. Assist Director (Technical) in preparing market rates.
3. Consolidate ICQS report and submit to Director (Technical) for review.
4. Assist Director (Technical) & Deputy Director (Technical) in issuing Technical Sanction.
5. Assist Director (Technical) in updating Technical Manual, especially on environment management and drainage.
6. Conduct research and development activities on sector issues, alternative delivery systems in water supply, environmental sanitation, water quality, environmental impact assessment and related issues.
7. Disseminate and transfer R&D outputs to the field.
8. Any other duties relevant to the Project, assigned from time to time, by the Director (Technical), Deputy Director (Technical), Deputy Director (Environment) or Deputy Director (Water Conservation), with respect to the implementation of the project.

Finance & Accounts Department

Director (Finance and Accounts)

1. Ensure that adequate and reliable accounting systems, and financial management procedures, are instituted for Project implementation.
2. Serve as the drawing and disbursing officer of the Project.
3. Manage the budget, supplementary grants, and surrender of savings.

4. Be responsible for managing the procurement budget and purchasing a wide range of works, goods, and consultancy services.
5. Release funds to RPMUs and other agencies for implementing activities entrusted to the KRWSA.
6. Prepare and submit reimbursement claims.
7. Undertake all statutory correspondence with GoK, GoI, and the World Bank.
8. Present agenda notes and minutes of the meetings of the Governing Council and the General Body.
9. Ensure all statutory compliance of rules pertaining to finance, accounts, administration and procurement under the Project, as well as World Bank rules pertaining to the Project.
10. Issue sanction for all Project issues within the limit of financial delegation.
11. Arrange the conduct of internal audit, review of audit replies and finalisation of audit findings.
12. Act as resource person for training programmes conducted by the Agency.
13. Any other duty assigned by the Deputy Executive Director or the Executive Director.

Deputy Director (Procurement)

1. Report to the Director (Finance and Accounts) and ensure that all Project procurement of goods and operations services is achieved according to Project deadlines.
2. Put in place policies and procedures, and oversee implementation, to ensure that all commodity procurement actions are compliant with the procurement guidelines of GOK and the World Bank.
3. Assist Director (Finance and Accounts) for purchasing a wide range of works, goods, and consultancy services, and managing the procurement budget.
4. Manage all field-initiated procurement documents, and ensure community contracting regulations. Management of procurement function includes preparing specifications and solicitation documents, managing evaluation, drafting requests for consent for the contracting officer, and overseeing vendor selection process.
5. Manage vendor relationships, contacts, and pre-qualification lists.
6. Provide inputs related to Project procurement, for financial and other reports.
7. Maintain procurement files in accordance with applicable policies and procedures.
8. Provide and interpret procurement procedures and policy guidance to Project staff.
9. Coach, mentor and train Project staff on procurement policies and procedures.
10. Manage procurement, and provide guidance and performance inputs to contracts, and RPMU managers.
11. Audit procurement.
12. Be responsible for the maintenance of systems and assets.
13. Plan, direct, and manage the central procurement activities of the KRWSA under the guidance of the Director (Finance), and the Director (Technical).

14. Develop, review, and approve new or improved procedures (administrative, purchasing and clerical) to maintain economy and efficiency of operation.
15. Approve bid proposals and specifications, compose requests for Governing Council sanction, and present recommendations on purchases requiring approval of the management or the Council.
16. Evaluate overall revisions, price and past performance of each contract and recommend price increases.
17. Liaise with purchase representatives of other public jurisdictions.
18. Supervise and participate in the preparation of financial and administrative reports.
19. Act as resource person for training programmes conducted by the Agency.
20. Any other duties assigned by the Director (Finance & Accounts), the Deputy Executive Director, or the Executive Director.

Deputy Director (Project Finance)

1. Manage and handle the financial aspects of the Project portfolio, including financial accounting, reporting, and financial analysis.
2. Oversee financial and administrative management strategies and local financial legislation and regulation, including the World Bank's financial regulations.
3. Manage the Project's banking and cash flow by supervising project activity and budget balance sheets and work plans.
4. Supply a financial blueprint for the Project, and ensure that the Project is managed effectively by maximising cost efficiencies.
5. Be responsible for budgetary decisions and planning, and remain well-versed in the technical aspects of making financial decisions.
6. Consolidate accounts of the PMU, RPMUs, GPs and BGs.
7. Manage FMIS records, Project-related issues, and correspondence with RPMUs.
8. Handle World Bank reports, claims, correspondence and liaison work.
9. Prepare an annual action plan.
10. Prepare budgets of the PMU and RPMUs.
11. Ensure proper functioning of the FMIS.
12. Monitor Project audit and internal audit.
13. Conduct internal and exit audits of GPs and BGs.
14. Facilitate and support training programmes relating to accounts.
15. Supervise the finalisation of accounts and preparation of financial statements.
16. Ensure timely completion of statutory audit, and liaise with external auditors (including AG audit).
17. Monitor timely compliance of statutory requirements.
18. Verify and recommend all payments (including pay, travel allowance, and reimbursement of medical, telephone, and newspaper claims) of all officers and staff of the PMU and RPMUs.
19. Exercise control over staff advance and ensure proper settlement.
20. Maintain the fixed assets register.
21. Prepare annual reports.

22. Assist in the daily management of office cash and supervise the maintenance of its accounts.
23. Verify bills (monthly salary and other arrears) pertaining to the officers and staff of the PMU.
24. Verify the correctness of other miscellaneous payments.
25. Act as resource person for training programmes conducted by the Agency.
26. Any other duties directed by the Director (Finance and Accounts), the Deputy Executive Director, or the Executive Director.

Deputy Manager (Accounts)

1. Prepare Project financial manuals and reports.
2. Prepare annual action plan and budget.
3. Prepare monthly financial indicators.
4. Monitor the fund positions at RPMUs, GPs and BGs.
5. Process fund release requests from the RPMUs.
6. Follow up with GoK on Project fund release.
7. Process all files relating to financial proposals, received from all departments and RPMUs.
8. Process all payment files received from all departments and RPMUs.
9. Prepare and file reimbursement claims.
10. Correspond with GoK, GoI and the World Bank.
11. Follow up with CAAA on claims lodged.
12. Issue guidelines and clarifications to RPMUs, GPs and GPATs.
13. Prepare and update audit guidelines for GPs and BGs.
14. Conduct internal audit of RPMUs.
15. Conduct exit audit of BGs and GPs – RPMU level.
16. Deduct TDS on payments.
17. File income tax return.
18. Compute TDS of staff.
19. Act as resource person for training programmes conducted by the Agency.
20. Any other duty assigned by the Deputy Director (Project Finance), or the Director (Finance and Accounts).

Human Resources Department

Director (Human Resource Development)

1. Identify, select, recruit and train suitable personnel for the effective functioning of the agency.
2. Assess and evaluate HR policies, and modify them, as may be necessary, from time to time.
3. Initiate and coordinate performance appraisal of Agency employees.
4. Advise the Project on capacity building and training programmes relating to technical, social, and financial aspects of Project implementation.

5. Prepare training plans and training calendars for Project stakeholders and coordinate their implementation utilising organisational resources (including training centre).
6. Supervise, design, prepare and produce training modules and other communication materials.
7. Identify training agencies capable of developing or improving desirable skill sets of Agency personnel, and develop a broad training plan.
8. Monitor all capacity building and training interventions of the Project (including from the point of view of continuous need assessment, adequacy of programme content, and effectiveness of methods).
9. Supervise and evaluate all training programmes conducted by the training wing.
10. Organise workshops, seminars and other interaction programmes for Project implementation.
11. Maintain systematic records of training imparted to Agency employees and track the effectiveness of such training.
12. Supervise the IEC component of Project implementation.
13. Supervise all promotion and publicity initiatives of the Agency, especially those relating to capacity building.
14. Act as resource person for training programmes conducted by the Agency.
15. Any other duty relevant to the Project, assigned by the Deputy Executive Director or the Executive Director.

Deputy Director (Training)

1. Manage all training activities of the Agency.
2. Prepare cost estimates for the annual training plan of the Agency, and submit training budget to the Director (HRD).
3. Submit training plans for various stakeholders and get approval in part or full.
4. Requisition the services of resource persons (wherever indicated in the KRWSA's training plan) from within or outside KRWSA, and conduct training.
5. Evaluate the organisation of training, with tools prescribed by the Director (HRD), and undertake content evaluation when directed by the requisitioning department or the Director (HRD).
6. Develop IT-enabled reporting and course management software to support training.
7. Develop training packages in community management of infrastructure, and social marketing. Market and provide consultancy support (to clients like local self-government institutions, centrally-sponsored projects, and non-governmental organisations) and offer cost-effective training.
8. Develop an incentive structure and compensation package to attract the best talent available in training.
9. Develop collaboration and networking amongst training organisations (like the Kerala Institute of Local Administration, the Kerala Agricultural University, the Centre for Water Resources development and Management, the Centre for Earth Science Studies, and the Integrated Rural Technology Centre) to develop cost-

effective training with assistance from GoI, CAPART, external funding agencies, and NGOs in relevant sectors.
10. Develop and administer training modules secured by the Agency as well as other agencies, while conforming to rules and guidelines issued by the Executive Director.
11. Help and support the Director (HRD) in all HR-related activities.
12. Act as resource person for training programmes conducted by the Agency.
13. Any other duty as prescribed from time to time, by the Director (HRD), the Deputy Executive Director or the Executive Director.

Training Specialist

1. Be responsible for logistics, co-ordination and conduct of capacity building programmes organised by the Agency.
2. Consolidate feedback, develop content sheet and modules, and empanel resource persons for training programmes.
3. Participate in training programmes as a nodal officer of the Agency, and report feedback to the Deputy Director (Training) and the Director (HRD) for their review.
4. Organize (through the RPMUs) need assessment exercises at district and GP levels, and suggest modifications required in training programmes (including specific methods, if any, for the inclusion of the excluded).
5. Identify and document best practices, good governance and lessons learned, on a continuous basis for dissemination and sharing.
6. Any other duties assigned by the Deputy Director (Training), or the Director (HRD).

Monitoring and Evaluation Department

Director (Monitoring and Evaluation)

1. Formulate a strategy for monitoring and evaluation of the Project.
2. Conceptualise, design, set up and operationalise the M&E system, to incorporate the needs of all key stakeholders.
3. Provide analytical reports of activities, achievements, shortfalls and reasons for the same; in advance, notify emerging issues at the field level; understand field-level problems; and coordinate the operationalisation of solutions from policy to field levels, with special focus on the vulnerable population (women, the poor, the tribal communities).
4. Provide the necessary capacity building at all levels for accepting, adopting and owning monitoring tools.
5. Focus on participatory monitoring, where the users of common assets take up the responsibility to monitor activities and achievements.
6. Design simple, comprehensive and practical indicators for field-level monitoring of the Project.

7. Prepare quarterly progress reports for reporting to the senior management of the Agency, and the World Bank.
8. Prepare an M&E manual.
9. Prepare ToRs for studies on procurement and monitoring of consultancy services, and disseminate findings.
10. Prepare ToRs for procurement and monitoring of consultants for Sustainability Evaluation Exercises, and periodic evaluation of the Project. 11. Ensure that provision for environmental audits is included in the TOR of Sustainability Evaluation Exercises.
11. Review the M&E system, and modify it to suit emerging needs.
12. Act as resource person for training programmes conducted by the Agency.
13. Any other duties relevant to the Project, assigned from time to time, by the Deputy Executive Director or the Executive Director.

Deputy Director (Monitoring and Evaluation, and MIS)

1. Design all M&E reporting formats, and practical indicators for Project monitoring at field level.
2. Collect and verify all MIS reports from SOs, GPATs and RPMUs.
3. Prepare monthly progress report of the Project.
4. Prepare baseline information of Project GPs.
5. Prepare quarterly progress reports for reporting to the senior management of the Agency, and the World Bank.
6. Prepare land transaction reports for submission to the World Bank.
7. Prepare Project review reports for visiting World Bank appraisal missions.
8. Provide analytical reports, required by the top management, on activities and achievements of the Project.
9. Update the key development objective indicators of the Project, fixed by the World Bank.
10. Update the Key Performance Indicators (physical & financial), and tribal and sustainability evaluation indicators fixed by the World Bank.
11. Provide information in response to questions from the Legislative Assembly, or according to the Right to Information Act.
12. Provide specific reports or information, required by the management, for reporting to GoK.
13. Share Project-related information with all team members of the Agency.
14. Update the Jalanidhi website, in association with the media specialist and the system administrator.
15. Assist the Director (M&E) prepare an M&E manual.
16. Assist the finance department prepare annual action plans of the Agency.
17. Assist the Director (M&E) conceptualise, design, set up and operationalise the M&E system, by incorporating the needs of all key stakeholders.
18. Assist the Director (M&E) capacitate SOs about the M&E system of the Agency.
19. Assist the Director (M&E) prepare ToRs, and finalise procurement, study methodology and monitoring of consultancy services awarded by the Agency for Project evaluation.

20. Assist the Director (M&E) review the M&E system for modifications to suit emerging needs.
21. Act as resource person for training programmes conducted by the Agency.
22. Any other duties assigned by the Director (M&E), the Deputy Executive Director or the Executive Director.

B. Officers in the Regional Project Management Unit

Regional Project Director

1. Overall in charge of implementation of all Project components.
2. Ensure that all stakeholders participate and are involved, as envisaged in Project philosophy and objectives.
3. Supervise and monitor Project implementation.
4. Supervise and monitor GPMU and SO/GPAT in every GP under the RPMU.
5. Issue technical sanction for schemes.
6. Collect and compile Project progress (physical, financial) and report to PMU in electronic format.
7. Coordinate and facilitate strategic, intermediary and grass root level capacity building.
8. Sign all Project implementation agreements on behalf of the Executive Director.
9. Act as resource person for training programmes conducted by the Agency.
10. Any other duties assigned by Directors at the PMU, Deputy Executive Director or the Executive Director.

Accounts Officer

1. Assist the Regional Project Director in carrying out the financial management aspects of the unit.
2. Ensure smooth and transparent fund flow in Project implementation.
3. Serve as trainer in community capacity building.
4. Ensure that all financial and administrative reports are required from the RPMU are prepared in time and sent to PMU.
5. Provide administrative and supervisory support to the Regional Project Director in handling staff and administrative issues.
6. Ensure that auditing is done in time.
7. Act as resource person for training programmes conducted by the Agency.
8. Any other duties assigned by the Regional Project Director.

Manager (Technical)

1. Guide GP Project Commissioners in planning and implementation of water supply, ground water recharge and sanitation schemes.

2. In consultation with water conservation specialists, guide the GPST, GPAT, SO, and consultant in the preparation of water security plans.
3. Facilitate informed decision-making, by helping GPs identify appropriate technology options for water supply schemes and ground water recharge activities.
4. Advise GPs and GPSTs in the selection of suitable technology options for sanitation activities in GPs.
5. Provide technical support to GPSTs in facilitating engineering survey, design of schemes, and preparation of estimates for water supply schemes and sanitation components.
6. Undertake feasibility studies on large water supply schemes or appropriate schemes where small water supply schemes are not possible.
7. Facilitate the appointment of technical service providers and consultants for design and preparation of DPRs, bid documents, etc. for large water supply schemes.
8. Issue technical sanction for DSRs/DPRs up to INR 25 lakh.
9. Guide the GPST in inviting quotations for GP-level components.
10. Assist the Director (Technical) and the Regional Project Director in vetting of DPRs and bid documents of comprehensive schemes prepared by technical consultants.
11. Issue tender notices for large water supply schemes.
12. Assist the Director (Technical) and the Regional Project Director in bid opening, evaluation of bids and award of contract for comprehensive schemes.
13. Assist the Director (Technical) and the Regional Project Director in appointment of ICQS consultant.
14. Ensure quality of materials procured by GPs and BGs.
15. Arrange quality testing of materials, wherever required.
16. Ask GPSTs to take corrective actions after reviewing test reports of quality and quantity of materials.
17. Ensure quality work in the field by supervision of GPST, SO and GPAT engineers.
18. Ensure that corrective actions are taken on issues pointed out by the ICQS consultant.
19. Ensure technical audit of work before releasing final payment to consultant.
20. Conduct super check of works (10 per cent) check measured by GP Project Commissioners.
21. Certify and recommend release of payments.
22. Guide the Project Commissioner in preparing as-laid maps.
23. Ensure equitable distribution of quality water as per design criterion.
24. Ensure that leaks have been rectified for proper running of the system.
25. Help Project Commissioners prepare O&M plan.
26. Guide Project Commissioners in preparing Implementation Completion Report.
27. Guide GPs in preparing GP-level exit reports.
28. Guide and supervise the activities of Project Commissioners in implementing the Project.

29. Assess requirements, and if necessary, sanction extra items and excess quantities reported by GPSTs.
30. Guide Project Commissioners in implementing appropriate water quality monitoring and surveillance of commissioned schemes.
31. Guide GPs and Project Commissioners in taking up and implementing appropriate water recharge measures.
32. Act as resource person for training programmes conducted by the Agency.
33. Any other duties assigned by the Regional Project Director.

Community Development Specialist

1. Ensure that GPs will fulfill all community development interventions and facilitate Project implementation.
2. Assist the Project Manager prepare required reports.
3. Organise, supervise, and monitor all capacity building initiatives required for Project implementation.
4. Ensure that user communities and GPs are mobilised for social action, so that user communities are empowered to perform their roles and responsibilities during planning, implementation and post-implementation phases of the Project.
5. Supervise the community awareness campaign and related programmes proposed by the GP.
6. Supervise the awareness programme on technology choice by communities, and ensure that cost commitments by communities are based on a transparent process of informed decision-making.
7. Help and support the Regional Project Director monitor and manage various contracts (with GPs, SOs, GPATs, etc).
8. Provide guidance and support in the preparation of CEPs and CAPs.
9. Supervise, monitor and evaluate the social process and awareness programmes of the service agencies or GPATs.
10. Ensure adequate participation and involvement in decision-making, of vulnerable groups and women, in Project implementation.
11. Act as resource person for training programmes conducted by the Agency.
12. Any other duties assigned by the Regional Project Director.

Water Conservation Specialist

1. Make arrangements to procure consultant for preparing water security plans of GPs.
2. Conduct technical evaluation and vetting of water security plans of GPs.
3. Refer water security plan to delineate different hydro-geomorphologic units in GPs and identify the most potential ground water and surface water area, to be used for BGs.
4. Place consultants for conducting detailed hydro-geological and geophysical surveys for identifying location of potential water source. The report generated from such studies should be based on the ground water investigation guidelines in

the Technical Manual. Verify the report and ensure the feasibility of the source, and if required visit the site and conduct detailed ground water survey to confirm the availability of water for the purpose.

5. Conduct site visits to each BG and suggest appropriate ground water recharge technique for sustainability of the source. Ground water recharge measures are based on local geomorphologic and hydro-geological conditions, and not administrative boundary.
6. During construction of open wells, visit the site and give technical advice. Conduct yield test and fix the quantity as per the safe yield.
7. During digging of bore wells, visit the site and make arrangements to collect the actual depth of the well and length of casing pipe used, and also ensure that the casing pipe is well seated in the basement rock. Collect the yield by keeping V-notch measurement and fix the quantity of water to be pumped accordingly.
8. Arrange to conduct yield test for both open wells and bore wells.
9. Collect water sample from the well and arrange to conduct chemical analysis for general parameters and bacteriology.
10. Assist the Regional Project Director in implementation of schemes.
11. Prepare ground water technical reports of each BG and the entire GP, and send to the PMU.
12. Arrange to fix observation wells around the water source to monitor water level and quality during pre- and post-implementation period, and also to study the impact of ground water recharge structure.
13. Study pre- and post-impact assessment of the scheme and present in a technical form.
14. Inform progress of work related to ground water, to the PMU.
15. Act as resource person for training programmes conducted by the Agency.
16. Any other duties assigned by the Regional Project Director.

C. Officers in the Grama Panchayat Support Team (GP-level Project Management Unit)

Project Commissioner

1. Take a lead role in marketing Project philosophy and ideology.
2. Guide and support SOs and GPATs placed in the GP for timely implementation and completion of the Project.
3. Support the consultant in preparing GP-level water security plan, and timely completion of works.
4. Ensure timely training to the GP, BGs, SOs, and GPATs during planning, implementation and post-implementation phases.
5. Supervise awareness creation and community mobilisation activities in the GP.
6. Ensure timely reporting of progress, to the RPMU and the PMU.
7. Provide resource support in technical training.

8. Play a proactive role in sanitation hygiene promotion programmes in the GP.
9. Facilitate and monitor the process of agreements (between GP–BG, GP–SO).
10. Co-ordinate with SOs and GPATs for timely implementation.
11. Liaise with BGs and the GP.
12. Liaise with concerned departments and agencies for timely implementation.
13. Ensure quality control of the work executed.
14. Ensure scheme implementation as approved from the RPMU and within financial limits
15. Report to the GPMU of any deviations from the original proposal, and get sanction, if required.
16. Guide SOs and GPATs in selecting perennial source location, through informed decision-making in BGs.
17. Guide SOs and GPATs in conducting detailed engineering survey and identifying locations (of reservoirs, pump houses, etc.)
18. Guide SOs and GPATs in preparing the detailed project report, for approval.
19. Vet DPRs for the approval of the Deputy Director (Technical).
20. Guide SOs and GPATs in preparing GP-level charts (Project implementation and monitoring) using CPM, PERT or MS Project.
21. Guide SOs and GPATs in preparing the list of materials and labour to be procured for BGs.
22. Supervise and monitor BGs' community contracting process.
23. Review water quality and other test reports that are mandatory in Project implementation.
24. Supervise and monitor yield test and pumping test of sources to assess the recommended yield.
25. Guide SOs, GPATs and BGs in arriving at O&M for schemes, including tariff fixation and by-law.
26. Ensure that all BGs select required operating staff for schemes and get trained in O&M.
27. Ensure that all the BGs have the proper disinfections mechanism installed.
28. Ensure 100 per cent check measurement of all bills of quantities.
29. Monitor and evaluate schemes for timely completion.
30. Serve as the Project manager in the GP.
31. Coordinate all activities under environmental management plan during implementation phase.
32. Ensure that implementation of all components are as per the guidelines issued for water supply schemes, environmental management plans, sanitation, drainage, etc.
33. Coordinate water quality monitoring and surveillance.
34. Arrange to conduct test for water quality, as and where necessary.
35. Co-ordinate activities on drainage (planning, design and implementation)
36. Check BG CEPs and GP plans and suggest modifications, if any.
37. Conduct field inspections, and evaluate field activities on water quality monitoring, environmental management plans and drainage, and report to the RPMU.
38. Support institutionalisation of community-based WQM and surveillance system.

39. Compile environmental data sheet and submit to RPMU for approval.
40. Ensure the social and environmental management issues related to Jalanidhi-II are properly addressed at the GP level.
41. Any other duties assigned by the Regional Project Director, or concerned portfolio heads.

Junior Project Commissioner

1. Assist the Project Commissioner in all works in the GP related to finance and accounting.
2. Enter physical and financial data in Web- based reporting system.
3. Ensure timely fund transfer from the GP to BGs.
4. Ensure timely work payments for SOs and GPATs from the GP.
5. Ensure timely payment for GP-level works executed by GP-level committees.
6. Assist the Project Commissioner in preparing and submitting various reports (M&E, progress reports, etc.) in time.
7. Provide resource support in BG-level accounts training
8. Assist the Project Commissioner in community mobilization and awareness creation.
9. Prepare BGs and the GP for audit and social audit.
10. Assist the Project Commissioner in managing GPST assets and payments.
11. Any other duties assigned by the Project Commissioner or RPMU officials.

Appendix 5: Staffing Plan

STAFFING PLAN IN PROJECT MANAGEMENT UNIT Proposed Staff Designations, requirement, qualifications, experience, recommended pay								
Office	**Designation**	**Staff requirement**	**Qualifications and experience**			**Nature of Appointment**	**Consolidated pay suggested for contract appointment**	**Remarks**
			Academic	**Experience**	**Desirable**			
Project Management Unit (PMU)								
	ED's office							
1	Executive Director	1	IAS			By appointment from Government		
2	Secretary to ED	1	Graduate from a recognised university and PGDCA	Three years of experience in office management	Experience as Secretary to CEO in reputed organisations	Deputation of suitable officers from Government Dept/ PSUs not below the rank of Junior superintendent, or Head Clerk or on contract	18000	
	Deputy ED's Office							
1	Deputy Executive Director	1	As per Govt norms	5 years of working experience in government. Field experience and emergency response capability required	Degree in any stream, Knowledge of computer applications, Excellent command over English. Preference will be given to applicant having EAP exposure.	Deputation of suitable officers from Government / PSU not below the rank of Deputy Collector	Deputation pay	Special allowance at the rate10% of the salary limited to a maximum of Rs 5,000 per month.

STAFFING PLAN IN PROJECT MANAGEMENT UNIT Proposed Staff Designations, requirement, qualifications, experience, recommended pay								
Office	**Designation**	**Staff requirement**	**Qualifications and experience**			**Nature of Appointment**	**Consolidated pay suggested for contract appointment**	**Remarks**
			Academic	**Experience**	**Desirable**			
2	Deputy Director (Administration)	1	MBA /MSW with specialisation in Human Resources or PG in public administration	8 years of working experience in administration department in supervisory capacity	Degree in law & Knowledge in Computer application. Excellent command over English.	Deputation of suitable officers from Government / PSU not below the rank of Under Secretary to Govt.	37000	
3	Data Base and System Administrator	1	B Tech (CS)/M.Sc (CS)/MCA/M.Sc(IT)	5 years of post qualification experience as system administrator	Experience in software applications, SQL/MSQL or data base management. Experience in GIS is added advantage	Deputation of suitable officers from Government / PSU not below the rank of System Administrator or on contract	30000	
4	Communication Strategist	1	PG in Mass communication /Journalism/ Any PG with PGDJMC	Media management, Strategic communication, Advertising and Corporate image building. Excellent command over English and Malayalam	Work experience in national media. Exposure to developmental journalism	Deputation of suitable officers from Government Dept/ PSUs not below the rank of Asst information officer or PRO or on contract	30000	
5	Senior Clerk cum Cashier	1	Graduate from a recognised university	Three years of experience in administration or cash handling	Post Graduate diploma in computer applications	Deputation of suitable officers from Government Dept/ PSUs not below the rank of Junior superintendent, or Head Clerk	Deputation pay	
Operations Department								
1	Director (Operations)	1	MBA/MSW/B-Tech(Civil/Mech)	12 years of experience in rural development projects or water supply projects	5 yrs experience in Community based projects	Deputation of suitable officers from Government Dept./ PSUs not below the rank of Superintending Engineer/ Jt. Development Commissioner /Dy.collector.	51000	Deputation Pay

STAFFING PLAN IN PROJECT MANAGEMENT UNIT Proposed Staff Designations, requirement, qualifications, experience, recommended pay								
Office	**Designation**	**Staff requirement**	**Qualifications and experience**			**Nature of Appointment**	**Consolidated pay suggested for contract appointment**	**Remarks**
			Academic	**Experience**	**Desirable**			
2	Deputy Director (Operations)	1	MBA/MSW/B-Tech(Civil/Mech)	8 years of experience in rural development projects or water supply projects	5 yrs experience in Community based projects	Deputation of suitable officers from Government Dept./ PSUs not below the rank of Executive Engineer/ Assistant Development Commissioner or on contract	37000	
3	Deputy Director (Vigilance and Panchayth)	1	Asper Govt norms	8 years of working experience in Panchayath department	Degree in law & Knowledge in Computer application	Deputation of suitable officers from Panchayath Department not below the rank of Deputy Director	Deputation pay	
4	Deputy Manager (Operations)	1	MBA/MSW/B-Tech(Civil/Mech)	5 years of experience in rural development projects or water supply projects	2 yrs experience in Community based projects	Deputation of suitable officers from Government Dept/ PSUs not below the rank of Assistant Executive Engineer/ Block Development Officer or on contract	30000	
	Finance Department							
1	Director (Finance)	1	As per Govt norms	12 years of experience in Financial Management	Working knowledge in computerized financial management	Deputation of suitable officers from Government Finance Dept. not below the rank of Joint Secretary to Govt.	Deputation pay	
2	Deputy Director (Project Finance)	1	CA	8 years of experience in Financial Management	Experience in handling project finance in computerized environment in externally aided projects not less than 5 years	Deputation of suitable officers from Government / PSU not below the rank of Under Secretary to Govt.	37000	

STAFFING PLAN IN PROJECT MANAGEMENT UNIT Proposed Staff Designations, requirement, qualifications, experience, recommended pay								
Office	**Designation**	**Staff requirement**	**Qualifications and experience**			**Nature of Appointment**	**Consolidated pay suggested for contract appointment**	**Remarks**
			Academic	**Experience**	**Desirable**			
3	Deputy Director (Procurement)	1	B.Tech/MBA/M.Com	5 years of working experience in procurement aspect in externally aided Project	Excellent command over English and knowledge in computes.	Deputation of suitable officers from Government / PSU not below the rank of Under Secretary to Govt. or on contract	37000	
4	Deputy Manager (Accounts)	1	CA	3 years of experience in Financial Management	Experience in handling project finance in computerised environment in externally aided projects not less than 2 years	Deputation of suitable officers from Government / PSU not below the rank of Under Secretary or on contract	30000	
5	Accountant	3	B Com with CA inter / B.Com with accounting software exp	Five years of experience in accounting in a reputed establishment /CA Firm	3yrs of exp in Computerised accounting	Deputation of suitable officers from Government Dept/ PSUs not below the rank of Junior superintendent, or Head Clerk or on contract	17000	
	Engineering Department							
1	Director (Technical)	1	B Tech (Civil) / (Mech)	12 years of experience in designing, implementing water supply schemes	Experience in community based Water Supply Projects	Deputation of suitable officers from Government Dept/ PSUs not below the rank of Superintending Engineer or on contract	51000	
2	Deputy Director (Technical)	1	B Tech (Civil)/(Mech)	8 years of experience in designing, implementing water supply schemes	Experience in community based Water Supply Projects	Deputation of suitable officers from Government Dept/ PSUs not below the rank of Executive Engineer or on contract	37000	

STAFFING PLAN IN PROJECT MANAGEMENT UNIT Proposed Staff Designations, requirement, qualifications, experience, recommended pay								
Office	**Designation**	**Staff requirement**	**Qualifications and experience**			**Nature of Appointment**	**Consolidated pay suggested for contract appointment**	**Remarks**
			Academic	**Experience**	**Desirable**			
3	Deputy Director (Environment)	1	Post Graduation in Envt. Mgmt/ B Tech (Civil) with not less than 5 years of experience in Water Quality or environmental sanitation aspects	8 years of experience in water supply projects	Experience in community based Water Supply Projects	Deputation of suitable officers from Government Dept/ PSUs not below the rank of Assitatnt Executive Engineer or on contract	37000	
4	Deputy Director (Water Conservation)	1	MSc Geology/ Hydrogeology or Geophysics or equivalent	8 years of experience in water development and hydrogeological investigations	Experience in community based Water Supply Projects	Deputation of suitable officers from Government Dept/ PSUs not below the rank of Senior Hydrogeologist or on contract	37000	
5	Project Engineer (PMU)	3	B Tech (Civil)/ (Mech)	5 years of experience in designing, implementing water supply projects	experience in community based WSS projects	Deputation of suitable officers from Government Dept/ PSUs not below the rank of Assistant Engineer or on contract	26000	
Monitoring and Evaluation Department								
1	Director (M&E)	1	MBA/MSW/ PG (Statistics/ Social Sciences)	12 years of experience in rural development projects or water supply projects	5 yrs of exp in similar field especially in monitoring and evaluation of externally aided projects	Deputation of suitable officers from Government Dept/ PSUs not below the rank of Jt. Development Commissioner or on contract	51000	
2	Dy.Director (M&E/ MIS)	1	MBA//MSc (IT)/MCA	8 years of experience in rural development projects or water supply projects	5 yrs experience in monitoring or information system management in Community based projects	Deputation of suitable officers from Government / PSU not below the rank of Under Secretary or on contract	37000	

STAFFING PLAN IN PROJECT MANAGEMENT UNIT Proposed Staff Designations, requirement, qualifications, experience, recommended pay								
Office	**Designation**	**Staff requirement**	**Qualifications and experience**			**Nature of Appointment**	**Consolidated pay suggested for contract appointment**	**Remarks**
			Academic	**Experience**	**Desirable**			
Human Resource Development Department								
1	Director (HRD)	1	MSW/ MBA(HR)	12 years of experience in rural development projects or water supply projects	5 yrs of experience in Capacity building or training activities especially in rural development projects or water supply projects	Deputation of suitable officers from Government Dept/ PSUs not below the rank of Jt. Development Commissioner or on contract	51000	
2	Deputy Director (Training)	1	MSW/ MBA(HR)	8 years of experience in rural development projects or water supply projects	3 yrs of experience in Capacity building or training activities especially in rural development projects or water supply projects	Deputation of suitable officers from Government Dept/ PSUs not below the rank of Assistant Development Commissioner or on contract	37000	
3	Training Specialist (CD)	1	MSW with Specialisation community development	3 years of experience in rural development projects or water supply projects	2yrs of experience in Community Development projects especially in capacity building	Deputation of suitable officers from Government Dept/ PSUs not below the rank of Higher Sec.School Asst or on contract	26000	
4	Traning Specialist (Technical)	1	B Tech (Civil)	3 years of expereinece in rural development projects or water supply projects	Specialised exposure in Training/Teaching 3 yrs of similar works in NGO/Trg Institution	Deputation of suitable officers from Government Dept/ PSUs not below the rank of Assistant Engineer or on contract	26000	
Communication and Capacity Development Unit (CCDU)								

STAFFING PLAN IN PROJECT MANAGEMENT UNIT Proposed Staff Designations, requirement, qualifications, experience, recommended pay								
Office	**Designation**	**Staff requirement**	**Qualifications and experience**			**Nature of Appointment**	**Consolidated pay suggested for contract appointment**	**Remarks**
			Academic	**Experience**	**Desirable**			
1	Director (CCDU)	1	Post Graduation in Science/ Envt. Science/ HRD/Envt. Engineering.	15 years of experience in RWS and Sanitation Sector Community Development	5 yrs of experience in Capacity building or training activities especially in rural development projects	Deputation of suitable officers from Government Dept./ PSUs not below the rank of Superintending Engineer/ Jt. Development Commissioner or on contract	51000	GOI gide lines 50000-60000
2	Consultant (IEC & HRD)	1	Post Graduation in Science/ Envt. Science/ HRD/Envt. Engineering/ Social Work/Social Sciences/ Ext.Service/Journalism	3 years of experience in conducting trainings/ Human Resource Development related to Rural and community Devt or in the field of communication for RWSS/ Health	2yrs of experience in Community Development projects especially in capacity building or water supply projects or 2 years in resarch and documentation	Contract	30000	30000-40000
3	Consultant (M &E)	1	Post Graduation in Science/ Statistics/ Social Science	3 years of experience in the field of moinitoring of RWSS and RD programmes	2yrs of experience in Community Development projects especially in capacity building or water supply projects or two years of research experience	Contract	30000	30000-40000
4	Consultant (HGY)	1	MSc Geology/ Hydrogeology or Geophysics or equivalent	3 years of experience in water development and hydrogeological investigations	2yrs of experience in Community Water supply projects	Contract	30000	30000-40000

STAFFING PLAN IN PROJECT MANAGEMENT UNIT Proposed Staff Designations, requirement, qualifications, experience, recommended pay								
Office	**Designation**	**Staff requirement**	**Qualifications and experience**			**Nature of Appointment**	**Consolidated pay suggested for contract appointment**	**Remarks**
			Academic	**Experience**	**Desirable**			
5	Consultant (WQMS)	1	Post Graduation in Envt. Mgmt/ B Tech (Civil) with not less than 3 years of experience in Water Quality or environmental sanitation aspects	3 years of experience in water supply projects	2 yrs Experience in community based Water Supply Projects	Contract	30000	30000-40000
6	Accountant	1	B Com with CA inter / B.Com with accounting software exp	3 years of experience in accounting in a reputed establishment /CA Firm	2yrs of exp in Computerised accounting	Contract	17000	15000-20000
7	Data Entry Operator	1	Graduate from a recognised university	2 yrs exp in office automation software's	PGDCA	Contract	13000	10000-15000
	Support staff							
1	Team Assistant	8	Graduate from a recognised university	2 yrs exp in office automation software's	PGDCA	Contract	13000	
2	Peon	5	SSLC			Contract	11000	
3	Driver	1	7 th std pass and valid light motor vehicle driving license			Contract	12000	
4	Security/Night Watchman	1	SSLC			Contract	11000	
5	Sweeper	1	4th Std			Contract	11000	

STAFFING PLAN IN REGIONAL PROJECT MANAGEMENT UNITS AND GRAMA PANCHAYAT-LEVEL SUPPORT TEAM Proposed Staff Designations, requirement, qualifications, experience, recommended pay								
SL No	**Designation**	**Staff requirement**	**Qualifications and experience**			**Nature of Appointment**	**Consolidated pay suggested for contract appointment**	**Remarks**
			Academic	**Experience**	**Desirable**			
Regional Project Management Units								
1	Regional Project Director	3	As per Government norms	10 years of experience in rural development projects or water supply projects	5 yrs experience in Community based projects/ Project Management exp	Deputation of suitable officers from Government Dept/ PSUs not below the rank of Sr.Executive Engineer/ Depty Development Commissioner	Deputation Pay	
2	Manager (Technical)	3	B Tech (Civil)/ (Mech)	8 years of experience in designing, implementing water supply projects	experience in community based WSS projects	Deputation of suitable officers from Government Dept/ PSUs not below the rank of Assistant Executive Engineer or on contract	37000	
3	Community Development Specialist	3	MSW with Specialisation community development	8 years of experience in rural development projects or water supply projects or with an NGO	3 yrs project experience in social research , IEC and documentation	Deputation of suitable officers from Government Dept/ PSUs not below the rank of ADC or on contract	37000	
4	Water Conservation Specialist	3	MSc Geology/ Hydrogeology or Geophysics or equivalent	8 years of experience in water development and hydrogeological investigations	Experience in community based Water Supply Projects	Deputation of suitable officers from Government Dept/ PSUs not below the rank of Sr.Hydrogeologist/ Hydrogeologist or on contract	37000	
5	Accounts Officer	3	As per Government norms	8 years of experience in handling accounts	Experience in handling project finance in computerised environment in externally aided projects not less than 5 years	Deputation of suitable officers from Government / PSU not below the rank of Accounts Officer in govt.fin.dept	Deputation Pay	
6	Accountant	3	B Com with CA inter / B.Com with accounting software exp	Five years of experience in accounting in a reputed establishment /CA Firm	3yrs of exp in Computerised accounting	Contract	17000	

STAFFING PLAN IN REGIONAL PROJECT MANAGEMENT UNITS AND GRAMA PANCHAYAT-LEVEL SUPPORT TEAM Proposed Staff Designations, requirement, qualifications, experience, recommended pay								
SL No	**Designation**	**Staff requirement**	**Qualifications and experience**			**Nature of Appointment**	**Consolidated pay suggested for contract appointment**	**Remarks**
			Academic	**Experience**	**Desirable**			
7	Peon	3	SSLC			Contract	11000	
8	Sweeper	3	4th Std			Contract	11000	
GPST								
1	Project Commissioner	1/GP	B Tech (Civil)	5 years of experience in designing, implementing water supply projects, Ability to lead and implement the project in a time bound manner.	Experience in community based WSS projects. Leadership, Managerial, Communication skills required.	Deputation of suitable officers from Government Dept/ PSUs not below the rank of Assistant Engineer or on contract	26000	
2	Jr.Project Commissioner	1/GP	B.Com with accounting software exp	Three years of experience in accounting in a reputed establishment /CA Firm	2yrs of exp in Computerised accounting. Leadership, Managerial, Communication skills required.	Contract	13000	

STAFFING PLAN FOR SUPPORT ORGANISATION / GPAT					
Sl No	**Designation**	**Persons needed**	**Proposed Pay**	**Qualification**	**Remarks**
1	Team leader	1	20,000	MSW/MBA/B.Tech with 3 yrs exp. or Water Supply Engr. not below the rank of AE.	One for GP
2	Senior Engineer	1	17,500	B.Tech with 2 yrs exp. or Water Supply Engr. not below the rank of AE.	One for GP
3	Community Organizer	1	16,000	MSW/ PG in Humanities with one yr exp.	One for GP
3	Junior Engineers	2	14,000	Diploma in Civil with 2 yrs exp.	One for 15 BG
4	Accountant	1	12,000	B Com with computerised financial accounting exp.	One for 30 BG
5	Community facilitators	2	8,000	+2 / Diploma/ITI	One for 15 BG

Appendix 6: Communication Strategy and Action Plan

Introduction

Communication of the project's philosophy, content, methodology and implementation to the beneficiary community is central to the project, which emphasizes on participation and ownership in all its components. The Information Education and Communication component in Jalanidhi Project involves the development and dissemination of IEC materials at interpersonal level, mass media level. The inter personal level includes materials like brochures, flip charts, manuals, stickers, etc. and mass media products include folk programme, wall paintings, posters, audio cassettes, to be disseminated through All India Radio, audio, video spots, movies, and through various visual medias. Developing of IEC materials and dissemination of awareness through appropriate media is the key success behind any development project.

Objectives of the Component

To bring the changes in knowledge, attitude and practices among the key stakeholders by creating awareness.

To provide information and educate the stakeholders to create a conducive environment for the project.

Major Project Components

- Rural Water Supply
- Ground Water Recharge.
- Sanitation.
- Environment Management
- Capacity building.
- GP Strengthening
- Rain water harvesting programme.
- Tribal Development.
- Water Quality Monitoring and surveillance.
- Rehabilitation of Multi GP Schemes.
- KWA Partnership programme.

Strategies to improve the communication activities.

1. IEC materials developed for the project will focus mainly on the reform initiatives in WATSAN sector in Kerala.
2. Major IEC materials developed will be in local language and simple to understand for the key stakeholders.
3. IEC activities will be converged with the line departments such as Health, TSC to save cost and time.
4. The defined methods of disseminating the IEC materials, monitoring its reach, effectiveness and measurement of sustainable behavioral changes have to be tracked promptly after every intervention

5. All stages of project implementation, developments, outcome, success stories and best practices have to be studied, documented and published widely at prompt intervals. Best stories may be documented in multiple formats to reuse it for times.
6. Mass communication tools shall be given due importance, for promoting WATSAN sector related messages and other methods shall be used more for project communication.
7. The project communication shall be mixed with sector related messages to get more sustainable cognitive changes.
8. Moreover the mass media, community portals, and other materials shall be nurturing the news value to all media, so that they can be absorbed by vernacular and national media.
9. IEC will effectively use the modern technologies to disseminate the messages as far as possible.

Communication need.

The success of any development project is dependent directly on the ability of the programme managers in communicating the components of the project to the various stakeholder groups to secure their commitment towards the cause of the same.

Stakeholders of the Project.

1. State Level

Policy makers, Programme managers and facilitators of PMU, WSSO, KWA. WRD. LSGD, Media. Representatives of Political establishments etc.

2. Regional or District Level.

RPMU programme managers, GPST and Regional level public representatives, line department officials etc.

3. GP Level

GP level programme mangers, GP Board members, SO Team, Grama Panchayath Action Team, GP level line department representatives, GP level Resource Team, School Health team etc.

4. Grass root level.

Beneficiary committees, Beneficiary Groups, Ward level committees, Scheme Level Committees, Scheme Level execution committees, Women groups etc.

Communication needs of the WATSAN sector in general.

1. Create awareness and motivate the community to act for protection of drinking water sources, safe handling of drinking water.
2. Educate people about various water conservation methods and motivate people for water conservation
3. Focus on sustainable behavior change among individuals, families, and communities to adopt improved health and hygiene practices
4. Attract people for community participation

5. Create a supportive atmosphere for better coordination, effective advocacy within and out to critical stakeholders
6. Promote personal responsibility for ensuring adequate safe drinking water.

Project Specific and strategic communication needs

1. Information about the policy shifts, new model and its implementation
2. To promote safe standards in handling water and avoiding the impact of E-Coli bacteria on general health
3. To create awareness on safe disposal of solid and liquid waste, and save from health issues that arise from unsafe surroundings.
4. Familiarize and promote the usage of environment management initiatives and thus protect the precious drinking water from bio –pollution
5. To empower women for shouldering O&M responsibility, and other trainings for micro earning
6. To capacitate Grama Panchayaths to carry out development activities resting on the project.
7. To capacitate the indigenous tribes on sanitation and hygiene, and to improve their quality of life.
8. To educate and capacitate the beneficiaries to face the post implementation issues and to run the most sophisticated O&M methodologies
9. Dissemination of GWR techniques, for ensuring sustainability of sources and as a general course.
10. Disseminating messages on establishing the need of RWH, and explaining the process including technical matters.
11. To ensure sustainable behavioral changes in water and sanitation, and to extend post implementation support for operation and maintenance

Infrastructure strengthening

- The role of RPMUs shall be strengthened for the strict implementation and periodical monitoring of region wise IEC implementation, and the GPST to facilitate GP level IEC activities.
- Compulsory and prompt guidelines may be drawn for district, GP and BG wise implementation , monitoring and documentation of IEC activities and events
- Increase strength and expertise of the local network in GP, BG level reporting by assigning a BG Reporter at each BG, so as to support the effective implementation of IEC.
- The Media center at PMU, shall monitor measure and record the IEC activities implemented statewide, and present the outcome before the Directors periodically and make necessary alterations as per the suggestions made. The best stories shall be published in vernacular, and national media and the details may be send to WRD, WB and share them to the community portals.
- The website may be altered in such a way with a Malayalam version, with dual –end interactive portal. The BG reporter shall exhibit the published stories in the web in every BG meeting or gatherings, and he/she may upload the stories in any format directly to the web as a citizen journalist. He/She may also furnish the online data sheets as demanded by the PMU. This can create a good reciprocative communication line

Key Communication Needs & Project Specific Communication Strategy							
Sl No	**Target group**	**Target sub groups**	**Key issues**	**Message**	**Responsibility**	**Most effective media**	**Supportive tools**
	The State of Kerala	Legislature	More legislations required, sustaining state water policy, and its strict adherence in lien with KRWSA –concept and activities	Contingency in the Water and sanitation sector of Kerala and role of Jalanidhi in establishing decentralized, demand driven, community participatory rural water supply model.	Project Management Unit	Brochures Newsletter Documentaries Workshops/ Gatherings Progress reports	Brochures Booklets Downloads from web Newsletter Exposure visits General write ups Print and visual media interviews Audio clips Video clips Broadcast and telecast materials Short films and documentaries News clippings Web feeds Online discussions Programs CDs of folk art performances LA Members meetings LA Members workshop Function invitations Community programs with presence of MLAs.
		Water resources dpt	Reinforce KRWSA to ensure the sustainability of implemented schemes and to address the further needs through Jalanidhi.	Information about the modus operandi of the project and, exhort them to support the community beneficial, cost effective and technically elevated version of Jalanidhi II, with sustainable mechanism.	Project Management Unit	Brochures Newsletter Documentaries Workshops/ Gatherings Progress report	
		LSG dpt	Empower LSG institutions to initiate, operate and maintain the newly established water supply schemes, and to ensure the community participation	Information about he modus operandi of the project and, exhort them to support the community beneficial, cost effective and technically elevated version of Jalanidhi II, with sustainable mechanism.	Project Management Unit	Brochures Newsletter Documentaries Workshops/ Gatherings Progress Report	
	KRWSA	PMU	Capacitate senior staff to	Promote only positives	Project Management Unit	Trainings	

Key Communication Needs & Project Specific Communication Strategy							
Sl No	**Target group**	**Target sub groups**	**Key issues**	**Message**	**Responsibility**	**Most effective media**	**Supportive tools**
			know the project more and to project the model before lien departments for close association	about the project – more louder and clearer		Workshops/ Gatherings	
		RPMUs	Improve district level influence on political/official decision making units to use them for smooth implementation	Every RPMU is responsible for maintaining a well informed , positive rapport with the political decision makers and influencers of the district	Regional Project Management Unit	Trainings Workshops/ Gatherings	
		GPSTs	Keep the beneficiary community well informed about the project and support their needs	GPST is a community oriented unit which is in the panchayath itself, to support all water related subjects for the beneficiaries	Regional Project Management Unit	Trainings Workshops/ Gatherings All IEC tools	
	KWA	KWA	More understanding about KRWSA – policies and operation	Jalanidhi model can be adopted for conceptualization and implementation, of rural water supply framework	Project Management Unit	Trainings Workshops/ Gatherings All IEC tools	Brochures Posters Booklets Media kits Downloads from web Newsletter Media brief reports Media seminar reports Exposure visits reports Function invitations General write ups

Key Communication Needs & Project Specific Communication Strategy							
Sl No	**Target group**	**Target sub groups**	**Key issues**	**Message**	**Responsibility**	**Most effective media**	**Supportive tools**
							Print and visual media interviews Audio clips Video clips Broadcast and telecast materials Short films and documentaries News clippings Web feeds Online discussions Programs CDs of folk art performances
	Grama Panchayaths	Panchayath Committee	Reform initiatives in WATSAN sector and management of community owned water supply schemes.	A panchayath committee is most responsible in effective implementation of schemes in every BG.	Regional Project Management Unit / / Grama Panchayath Management Unit	Trainings Workshops/ Gatherings All IEC tools	Brochures Posters Booklets Media kits Downloads from web Newsletter Media brief reports Media seminar reports Exposure visits reports Function invitations General write ups Print and visual media interviews Audio clips
		Kudumbasree	Participate in community Organisation aspects of KRWSA	The Kudumbasree communities can act as a social mobilization agent, as well as catalyst for the speedy implementation and support force. It can also act as a resource team in every GP/BG.	Regional Project Management Unit / Grama Panchayath Management Unit	Trainings Workshops/ Gatherings All IEC tools	

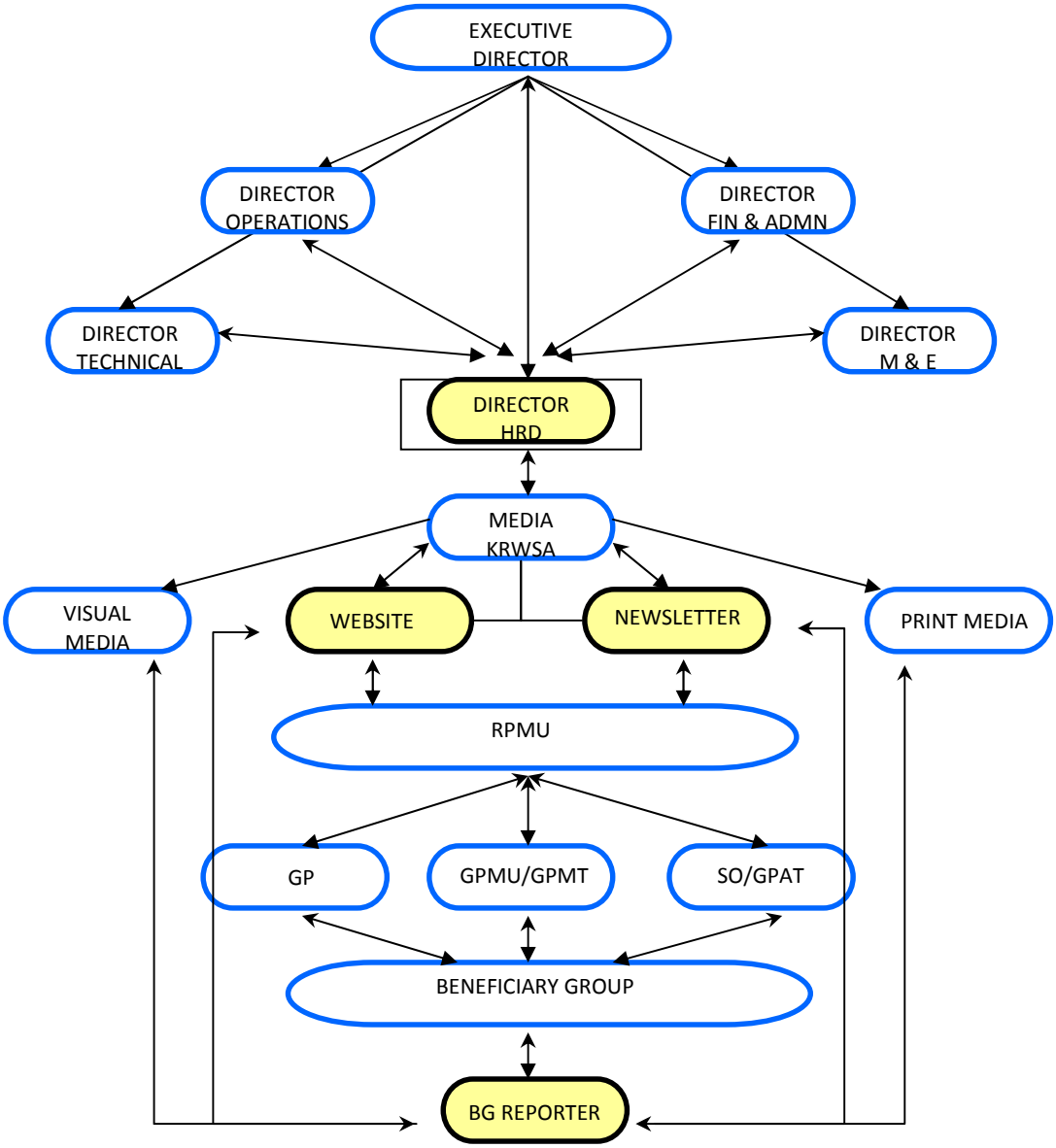
Key Communication Needs & Project Specific Communication Strategy							
Sl No	**Target group**	**Target sub groups**	**Key issues**	**Message**	**Responsibility**	**Most effective media**	**Supportive tools**
							Video clips Broadcast and telecast materials Short films and documentaries News clippings Web feeds Online discussions Programs CDs of folk art performances Best GP and BG awards
5	Supporting organizations/GPAT	SO /GPAT staff	Improve the level of responsibility in executing the project	The SO in every GP shall act as responsible executers of every implementation aspects.	Regional Project Management Unit / Grama Panchayath Management Unit	Trainings	Brochures Posters Booklets Media kits Downloads from web Newsletter Media brief reports Media seminar reports Exposure visits reports Function invitations General write ups Print and visual media interviews Audio clips Video clips
			Adhere strictly to the time and action plan for implementation	The credibility, accountability and integrity shall be stressed for adhering to the project implementation as well as time and action plan.	Regional Project Management Unit / Grama Panchayath Management Unit	Workshops/ Gatherings	

Key Communication Needs & Project Specific Communication Strategy							
Sl No	**Target group**	**Target sub groups**	**Key issues**	**Message**	**Responsibility**	**Most effective media**	**Supportive tools**
							Broadcast and telecast materials Short films and documentaries News clippings Web feeds Online discussions Programs CDs of folk art performances Best SO/GPAT awards
6	Beneficiary Community	Women folk	More participation in water management	Women in the community are water managers. They are the intenders, users and conservers of water. So they shall be capacitated to manage the quality, quantity and availability of water.	Regional Project Management Unit	Trainings	Beneficiary manual Brochures Posters Booklets Media kits Downloads from web Newsletter Exposure visits reports General write ups Print and visual media interviews Audio clips Video clips Broadcast and telecast materials Short films and documentaries News clippings
		Pressure groups	Improve social commitment for ensuring water management	Water as a life-resource, all groups has the right and obligation to protect and conserve water.	/ Grama Panchayath Management Unit	Workshops/ Gatherings	
			Develop and project solid water database and project before authorities	The pressure groups have to use all strategies to influence the decision makers and protect their water rights.	Regional Project Management Unit / Grama Panchayath Management Unit		
		Common beneficiaries	Understand the water scenario, participate in the project and support	Serious interventions shall be made to propagate water scarcity as a major	Regional Project Management Unit / Grama Panchayath	All IEC tools	

Key Communication Needs & Project Specific Communication Strategy							
Sl No	**Target group**	**Target sub groups**	**Key issues**	**Message**	**Responsibility**	**Most effective media**	**Supportive tools**
			the sustainability	concern, and to educate them for sustainable behavioral change	Management Unit		Web feeds Online discussions Programs CDs of folk art performances
7	Media	Print Media	Cover more varied topics about KRWSA stories	Jalanidhi is appreciated as a highly successful model in decentralized water supply system which is adaptable for any part of the country	State Project Management Unit / Regional Project Management Unit / Grama Panchayath Management Unit	Workshops/ Gatherings	Brochures Booklets Media kits Downloads from web Newsletter Media briefs Media seminar Exposure visits Function invitations Write ups Print and visual media interviews Audio clips Video clips Broadcast and telecast materials Short films and documentaries News clippings Web feeds Online discussions Programs Folk art performances Best journalist on Jalanidhi awards
			Encourage independent or “citizen” journalism			All IEC tools	

Key Communication Needs & Project Specific Communication Strategy							
Sl No	**Target group**	**Target sub groups**	**Key issues**	**Message**	**Responsibility**	**Most effective media**	**Supportive tools**
		Visual Media	More audiovisual coverage on Jalanidhi stories Bring out stories from unattended locations to media through stringer ships or citizen journalists	Jalanidhi is a public movement, in which demand driven communities are capacitated to execute, maintain and own up water supply schemes.	State Project Management Unit / Regional Project Management Unit / Grama Panchayath Management Unit	Workshops/ Gatherings All IEC tools	Brochures Booklets Media kits Downloads from web Newsletter Media briefs Media seminar Exposure visits Function invitations Write ups Print and visual media interviews Audio clips Video clips Broadcast and telecast materials Short films and documentaries News clippings Web feeds Online discussions Programs Documentary competitions TV spots competition Promo audio and video

Project Communication Network - Jalanidhi – II



Preparation of IEC Tools / Materials

Effective Information, Education and Communication (IEC) materials are an important component of the comprehensive implementation process of the project. Jalanidhi have a good set of IEC materials. But to incorporate the changed scenario in all aspects of the project and to attain targeted behavioral changes some special IEC interventions have to be introduced.

Pretested IEC Tools and Key Messages In Jalanidhi -1

1	Brochures	1. Water borne diseases 2. Handling of drinking water 3. Chlorinating wells for water purification 4. Rainwater for drinking purposes 5. Healthy home 6. Usage of latrines 7. Soak pits for disposal of liquid-waste 8. Wormi –composting 9. Watershed management
2	Booklets	1. Messages for Wall painting 2. Booklet on "Koottayma" (Community Mobilization) 3. Instruction manual (on how to use the supplied IEC materials) 4. School diary 5. Quiz book for school children
3	Wall posters	1. Against Solid Waste Disposal in public places 2. Avoiding Desecration of Public Places 3. Avoiding Urinating in public places. 4. Cleanliness as a childhood habit 5. Keeping water source clean 6. Plastic menace- a threat to earth 7. Vermi- composting 8. Importance of Cleanliness in the market place 9. Rainwater as drinking water 10. Watershed for sustainable sources
4	Pocket books	1. Technical aspects of latrine 2. Construction of Rain water-harvesting structures
5	Manual	1. Technical manual on sanitation 2. Manual on implementation 3. Training manual for operation and maintenance
6	Three pile sorting cards	1. Three pile sorting cards for Tribal area
7	Name slips	1. Name slips for school children- 9 nos.
	Time table cards	1. School sanitation messages (English) 2. School sanitation messages (English)
	Post it pads with logo	1. Logo familiarization
	Jalamarmaram	1. Official newsletter
	Avar prathikarikkunnu	1. Opinion poll of participant GPs
8	Radio based program	1. Water quality and health 2. adequate chlorination of drinking water 3. continuous water quality monitoring using chloroscopes
	Mini documentaries	**1. Women, Water and Sanitation**

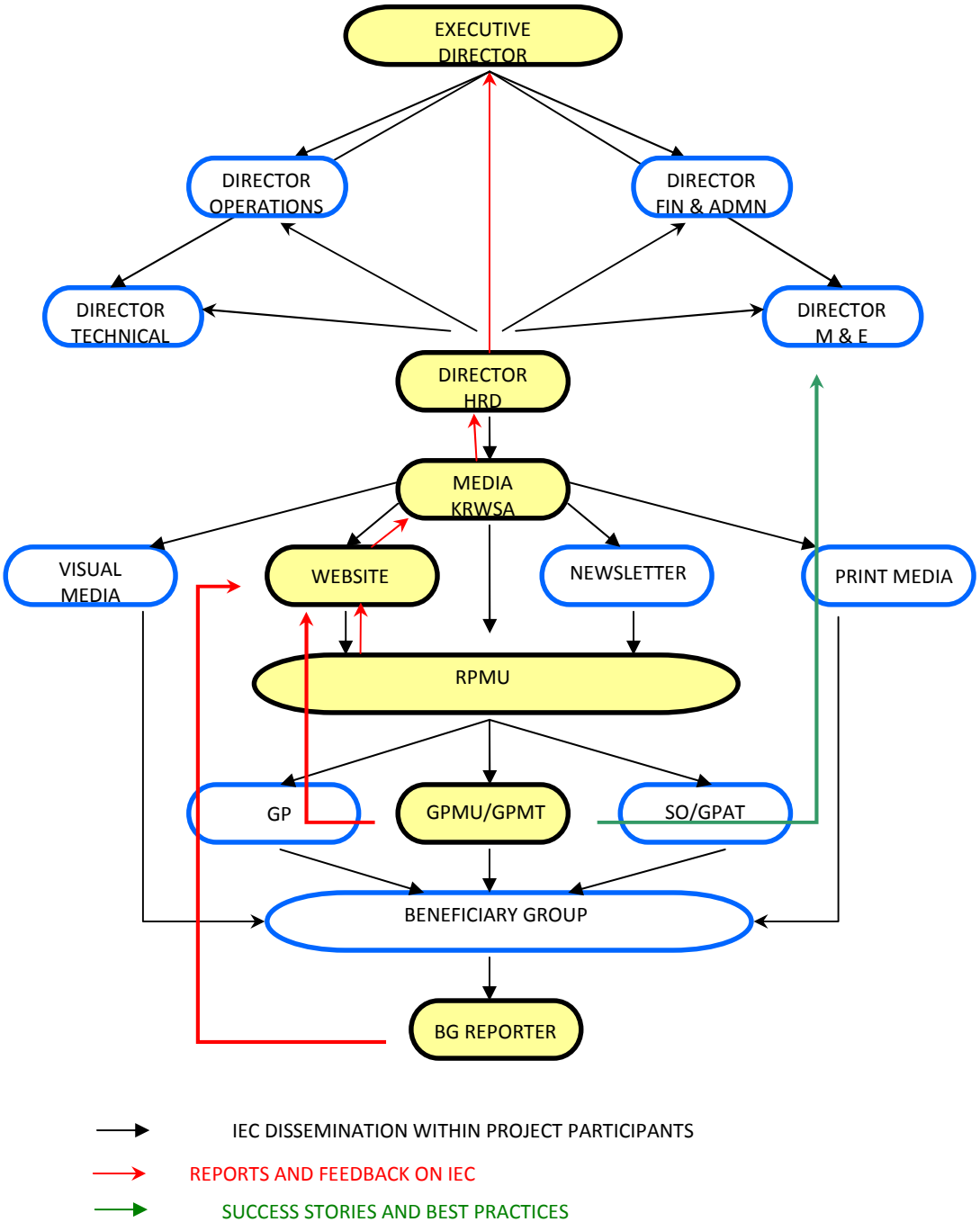
	15 minutes each	**2. Sanitary Well** **3. Water- borne diseases** **4. Technical Options for Sanitation** **5. Water & Sanitation in the Tribal Sector** **6. Personal Hygiene** **7. Environmental Sanitation** **8. Watershed Management** **9.** Water- the Elixir
	Template on Chlorination	1. significance of chlorination and use bleaching powder economically and efficiently
	Documentary films	1. nil
	Cartoons	1. significance of rain water harvesting , ground water recharge
	IEC for the Tribal Sector	1. tribal songs on sanitation 2. Koothu (a street drama form)
	Demo- Units	1. sanitary latrines, 2. conversion of unsanitary latrines **3.** construction of rain water harvesting units
	Folk arts	1. Koothu in tribal settlement of Attappadi

Fresh IEC and Media Interventions Suggested

Sl No	Details of IEC intervention	Targeted behavior/ action	Key message
1.	Brochures/ Booklets/ Communication kits/ Web articles/ Broadcast and telecast materials/ News clips/ Online discussions/	Success and best practices	1. Success and best practices of Jalanidhi - 1
2.		Knowing self	2. The title, rights and obligations of a beneficiary
3.		Community reporting	3. You can also become a beneficiary reporter
4.		Best practices	4. Case studies best practices in Jalanidhi -1
5.		Sector information	5. The task of empowering WATSAN sector - Jalanidhi, parallel agencies , policies and sector reforms
6.		Water management	6. Water quality surveillance water recycling and innovative technologies
7.		GWR	7. Ground water fact sheet watershed management and recharge methods
8.		Environment management	8. Solid waste management, plastic menace and environment
9.		Beneficiary empowerment	9. Usage of computers, website, modern communication methods, and water moves which they can participate
10.		Women empowerment	10. Role of women in water management
11.		Grama Panchayath empowerment	11. 73rd and 74th amendments of Indian Constitution, role of GPs, success stories of GPs, activity planning model
12.		Motivating GPs for 100% sanitation	12. Stories of great achievement – Nirmal Grama Puraskar for GPs.
13.		Jalanidhi activities in GPs	13. Success stories of GP rehabilitation and multi GP schemes
14.		Targeting MLAs and state level political consortium	14. Project details and success to create a harmonious political scenario, to accelerate project activities

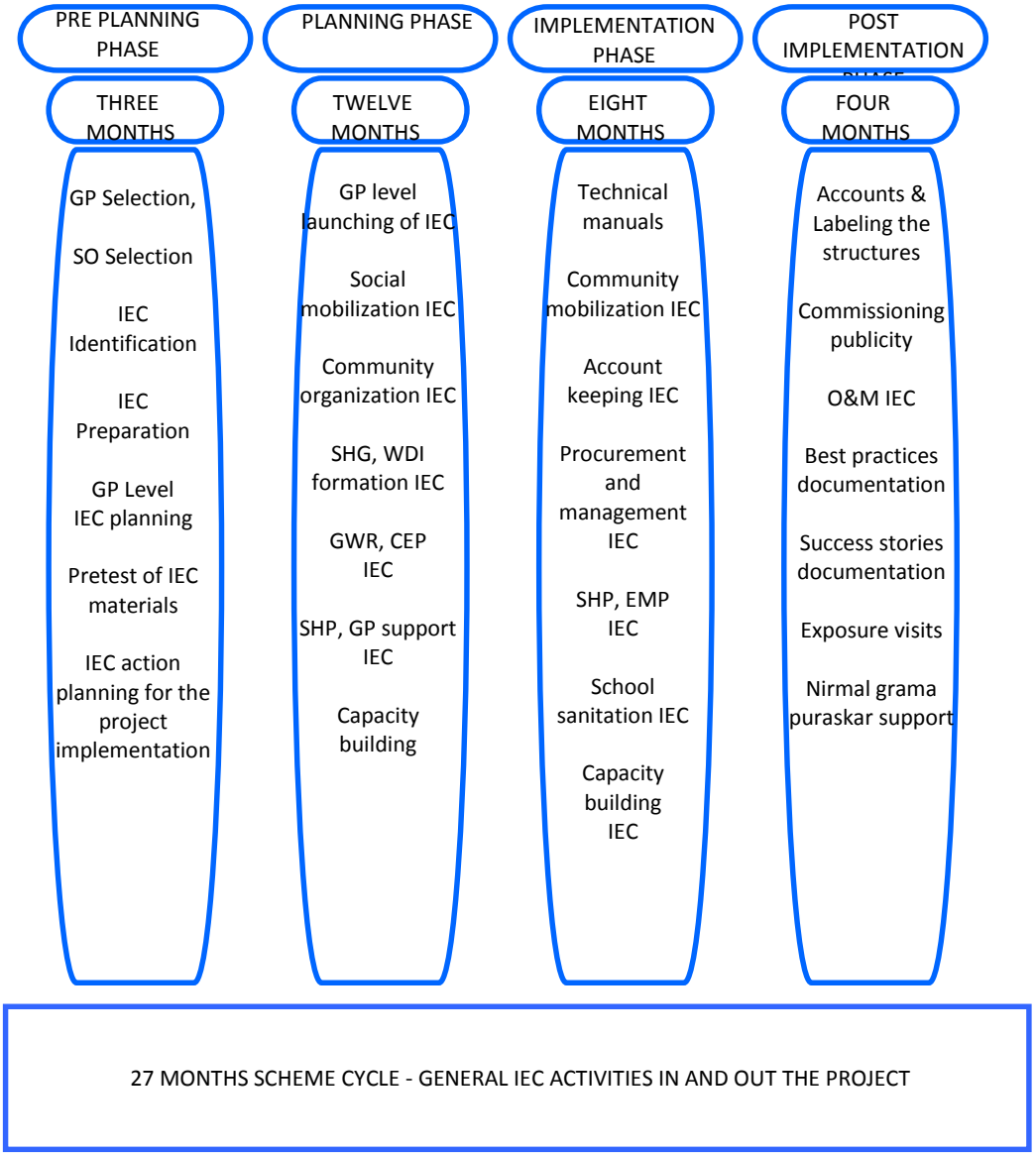
15.		Media -National	15. Project appreciation, projection of success stories and best practices on national level
16.		Media - International	16. Project appreciation projection of success stories and best practices on inter national level
17.	Documentaries and short films	English/ Malayalam Documentary/ Short film	17. Jalanidhi -1 - THE SAGA OF COMMUNITY WATER MANAGEMENT
18.		English/ Malayalam Documentary/ Short film	18. WATER AND SANITATION SECTOR OF KERALA AND ROLE OF JALANIDHI
19.	Website	Interactive two end website	19. Official website with project end and community end access interactive portal
20.	Official Newsletter Bi lingual	Community interaction	20. Monthly published newsletter with beneficiary subscription
21.	Media kit	Comprehensive information	21. Fully equipped media kit with all projects informatory materials to address any communication need - local, national or international level.
22.			22. Other special or regional IEC , based on the requirements from time to time

Project IEC Dissemination Plan and Media Network



IEC Launching Timeframe

IEC ACTIVITIES IN THE SCHEME CYCLE



Monitoring parameters

Delivery system

It shows what links in the delivery system are not functioning as expected.

Time, target and location

It reveals whether the materials have been delivered in time, to the correct people, at the correct place.

Delivery plan

It will help to correct the delivery plan when it is found inadequate. or in error

Display locations

It reveals if sites where materials are displayed need to be changed.

Timing

It informs whether IEC exercises to be made at more appropriate times

Distribution

Distribution of print materials. Are posters up, but not where the target audience can see them? Have flip charts reached the health centers where the health workers have been trained in their use?

Behavioral impact

What behavioral impact the IEC exercises created, and its level of response

Acceptance and appreciation

Whether the public accept and appreciate the IEC interventions

Adaptability and reproduction

Whether the IEC appearance or content to be changed, and the need for reproduction

When to monitor

Monitoring can be done at several periods. This may vary from one intervention to another. But the general times can be

Training materials – Immediately after the trainings
Project information – Just after the pre –planning, and planning phases

Community Mobilization –Just after the planning phase
Behavioral change – Just after the planning phase, implementation phase, and post implementation phase

GP level launching of IEC
Social mobilization IEC
Community organization IEC
SHG, WDI formation IEC
GWR, CEP IEC
SHP, GP support IEC
Capacity building

} End of 12 months planning phase – PMU/RPMU

Technical manuals
Community mobilization IEC
Account keeping IEC
Procurement and management IEC
RPMU/GPST

} End of 8 months implementation phase-

SHP, EMP IEC
School sanitation IEC
Capacity building IEC
Accounts &
Labeling the structures
Commissioning publicity
O&M IEC
Best practices documentation
Success stories documentation
Exposure visits
Nirmal grama puraskar support

} End of 4 months post implementation phase-
PMU/RPMU.GPST

Monitoring levels

State level	– PMU, KRWSA
Regional level	– RPMUs, KRWSA
Grama Panchayath level	– GPST
BG level	– BG reporter

Financial Estimation of Media Plan

Rs.3 crores has been estimated for the various IEC intervention of the Project. This will be around 0.25 % of the total project financial outlay.

Conclusion

The world of IEC is ever changing. It is really interesting and moreover informatory to deal with the changing community behavior. Each IEC intervention aims at sustainable behavioral changes which can be helpful to the global community, eventually. The IEC especially in WATSAN sector can spread a wide reach of positive management of un replenishable natural resources. Every move towards a better globe is appreciable. It is encouraging to see all world organizations are targeting WATER – the fast depleting natural resource. Hope the communication strategy of KRWSA can abide with the global movement for water conservation and management.

Appendix 7: Procurement Plan (September 2011– February 2013)

Kerala Rural Water Supply and Sanitation Project

(KRWSSP)

Procurement Plan

September 2011 - February 2013

Kerala Rural Water Supply and Sanitation Agency
Government of Kerala

Procurement Plan

I. GENERAL

1. Project information:

Country	:	India
Borrower	:	Government of Kerala
Project Name	:	Kerala Rural Water Supply and Sanitation Project- (KRWSSP) Jalanidhi II
Loan /Credit No.	:	----------.
Project Implementing Agency (PIA)	:	Kerala Rural Water Supply and Sanitation Agency (KRWSA), Government of Kerala

Association's approval Date of the Procurement Plan

[Original] : ----------

[Revision 1]* :

2. Date of General Procurement Notice : August 30,2011

3. Period Covered by this procurement plan : 18 months

II. Goods and Works and non-consulting services:

1(a). Procurement Methods and Threshold:

Sl No	Method of Procurement	Threshold (US$ Equivalent) for Goods	Threshold (US$ Equivalent) for Works
A	International Competitive Bidding	> US$ 300,000	> US$10 Million
B	National Competitive Bidding (As per para 3.3 and 3.4 of Bank Guideline)	> US$ 50,000 and less than US$ 300,000.	> US$ 50,000 and less than US$ 10 Million
C	Shopping(As per para 3.5 of Bank Guideline)	Upto US$ 50,000	Upto US$ 50,000
D	Direct Contracting	In accordance with para 3.7 and 3.8 of Bank Guideline	In accordance with para 3.7 and 3.8 of Bank Guideline
E	Community Participation in procurement (As per para 3.19 of Bank Guideline)	Upto US$ 50,000	Upto US$ 50,000
F	Force Account	Not applicable	As per para 3.9 of Bank Guideline

1 (b)) Procurement Decisions subject to Prior Review by the Association as stated in Appendix 1 to the Guidelines for Procurement.

Sl No	Procurement Method	Prior Review Threshold (US$ Equivalent)IDA review	Comments
1	ICB (Goods)	All contracts	
2	NCB (Goods)	First procurement irrespective of value and all subsequent contracts above US$ 200,000.	All other procurement will be subject to Post Review
3	ICB (Works)	All contracts	
4	NCB (Works)	a)First three procurements Irrespective of value. b) First three Multi GP schemes irrespective of the value shall be prior reviewed. c) All subsequent contract above US $1,000,000 shall be prior reviewed	All other procurement will be subject to Post Review
5	Shopping	-	All procurement will be subject to post review
6	Community Contracting	-	All procurement to be Post Review
7	Direct Contracting	All contracts require prior clearance and shall be prior reviewed.	Goods and works which meet the requirement of Paragraph 3.7 of the Association Guidelines
9.	Force Account	All procurement requires prior IDA clearance.	Works which meet the requirement of Paragraph 3.9 of the Association Guidelines

2. Specific Procurement arrangements for NCB contracts:

All National Competitive Bidding [NCB] will be conducted as per para 3.3 and 3.4 of the guideline and shall adhere to the following provisions :

i) 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;

ii) 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;

iii) 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;

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

v) 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 Bank only in cases of *Force Majure* and circumstances beyond the control of the Purchaser / Employer);

vi) Re-bidding shall not be carried out without the prior concurrence of the Bank. The system of rejecting bids outside a pre-determined margin or "bracket" of prices shall not be used in the project;

vii) Rate contracts entered into by Directorate General of Supplies & Disposals, will not be acceptable as a substitute for NCB procedures. Such contracts will be acceptable however for any procurement under National Shopping procedures;

viii) Two or three envelop system will not be used.

III. Selection of Consultants

1. Selection Methods and Prior Review Threshold:

	Selection Method	Threshold(US$ Equivalent)	Prior Review Threshold (US$ Equivalent)	Comments
1.	**Competitive Methods (Firms):** a) QCBS b) QBS c) Least Cost Selection. d) Fixed Budget Selection	No threshold	First contract irrespective of value and subsequently all Contracts estimated to cost US$ 100,000 or more	All other contracts will be subject to Post Review
	c) Consultant Qualification	< US $100000		
2	**Single Source (Firms/individuals).**	As per para 3.8 to 3.11 of the Guideline.	All Single source contracts require appropriate justification and shall be prior reviewed.	
3	**Individual consultants (competitive)**.	In accordance with the Section V of the Guideline.	All Contracts estimated to cost US$ 50,000 or more	All other contracts will be subject to Post Review

2. Short list comprising entirely of national consultants: Short list of consultants for services, estimated to cost less than $USD 500,000equivalent per contract, may comprise entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines.

3. Selection of NGO/Support Organizations (SO): Selection of NGO/SO shall be done in accordance with the provision of para 3.16 of the Bank guideline Selection and employment of consultant : under IBRD loans and IDA credits dated January 2011 and shall follow the selection criteria specified in the Procurement Manual.

IV Procurement Manual :

KRWSA has prepared a procurement manual confirming to Bank guideline which will guide all the implementing agencies at all levels .All the procurement for Goods, works, services under the project shall be carried out in accordance with the provision s of the World Bank guideline : Procurement of Goods ,works and non consulting services and Selection and employment of consultant : under IBRD loans and IDA credits dated January 2011 . In case of any inconsistency between the Procurement manual procedures, GFR of GOI and the Bank guidelines dated January 2011, the latter shall prevail for procurement under the project

V. Procurement Packages with Methods and Time Schedule

Procurement Plan for Works, Goods and Consultancy Services is attached at Annexure-1A , Annexure -1B and Annexure 1C respectively

VI. Implementing Agency Capacity Building Activities with Time Schedule

1. The agreed Capacity Building Activities are listed below with the agreed time schedule

No.	Expected outcome/ Activity Description	Year 1	Year 2	Year 3
1.	Training on procurement for all staff of KRWSA and RPMU ,	X		
2	Training and handholding on procurement by RPMU for the procurement by GP .	X	X	X
3	Staff who have earlier received procurement training will provide procurement training to Engineers in GPST/GPMU .	X	X	X

Jalanidhi II-Batch I- List of Gram Panchayaths

Sl No	District	Name of GP
1	Trivandrum	Kattakkada
2		Manikkal
3	Kollam	Mynagappally
4		Kulasekharapuram
5	Pathanamthitta	Kunnamthanam
6		Ranni
7	Alleppey	Punnapra North
8	Kottayam	Kadaplamattom
9		Mutholi
10	Iddukki	Konnathady
11		Idukki-Kanjikkuzhi
12	Ernakulam	Kadungalloor
13	Thrissur	Elavally
14		Nadathara
15	Palakkad	Elavanchery
16	Malappuram	Karuvarakundu
17		Kuttippuram
18	Kozhikode	Thamarassery
19		Cheruvannur
20	Kannur	Irikkur
21		Udayagiri
22	Wayanad	Thariyode
23		Noolpuzha
24	Kasargode	Puthige
25		Pullur-Periya
26		Padne

18 Months Procurement Plan for Goods (September 2011 to February 2013)																						
SlNo.	Description of goods	No of units	Unit cost(Rs)	No.of contracts	Estimated Value of each contract (Rs in lakhs)	Estiamted total Cost (RS in lakh)	Method of procurement	Contracting Agency	Design investigationmpelted (Date)	Estimateprepared & sanctioned (Date & Value)	Preparation of bid document (Date)	Banks no objection to bidding document (Date)	Bids		Contract award decided (Date/Value/Currency)	Banks no objection contract award (Date)	Contract sigend (Date/ Value/ Curency)	Contract No.	Namenof contractor Nationality	WBR No.	Date of completion of contract	Expenditure incrued to date (Rs lakhs)
													Date of invitation of \bid	Date of Bid Opening								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
A	Furniture & Interiors (PMU&RPMU)																					
1	Conf. Table PMU	1	500000	1	5.0	5.0	Shopping	KRWSA (PMU)			1-Nov-11	NA	6-Nov-11	21-Nov-11	26-Nov-11							
2	Conf. Table RPMU	3	200000	3	2.0	6.0	Shopping	RPMU			1-Oct-11	NA	6-Oct-11	21-Oct-11	26-Oct-11							
3	Office furniture	3	25,000	2	0.4	0.8	Shopping	KRWSA (PMU)			1-Oct-11	NA	6-Oct-11	21-Oct-11	26-Oct-11							
4	Executive Chairs	12	15,000	4	0.5	1.8	Shopping	KRWSA (PMU)/ RPMU			1-Oct-11	NA	6-Oct-11	21-Oct-11	26-Oct-11							
5	Ordinary Chairs	60	5000	4	0.8	3.0	Shopping	KRWSA (PMU)/ RPMU			1-Oct-11	NA	6-Oct-11	21-Oct-11	26-Oct-11							
6	Plastic Chairs	600	1000	4	1.5	6.0	Shopping	KRWSA (PMU)/ RPMU			1-Oct-11	NA	6-Oct-11	21-Oct-11	26-Oct-11							
A1	Furniture & Interiors (GPST)																					
7	Tables, Chairs , Alimarah etc for 26 GPs - Batch-I	7 X 26	34410	3	3.0	8.9	Shopping	RPMU			1-Oct-11	NA	6-Oct-11	21-Oct-11	26-Oct-11							
8	Tables, Chairs , Alimarah etc for 68 GPs - Batch-II	7 X 68	34410	3	7.8	23.4	Shopping	RPMU			1-Oct-11	NA	6-Oct-11	21-Oct-11	26-Oct-11							
B	Office Equipments (PMU& RPMU)																					
9	Fax machines	4	10,000	4	0.1	0.4	Shopping	KRWSA (PMU)/RPMU			1-Nov-11	NA	6-Nov-11	21-Nov-11	26-Nov-11							
10	Scanners & Photocopiers	5	55000	4	0.7	2.7	Shopping	KRWSA (PMU)/RPMU			1-Oct-11	NA	6-Oct-11	21-Oct-11	26-Oct-11							
11	LCD Projector /Monitor	4	175000	4	0.7	2.8	Shopping	KRWSA (PMU)/RPMU			1-Nov-11	NA	6-Nov-11	21-Nov-11	26-Nov-11							

18 Months Procurement Plan for Goods (September 2011 to February 2013)																					
SlNo.	Description of goods	No of units	Unit cost(Rs)	No.of contracts	Estimated Value of each contract (Rs in lakhs)	Estiamted total Cost (RS in lakh)	Method of procurement	Contracting Agency	Design investigationmpelted (Date)	Estimateprepared & sanctioned (Date & Value)	Preparation of bid document (Date)	Banks no objection to bidding document (Date)	Bids		Contract award decided (Date/Value/Currency)	Banks no objection contract award (Date)	Contract sigend (Date/ Value/ Curency)	Contract No.	Namenof contractor Nationality	WBR No.	Date of completion of contract	Expenditure incrured to date (Rs lakhs)
													Date of invitation of \bid	Date of Bid Opening								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
12	Fan (PMU-5, RPMU (5) ,Speakers/PA system -4 Nos	14	430000	4	1.1	4.3	shopping	KRWSA (PMU)/RPMU			1-Jan-12	NA	6-Jan-12	21-Jan-12	26-Jan-12							
13	Airconditioners(PMU(10) RPMU (6)) & Refrigerators (4)	20	250000	4	2.5	10.0	shopping	KRWSA (PMU)/RPMU			1-Jan-12	NA	6-Jan-12	21-Jan-12	26-Jan-12							
14	Video Confercencing faciltites	4	1250000	4	12.5	50.0	shopping	KRWSA (PMU)/RPMU			2-Jan-12	NA	7-Jan-12	22-Jan-12	27-Jan-12							
15	Telephone instruments - Land,Mobile, ,EPABX	30	60000	4	4.5	18.0	shopping	KRWSA (PMU)/RPMU			1-Oct-11	NA	6-Oct-11	21-Oct-11	26-Oct-11							
C	Computer & Acessories																					
(a)	PMU																					
16	Servers	2	1000000	2	10.0	20.0	shopping	KRWSA (PMU)			1-Jan-12	NA	6-Jan-12	21-Jan-12	26-Jan-12							
17	PCs/Laptops	41	40000	4	4.1	16.4	shopping	KRWSA (PMU)			6-Jan-12	NA	11-Jan-12	26-Jan-12	31-Jan-12							
18	Printers	10	15000	2	0.8	1.5	shopping	KRWSA (PMU)			6-Jan-12	NA	11-Jan-12	26-Jan-12	31-Jan-12							
19	Software(OS,Antivirus ,networking etc)	4	1875000	4	18.8	75.0	shopping	KRWSA (PMU)/RPMU			1-Oct-11	NA	6-Oct-11	21-Oct-11	26-Oct-11							
20	UPS/Generator-PMU	1	2000000	1	20.0	20.0	Shopping	KRWSA (PMU)			1-Jan-12	NA	6-Jan-12	21-Jan-12	26-Jan-12							
(b)	RPMU																					
21	Servers	3	200000	3	2.0	6.0	shopping	RPMU			1-Oct-11	NA	6-Oct-11	21-Oct-11	26-Oct-11							
22	PC	21	30000	3	2.1	6.3	shopping	RPMU			1-Oct-11	NA	6-Oct-11	21-Oct-11	26-Oct-11							
23	Printers (@3 each)	9	50000	3	1.5	4.5	shopping	RPMU			1-Oct-11	NA	6-Oct-11	21-Oct-11	26-Oct-11							
24	UPS-RPMU	3	612500	3	6.1	18.4	shopping	RPMU			8-Jan-12	NA	13-Jan-12	28-Jan-12	2-Feb-12							
(c)	Batch I* (for GPST)																					
25	Server	26	150000	3	13.0	39.0	shopping	RPMU			1-Oct-11	NA	6-Oct-11	21-Oct-11	26-Oct-11							
26	PC s	26	35000	3	3.0	9.1	shopping	RPMU			1-Oct-11	NA	6-Oct-11	21-Oct-11	26-Oct-11							
27	Printers (@2 each)	52	15000	3	2.6	7.8	shopping	RPMU			1-Oct-11	NA	6-Oct-11	21-Oct-11	26-Oct-11							

18 Months Procurement Plan for Goods (September 2011 to February 2013)																					
SlNo.	Description of goods	No of units	Unit cost(Rs)	No.of contracts	Estimated Value of each contract (Rs in lakhs)	Estiamted total Cost (RS in lakh)	Method of procurement	Contracting Agency	Design investigationmpelted (Date)	Estimateprepared & sanctioned (Date & Value)	Preparation of bid document (Date)	Banks no objection to bidding document (Date)	Bids		Contract award decided (Date/Value/Currency)	Banks no objection contract award (Date)	Contract sigend (Date/ Value/ Curency)	Contract No.	Namenof contractor Nationality	WBR No.	Date of completion of contract	Expenditure incrured to date (Rs lakhs)
													Date of invitation of \bid	Date of Bid Opening								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
28	UPS GPST	26	5000	3	0.4	1.3	shopping	RPMU			1-Oct-11	NA	6-Oct-11	21-Oct-11	26-Oct-11							
(d)	Batch II*(for GPST)																					
29	Server	68	150000	3	34.0	102.0	NCB	RPMU			1-Jun-12	NA	6-Jun-12	21-Jun-12	26-Jun-12							
30	PC s	68	35000	3	7.9	23.8	shopping	RPMU			1-Jun-12	NA	6-Jun-12	21-Jun-12	26-Jun-12							
31	Printers (@2 each)	136	15000	3	6.8	20.4	shopping	RPMU			1-Jun-12	NA	6-Jun-12	21-Jun-12	26-Jun-12							
32	UPS GPST	68	4625	3	1.0	3.1	shopping	RPMU			1-Jun-12	NA	6-Jun-12	21-Jun-12	26-Jun-12							
	TOTAL			101		517.7																

18 Months Procurement Plan for Works (September 2011 to February 2013)																						
Sl.No	Description of works			Implementing Agency	No. Of Contracts	Estimated value of each contract(Rs lac)	Estiamted total Cost (Rs in lac)	Method of procurement	Design investigation compelted (Date)	Estimateprepared&sanctioned (Date & Value)	Preparation of bid document (Date)	Banks no objection to bidding document (Date)	Bids		Contract award decided (Date/Value/Currency)	Banks no objection contract award (Date)	Contract sigend (Date/ Value/ Curency)	Contract No.	Name of contractor &Nationaliy	WBR No.	Date of completion of contract	Expenditure incruured to date
	Description of works @	No. of Scheme	unit cost (Rs)										Invitation (Date)	Opened on (Date								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
A	Small Schemes *																					
1	Open Well	306	1045958	BC	306	10.46	3,201	CC/Shopping	1-Oct-12	16-Oct-12	26-Oct-12	NA	29-Oct-12	28-Nov-12	03-Dec-12							
2	Bore Well	72	768347	BC	72	7.68	553	CC/Shopping	1-Oct-12	16-Oct-12	26-Oct-12	NA	29-Oct-12	28-Nov-12	03-Dec-12							
3	Spring	18	406224	BC	18	4.06	73	CC/Shopping	1-Oct-12	16-Oct-12	26-Oct-12	NA	29-Oct-12	28-Nov-12	03-Dec-12							
4	Specific water treatment plant for quality affected habitations	40	700000	BC	40	7.00	280	Shopping	1-Nov-12	16-Nov-12	26-Oct-12	NA	29-Oct-12	28-Nov-12	03-Dec-12							
5	Tribal Water Supply Schemes	36	1,150,554	BC	36	11.51	414	CC/Shopping	1-Dec-12	16-Dec-12	26-Dec-12	NA	29-Dec-12	28-Jan-13	02-Feb-13							
B																						
6	Open well for 5 House holds (Common)	24	100000	BC	24	1.00	24	CC/Shopping	1-Dec-12	16-Dec-12	26-Dec-12	NA	29-Dec-12	13-Jan-13	18-Jan-13							
7	Open well with pulley for Individual house holds	840	20000	BC	840	0.20	168	CC/Shopping	1-Dec-12	16-Dec-12	26-Dec-12	NA	29-Dec-12	13-Jan-13	18-Jan-13							
8	Filter point well & Others	240	20000	BC	240	0.20	48	CC/Shopping	1-Dec-12	16-Dec-12	26-Dec-12	NA	29-Dec-12	13-Jan-13	18-Jan-13							
9	Rain water Harvesting for Individual holds	1,476	24,157	HH	1476	0.24	357	CC	1-Jan-13	16-Jan-13	26-Jan-13	NA	29-Jan-13	28-Feb-13	05-Mar-13							
	Rehabilitation schemes																					
10	Transfer & Rehabilitation of Existing Single GP Water Supply schemes	86	564,699	BC	86	5.65	487	CC/Shopping	1-Dec-12	16-Dec-12	26-Dec-12	NA	29-Dec-12	28-Jan-13	02-Feb-13							
11	Transfer and rehabilitation of existing single GP KWA water supply Schemes	50	2,752,796	BC	50	27.53	1,376	CC/Shopping /NCB	1-Dec-12	16-Dec-12	26-Dec-12	NA	29-Dec-12	28-Jan-13	02-Feb-13							
	Ground Water Recharge works (GWR)						-															
12	Ground water Recharge works at GP level $	26	3,432,000	GP	26	34.32	892	NCB/shopping	1-Dec-12	16-Dec-12	26-Dec-12	NA	29-Dec-12	28-Jan-13	02-Feb-13							
C	Sanitation Schemes																					
a)	Solid Waste																					
13	Household level - Vermi composting units for 1.5 kg/day (50:50)	1,000	800	HH	1,000	0.01	8	CC	1-Dec-12	16-Dec-12	26-Dec-12	NA	29-Dec-12	28-Jan-13	02-Feb-13							
14	Household level ring composting units (50:50) (1.5 kg/day waste)*	1,000	1,800	HH	1,000	0.02	18	CC	1-Dec-12	16-Dec-12	26-Dec-12	NA	29-Dec-12	28-Jan-13	02-Feb-13							
15	Household level floating/fixed dome type bio-gas units (50:50) (2.5 kg/day waste)*	200	10,000	HH	200	0.10	20	CC	1-Dec-12	16-Dec-12	26-Dec-12	NA	29-Dec-12	28-Jan-13	02-Feb-13							

18 Months Procurement Plan for Works (September 2011 to February 2013)

Sl.No	Description of works			Implementing Agency	No. Of Contracts	Estimated value of each contract(Rs lac)	Estiamted total Cost (Rs In lac)	Method of procurement	Design investigation compelted (Date)	Estimateprepared&sanctioned (Date & Value)	Preparation of bid document (Date)	Banks no objection to bidding document (Date)	Bids		Contract award decided (Date/Value/Currency)	Banks no objection contract award (Date)	Contract sigend (Date/ Value/ Curency)	Contract No.	Name of contractor &Nationaliy	WBR No.	Date of completion of contract	Expenditure incruured to date
	Description of works @	No. of Scheme	unit cost (Rs)										Invitation (Date)	Opened on (Date							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
16	Community level (400kg of waste on an avg.)bio gas plant for organic waste in market,bustand Township (80:20)	10	552,000	GP	10	5.52	55	shopping	1-Dec-12	16-Dec-12	26-Dec-12	NA	29-Dec-12	28-Jan-13	02-Feb-13							
17	Processing units for inorganic waste (plastics) shreding at a cluster level. (80:20)	5	525,000	GP	5	5.25	26	shopping	1-Dec-12	16-Dec-12	26-Dec-12	NA	29-Dec-12	28-Jan-13	02-Feb-13							
b)	Liquid Waste																					
18	Storm water drainage interventions in critical sections of GPs to protect the water sources. (80:20)	20	2,900,000	GP	20	29.00	580	NCB/ shopping#	1-Dec-12	16-Dec-12	26-Dec-12	NA	29-Dec-12	28-Jan-13	02-Feb-13							
c)	Safe disposal of human excreta & Others																					
19	Community septic tank solutions in densely populated colonies (80:20)	15	375,000	GP	15	3.75	56	shopping	1-Dec-12	16-Dec-12	26-Dec-12	NA	29-Dec-12	28-Jan-13	02-Feb-13							
20	Demonstraing new technologies for latrine solutions in difficult areas (80:20)	2	50,000	GP	2	0.50	1	shopping	1-Dec-12	16-Dec-12	26-Dec-12	NA	29-Dec-12	28-Jan-13	02-Feb-13							
21	Pay and use latrine in each GP in market,township, busstand etc and should be gneder sensitive (80:20)	2	820,000	GP	2	8.20	16	shopping	1-Dec-12	16-Dec-12	26-Dec-12	NA	29-Dec-12	28-Jan-13	02-Feb-13							
					5,468		8,655															

- *- with an average of 41 HHs
- Bidding documents as agreed with IDA shall be used for carrying out procurement of works.
- The contract exceeding the Shopping threshold of $50000 shall be procured following NCB method.
- This proc plan covers the work to be undertaken in 26 GPs under Batch I
- Proc Plan will be revised for Batch II /III /IV
- All estimates are based on current SSR
- KRWSA will provide professional & technical support for all schemes to be executed by BC/HH and GP and ensure that these are executed in accordance with the agreed procurement procedures

18 Months Procurement Plan For Consultancy & Services (September 2011 to February 2013)																			
													Rupees in Lakhs						
Sl. No.	Description of Services	No. of contracts	Estimated value of each contract (Rs lakhs)	Estimated Total Cost (Rs. lakh)	Method of Selection	Implementing Agency	Advertising for Short listing (Date)	TOR Shortlist Finalised (Date)	RFP Final Draft to be forwarded to the Bank (Date)	No objection from Bank for TOR /Shortlist/ Final RFP (Date)	RFP Issued (Date)	Proposals to be Received by the Project Authorities	Evalution to be Fianalised (Technical/# Combined/ Draft Contract/ Final Contract) (Date) **	No Objection by the Bank (Technical #Combined /Draft Contract/ Final Contract) (Date) **	Contract Numbers, Value and Curency	Name of Consultant / Nationality	Services to be Completed (Date)	**WBR No.	Exp. Incured to Date
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	Consultancy for Development of Water Security & Plan for 23 GPs out of 26 GPs in Batch I	3	37.3	112	LCS	RPMU	18-Jul-11	27-Aug-11	01-Sep-11	NA	02-Sep-11	22-Sep-11	07-Oct-11						
2	Hiring of Support Orginisation for 26 GPs-Batch I [a]	26	21.5	559	QBS/ SSS/ CQ	GP							30-Oct-11						
3	Consultancy for Process Monitoring for 26 GPs	3	6.7	20	LCS	KRWSA	01-Apr-12	26-Apr-12	27-Apr-12	NA	28-Apr-12	12-May-12	27-May-12						
4	Independent Construction.Quality &Surveillance Consultancy for 26 GPs	3	20.0	60.0	LCS	RPMU	01-Dec-12	26-Dec-12	27-Dec-12	NA	28-Dec-12	11-Jan-13	26-Jan-13						
5	Tehcnical consultancy for type design of specific treatment plant	1	2	2	IC	KRWSA	01-Oct-12	26-Oct-12	27-Oct-12	NA	28-Oct-12	11-Nov-12	26-Nov-12						
6	Consultancy support for piloting regional septage treatment	1	20	20	CQ	KRWSA	01-Jan-13	26-Jan-13	27-Jan-13	NA	28-Jan-13	11-Feb-13	26-Feb-13						
7	Technical consutancy for type design of community septic Tank	1	2	2	CQ	KRWSA	01-Oct-12	26-Oct-12	27-Oct-12	NA	28-Oct-12	11-Nov-12	26-Nov-12						
8	Technical consutancy for design of pay and use toilets	1	2	2	CQ	KRWSA	01-Sep-12	26-Sep-12	27-Sep-12	NA	28-Sep-12	12-Oct-12	27-Oct-12						
9	Technical consutancy for storm water drainage	3	8	24	CQ	RPMU	01-Sep-12	26-Sep-12	27-Sep-12	NA	28-Sep-12	12-Oct-12	27-Oct-12						
10	Technical Support for type design Demo toilets	1	0.6	0.6	IC	KRWSA	01-Sep-12	26-Sep-12	27-Sep-12	NA	28-Sep-12	12-Oct-12	27-Oct-12						
11	Software development for MIS	1	90	90	LCS	KRWSA	01-Dec-11	26-Dec-11	27-Dec-11	NA	28-Dec-11	11-Jan-12	26-Jan-12						
12	Technical consultancy for Water Security & Development Plan for 68 GPs -Batch II	3	113.33	340	LCS	RPMU	01-Feb-13	26-Feb-13	27-Feb-13	NA	28-Feb-13	14-Mar-13	29-Mar-13						

18 Months Procurement Plan For Consultancy & Services (September 2011 to February 2013) Rupees in Lakhs

Sl. No.	Description of Services	No. of contracts	Estimated value of each contract (Rs lakhs)	Estimated Total Cost (Rs. lakh)	Method of Selection	Implementing Agency	Advertising for Short listing (Date)	TOR Shortlist Finalised (Date)	RFP Final Draft to be forwarded to the Bank (Date)	No objection from Bank for TOR /Shortlist/ Final RFP (Date)	RFP Issued (Date)	Proposals to be Received by the Project Authorities	Evalution to be Fianalised (Technical/# Combined/ Draft Contract/ Final Contract) (Date) **	No Objection by the Bank (Technical #Combined /Draft Contract/ Final Contract) (Date) **	Contract Numbers, Value and Curency	Name of Consultant / Nationality	Services to be Completed (Date)	**WBR No.	Exp. Incured to Date
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
13	Hiring of Support Orginisation for 68 GPs-Batch II	68	21.5	1462	QBS/ SSS/ CQ	GP#	01-Jan-13	26-Jan-13	27-Jan-13	NA	28-Jan-13	27-Feb-13	14-Mar-13						
14	Consultancy for Process Moritoring for 68 GPs (Batch II)	3	20.0	60	LCS	KRWSA	01-Aug-12	26-Aug-12	27-Aug-12	NA	28-Aug-12	11-Sep-12	26-Sep-12						

18 Months Procurement Plan For Consultancy & Services (September 2011 to February 2013)																			Rupees in Lakhs
Sl. No.	**Description of Services**	**No. of contracts**	**Estimated value of each contract (Rs lakhs)**	**Estimated Total Cost (Rs. lakh)**	**Method of Selection**	**Implementing Agency**	**Advertising for Short listing (Date)**	**TOR Shortlist Finalised (Date)**	**RFP Final Draft to be forwarded to the Bank (Date)**	**No objection from Bank for TOR /Shortlist/ Final RFP (Date)**	**RFP Issued (Date)**	**Proposals to be Received by the Project Authorities**	**Evalution to be Fianalised (Technical/# Combined/ Draft Contract/ Final Contract) (Date) ****	**No Objection by the Bank (Technical #Combined /Draft Contract/ Final Contract) (Date) ****	**Contract Numbers, Value and Curency**	**Name of Consultant / Nationality**	**Services to be Completed (Date)**	****WBR No.**	**Exp. Incured to Date**
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
	KRWSA Part																		
27	Water Quality Surveillance Services	3	3.3	10.0	QBS	RPMU	01-Dec-12	26-Dec-12	27-Dec-12	NA	28-Dec-12	11-Jan-13	26-Jan-13						
	Total	173		4529															

Note_

All single source selection will be subject to prior approval and review of IDA.

Bank standard RFP shall be used for carrying out procurement of all consultancy.

Procurement of all SOs shall be carrried out in accordance with the Bank guidelines and selection criteria specified in the procurement manual

Item no 3 & 14 , KRWSA will enter into 3 different contracts for 3 RPMUs

Item No 16 , there will be 9 GPs under 3 multi GP schemes coming under 18 months plan (ie 3 GPs per scheme= 3 x 3) and hence 9 different contracts

Item No 17, there will be for two large schemes coming under 18 months plan and hence two different contracts

Item No 22, there will be 150 schemes for study and 16-17 no of schemes will be handled by one contract due to complexity ie 150/16 =9 contracts approx (3 contract per RPMU))