

KARNATAKA NEERAVARI NIGAM LTD

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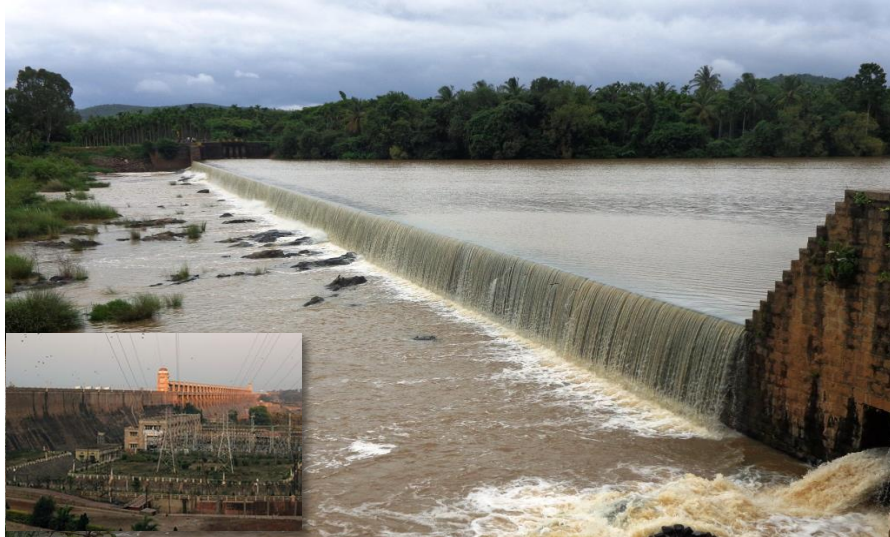
**ADVANCED CENTRE FOR
INTEGRATED WATER RESOURCES MANAGEMENT**



**Karnataka Integrated and Sustainable Water Resources
Management Investment Program**

ADB LOAN No. 0085-IND/LOAN No. 3172

**Quarterly Progress Report
July-September 2016**



**Project Management Unit, KISWRMIP
Karnataka Neeravari Nigama Ltd (KNNL)**

Project Support Consultant

SMEC International Pty. Ltd. Australia

in association with

SMEC (India) Pvt. Ltd.



OCTOBER 2016

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Report for:	Karnataka Neeravari Nigam Ltd (KNNL)

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II	Minutes of workshop on project orientation for WUCS
III	Brief Note On Water Users Co-operative Society
IV	Communication Material regarding roles and responsibilities of O&M of canals and alternative cropping methods



GLOSSARY

AC-IWRM	Advanced Center for Integrated Water Resource Management
ADB	Asian Development Bank
BRP	Bhadra River Project
BRRBC	Bhadra Reservoir Right Bank Canal
CADA	Command Area Development Authority
CDTA	Capacity Development Technical Assistance
CPM	Community Participation Management
CWC	Central Water Commission
DATC	District Agriculture Training Centre
DPR	Detailed Project Report
DSS	Decision Support System
EARF	Environmental Assessment Review Framework
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
FAM	Facility Administration Manual
FAO	UN Food and Agriculture Organisation
FFS	Farmer Field School
GoK	Government of Karnataka
HAMPI	Hampi World Heritage
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
IEC	Information Education and communication
IEE	Initial Environmental Evaluation
IWRM	Integrated Water Resource Management
KERS	Karnataka Engineering Research Station Karnataka Integrated and Sustainable Water Resource Management Investment Program
KISWRMIP	
KNNL	Karnataka Neeravari Nigam Limited
KVK	Krishi Vigyan Kendra (Agriculture Science Centre)
LBHLC	Left Bank High Level Canal
LBMC	Left Bank Main Canal
MASSCOTE	Mapping Systems and Services for Canal Operation Techniques
MFF	Multi-tranche Finance Facility
MIS	Management Information System
MOU	Memorandum of Understanding
MTR	Mid Term Report
NCA	Net Command Area
NEP	National Environment Policy
NGO	Non-Government Organisation
O&M	Operation and Maintenance



PALMS	Productive Agriculture Linkages and Marketing System
PCC	Program Co-ordination Committee
PD	Project/Project Director
PIO	Project Implementation Office
PMIS	Program Monitoring Information System
PMMS	Program Monitoring Management System
PMU	Project Management Unit
PPMS	Program Performance Monitoring System
PPTA	Project Preparation Technical Assistance
PRA	Participatory Rural Appraisal
PSC	Project Support Consultant
QCBS	Quality Cost Based System
QPR	Quarterly Progress Report
RBC	Raya Basava Canal
RBHLC	Right Bank High Level Canal
RBLLC	Right Bank Low Level Canal
RFP	Request for Proposal
RICM	Regional Institute of Cooperative Management
RMP	Risk Management Plan
SC	State Steering Committee
SGoK	State Government of Karnataka
SHG	Self-Help Group
SMEC	Snowy Mountains Engineering Corporation
SPS	Safeguard Policy Statement
SRI	System of Rice Intensification
SST	Support Services Team
TLBC	Tungabhadra Left Bank Canal
TNA	Training Needs Assessment
ToR	Terms of Reference
TRBC	Tungabhadra Right Bank Canal
VNC	Vijayanagara Channels
WALMI	Water And Land Management Institute
WBADMIP	West Bengal Accelerated Development of Minor Irrigation Project
WRD	Water Resource Department
WRIS	Water Resources Information System
WRS	Water Resources Specialist
WUA	Water Users Association
WUCS	Water Users Co-operative Society



1 PROJECT BACKGROUND

1.1 INTRODUCTION

Karnataka is a water stressed State in India with ever increasing inter-sectoral water demands, the major sector being agriculture.

With the assistance of the Asian Development Bank (the Bank), the State Government of Karnataka has launched the *Karnataka Integrated and Sustainable Water Resources Management Investment Program* (the Program), with the objective of improving water availability for competing water demands in the selected river basins by implementing integrated water resources management (IWRM) and improving irrigation services delivery in the State. The program is expected to increase water use efficiency, and provide economic opportunities, in particular, to women, and improve rural incomes. The focus of the Program for implementation of physical works is Krishna Basin (**Figure 1**), in specific, the Tungabhadra Sub-basin. However, the IWRM activities will be implemented State-wide.

The multi-tranche financing facility (MFF) for the KISWRMIP and the periodic financing request (PFR) for Project-1 were approved by ADB on 25 September 2014 and 17 October 2014 respectively. The total cost of the investment program over the period 2014-2021 is expected to be \$225 million, with ADB financing amounting to \$150 million. Project 1, estimated at \$48 million, is expected to be completed by September 2018. Project 1 financing comprises \$31 million from ADB's ordinary capital resources, \$16.6 million from the Government of Karnataka (GOK), and \$400,000 of beneficiary contribution. The loan is effective from 13 July 2015 and loan closing is scheduled for 31 March 2019.

1.2 PROJECT MANAGEMENT UNIT

Karnataka Neeravari Nigam Limited (KNNL) is the Executing Agency for Implementation of ADB assisted KISWRMIP. The Project Management Unit (PMU) is headed by the Project Director and Managing Director, KNNL with its headquarters at Bengaluru. Project Implementation Offices (PIOs) are headed by Chief Engineer of Upper Tunga Project Zone, Shivamogga for Project -1 and Chief Engineer of Irrigation Central Zone for Project 2 at Munirabad.

M/s SMEC International Pty. Ltd., Australia has been contracted as the Project Support Consultants by KNNL to provide consultancy services for the Tranche -1. The PSC's time based contract has commenced in December 2015 through 2019. An updated list of the PMU staff is given in **Table 1**.

Table 1: List of PMU Staff

Sl. No.	Name	Designation
1.	R. Rudraiah	Program Director
2.	G.E. Yathishchandran	Superintending Engineer
Budget/ Administration Cell		
3.	N. Ravindran	General Manager (Finance)
4.	Nagaveena	Asst. General Manager (Finance)
5.	Rajiv Patil	Manager (Finance)
6.	Praveen Reddy	Finance Assistant



Sl. No.	Name	Designation
Monitoring Management Cell		
7.	Eswara Chandra K.S.	Program Officer (Additional charge)
8.	-	MIS & GIS Communication Expert
Irrigation Management Cell		
9.	C.S. Nagendra	Executive Engineer (Designs)
10.	Manjunath S.	Executive Engineer (I/c)-(Project Branch)
11.	Eswara Chandra K.S.	Technical Assistant
12.	Deepa K.	Assistant Engineer
13.	C. B. Niranjana	Assistant Engineer
14.	P.R.M. Sharma	EAP Consultant (Part time)

This is the third Quarterly Progress Report (QPR) for the period July-September 2016. The QPR presents main achievements, meetings, workshops, trainings and other events, key challenges faced, and targets achieved during reporting quarter.

1.3 PROJECT BASIC DATA

The project basic data is given in **Table 2**.

Table 2: Project Basic Data

Project Basic Data		
1	Name of the Project	Karnataka Integrated and Sustainable Water Resources Management Investment Program (KISWRMIP)
2	Project Number	MFF 0085: Loan 3172 IND
3	Sector	Agriculture & Natural Resources
4	Financial Plan for MFF 2014-2021	ADB \$150 million, GoK\$ 75 million= \$225 million (ADB INR750 Cr : GoK INR 375 Cr = INR.1125 Cr)@INR. 50/\$
5	First Tranche 2014-2019	ADB \$31 million: GoK\$ 17 million= \$48 million (ADB INR155 Cr: GoK Rs 85 Cr=INR 240 Cr) @INR. 50/\$
(i)	Loan Signed on	07 May 2015
(ii)	Loan effective from	13 July 2015
(iii)	Loan Closing Date	31 March 2019
(iv)	Executing Agency	Water Resources Department of Karnataka through (Karnataka Neeravari Nigam Limited)
(v)	Implementing Agencies	Advanced Centre for IWRM & Karnataka Neeravari Nigam Limited
6	Goals & Objectives	The Project aims to manage and sustain the increasingly scarce water resources in the selected river basins in Karnataka
7	Activities involved	(i) State and basin institutions strengthened for IWRM,- (AC-IWRM) (Strengthening the relevant institutions, specifically the Advanced Centre for IWRM (AC-IWRM) for advancing policy review, river basin management, water resources information systems establishment)



Project Basic Data

		(ii) Irrigation system infrastructure and management modernized,(KNNL) Modernization of irrigation system infrastructure and management in the Gondhi sub-project, including strengthening of water user cooperative societies (WUCS). Flow Measurement and Telemetry supply and Installation in the Tungabhadra sub basin.								
		(iii) Project and management systems operational. (KNNL & AC-IWRM).								
8	Outcomes of the project	Improved water resources management in the Tungabhadra sub basin in Karnataka (Institutional Strengthening , International Best Practice, Sub-basin Planning, Decision Support systems etc.,)								
9	Status of Physical Progress of Procurements									
(i)	Modernization of Gondhi Main Canal and Distributaries	Contract Awarded- Work under Progress Tender Value: INR 112,21,88,261.00								
(ii)	Flow Measurement & Telemetry System	Contract Awarded- Work Under Progress Tender Value: INR 2,81,50,161.00 + Euro 1,945,020.00								
(iii)	Project Support Consultants	Contract Awarded- Work Under Progress Tender Value: INR 10,42,79,758.00 + AUD 644,392.00 + USD 602,051.00								
10	Projections for CY 2016									
	Contract Awards				Disbursements					
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
	11.820	0.030	0.030	1.831	13.711	0.518	0.586	3.437	1.083	5.624
	*As agreed during the TPRM, Jaipur, held on 30-31 Jan 2016.									
11	Status of Projections for CY 2016									
	Contract Awards				Disbursements					
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
	12.668	-	-	-	12.668	-	-	-	-	-
	#Note: the Q1 contract award is due to award of Gondhi package @ 1\$ = INR 65.5540									
Review meetings of the Project Progress										
12	Tripartite Review Meetings	a) 7 Dec 2015, Delhi. b) 30-31 Jan 2016, Jaipur c) 16-17 Sep 2016, Delhi								
13	Dates of ADB Missions	a) Special Project Administration Mission – 27 to 28 July 2015 b) Loan Inception Mission - 6 – 10 Nov 2015 c) Loan Review Mission - 26 – 5 May 2016								
14	Project Coordinating Committee (PCC)	Constituted Vide Govt. Order no. WRD 51 MBI 2015 (P1) Dt 27 Nov 2015								
15	External Aided Project Monitoring Committee meeting under the	a) 1 st Meeting held on 6th Aug 2015 b) 2 nd Meeting held on 7th Jan 2016 c) 3 rd Meeting held on 30th May 2016								

**Project Basic Data**

	Chairmanship of Additional Chief Secretary to Govt.	
16	Meetings under the Chairmanship of Addl. Chief Sec/ Principal Secretary/ Secretary Water Resources Department	a) Meeting held on 25 th Feb 2016 b) Meeting held on 10 th Jun 2016
17	Review meeting of KISWRMIP activities under the Chairmanship of Deputy Secretary (ADB II), DEA	22 Aug 2016

1.4 UTILISATION OF FUNDS**1.4.1 CONTRACT AWARDS**

The details of contracts awarded so far under the Project -1 are given in **Table 3**. The contract award data is exclusive of ACIWRM part, which will be included when ACIWRM data is available.

Table 3: Contract award under Project -1

Procurement Item	Contract Amount	Date of Award	ADB Financing
Gondhi NCB-1 Main Canal and Distributaries, Earth work lining, structures and flow measurement devices.	INR 112,21,88,261.00	26-02-2016	74%
ICB-2 Flow Measurement, Telemetry –Supply & Installation (FMT-ICB-2)	INR 2,81,50,161.00 + Euro 1,945,020.00	23-11-2015	82%
PSC-1 Program Support Consultants (including WUCS strengthening support)	INR 10,42,79,758.00 + AUD 644,392.00 + USD 602,051.00	20-11-2015	85%
EFFM 5 Effects Monitoring	Action to recruit Effects Monitoring Consultants has been initiated.		
Gondhi DC Multiple Lots Command Area Development works	30 Contracts of value less than USD 30,000.00 to be awarded by Dec 2016.		74%

1.4.2 DISBURSEMENTS

The details of disbursements so far under Project -1 are given in Table 4.

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Table 4: Details of disbursement under the Project -1

Description	Currency	Expenses Booked	ADB Financing %	Disbursement Status		Remarks
				WA submitted	ADB Disbursement	
Gondhi NCB-1 Main Canal and Distributaries, Earth work lining, structures and flow measurement devices	INR	6,45,00,000	74%	4,77,30,000	4,77,30,000	
ICB-2 Flow Measurement, Telemetry –Supply & Installation	Euro	194,502	80%	155,602	155,602	
	INR	28,15,016	82%	22,52,013	-	
PSC-1 Program Support Consultants (including WUCS strengthening support)	INR	98,44,802	100%	98,44,802	98,44,802	
	USD	-	-	-	-	
	AUD	64,439	74%	47,730	47,730	
EFFM 5 Effects Monitoring	-	-	-	-	-	
Gondhi DC Multiple Lots Command Area Development works	-	-	-	-	-	
AC-IWRM	INR	67,19,387	Varied %	52,83,835	-	
	USD					
TOTAL					-	

Re-estimated costs to completion: Nil



1.5 PHYSICAL PROGRESS

The physical progress of the Program is assessed based on the output and outcome indicators given in the Design and Monitoring Framework (DMF) of KISWRMIP. The physical progress in terms of DMF outcome and output indicators is given in **Table 5**.

Table 5: Status of DMF for Project 1

Item	Performance Targets and Indicators with Baseline	Status as of 30 September 2016
Outcome	Target	Status
River basin plan for Krishna-8 (K-8) sub-basin successfully implemented	<ul style="list-style-type: none"> Institutional arrangements for river basin management in the K-8 sub-basin are established. 	<ul style="list-style-type: none"> Not due
Outputs	Target	Status
(i) State and basin institutions strengthened for IWRM	<ul style="list-style-type: none"> At least 200 WRD staff (of which about 75 are women staff) are certified in IWRM (baseline = 0) 	<ul style="list-style-type: none"> Updated information awaited from ACIWRM. (baseline = 0)
(ii) Irrigation system infrastructure and management modernized	<ul style="list-style-type: none"> 123 km of irrigation canal upgraded at Gondhi irrigation subproject to serve 4,600 hectares command area 	<ul style="list-style-type: none"> Gondhi Civil works contract (GONDHI-NCB-1) awarded to M/s RPP Infra Projects Ltd. for INR 112.22 Cr. on 26 Feb 2016. 1.4 km of GLBC has been completed. 0.6 km of GRBC has been completed.
	<ul style="list-style-type: none"> Gondhi irrigation subproject main-system asset management (operation and maintenance) plan developed (baseline = 0) 	<ul style="list-style-type: none"> Not due
	<ul style="list-style-type: none"> Telemetry systems operational for at least 100 locations within the sub-basin. 	Installation in Progress (Table 6)
	<ul style="list-style-type: none"> At least 7 WUCS operating and maintaining transferred systems 	<ul style="list-style-type: none"> Not due
(iii) Project and management systems operational	<ul style="list-style-type: none"> KNNL approves annual work plan within 30 days of receipt PMU is operational Contract award and disbursement project versus actual 	<ul style="list-style-type: none"> PMU is operational Contract award and disbursement at-risk however annual projections remain on-track.

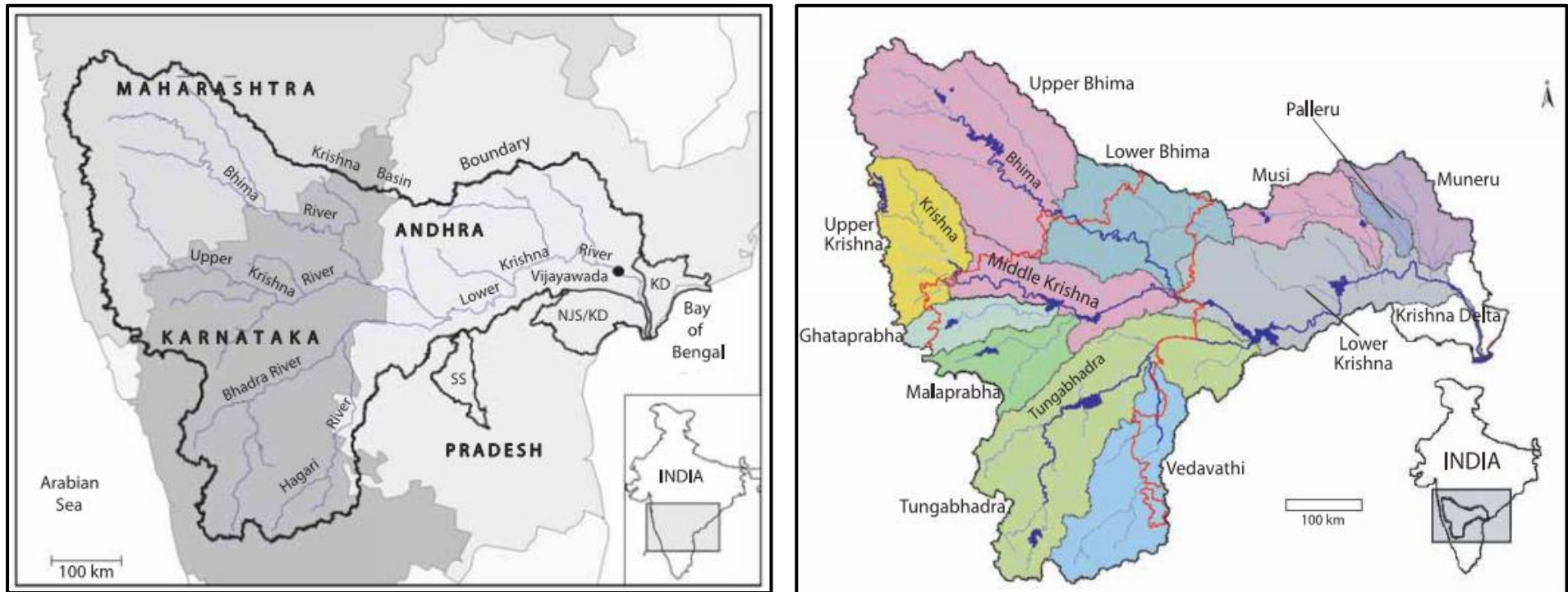


Figure 1: Krishna River network and sub-basins



The Program is being implemented in two tranches (or projects): the first 4-year Tranche-1 is to be followed by a 6-year Tranche 2 planned to commence after one year of Tranche-1 implementation. The Program comprises three outputs:

Output 1: State and Basin Institutions Strengthened for IWRM

The output will strengthen the institutional capacities of the Water Resources Department (WRD) and the Advanced Centre for IWRM (AC-IWRM) to implement IWRM in select river basins in Karnataka. This will include: (i) development and implementation of river basin plans to better manage water resources; (ii) capacity building and certification of the WRD (including its associated agencies like Karnataka Neeravari Nigam Limited [KNNL]) in IWRM with 30% of trainees being women, and (iii) improved water resources information systems.

Output 2: Irrigation System Infrastructure and Management Modernized

This output will include: (i) modernization of irrigation infrastructure including installation of telemetry for canal flow measurement of three irrigation subprojects within the Tungabhadra Sub-basin (Gondhi Subproject under Tranche 1, and Vijayanagara Channels (VNC) and Tungabhadra Left Bank Canal (TLBC) under Tranche 2); (ii) strengthening asset management and main system operation and maintenance (O&M), and (iii) capacity building of inclusive water user cooperative societies (WUCS), with women representation, for improved operation, maintenance and water management within their respective command area.

Output 3: Program Management Systems operational

This output will focus on delivery of the above two program outputs on time and within budget.

1.6 MILESTONES AND ACTIVITIES

The major milestone and activities identified for Project 1 are given in **Table 6**.

Table 6: Milestones and activities for Tranche 1

Action Point	Time Frame	Current Status
AC-IWRM		
Submit draft contract for two International consultancy positions – Hydrologist and River basin modeller.	15-Jun-16	Signing of agreements is under process. NTP will be issued shortly.
Mobilize outstanding Contractual staff: RBM specialist, Hydrology & Irrigation systems expert	30-06-2016	RBM Specialist selected and financial proposal will be placed before the E.C. to be held on 13-07-2016. For Hydrology and Irrigation Systems Expert even for 4th call suitable candidate is not available.
Submit draft contract document for Policy and Institutions Consultant to ADB for prior approval	15/06/2016	Signing of agreements is under process. NTP will be issued shortly.
Mobilize Policy and Institutions consultant	30/06/2016	Discussing with CTA for scheduling other activities.
Publish website	31-05-2016	Published



Action Point	Time Frame	Current Status
Submit Submission 0's to ADB for prior approval for Climate Change specialist and M&E expert	31-07-2016	Discussing with CTA.
KNNL		
Submit draft SST sub-contract to ADB for review and prior approval.	7-May-16	The proposal was submitted to ADB on April 30, 2016. Observations and suggestions received from ADB on May 6, 2016 were appropriately addressed and the proposal and re-submitted. Formal approval received from ADB on 5 October 2016; SST in place since 15 September 2016.
Submit the first CAD works package to ADB for review and prior approval.	30-06-2016	a) Series of consultation meetings held between Kagekodemage WUCS, KNNL, CADA, SMEC and Nandi Consultants on CAD packages including site inspection and transect walk (23 September 2016); b) Progress review meeting by CE at Bhdravati on 2 October 2016; c) Discussion on design, estimates and modifications proposed by WUCS on Oct 3, 2016; d) Final resolution on CAD package by WUCS obtained on Oct 24, 2016; e) The bid document along with necessary attachments including the WUCS resolution was forwarded to KNNL by CADA Administrator and will be sent to ADB for approval for starting the CAD packages.
Award of at least 30 CAD packages to WUCS	31-12-2016	Shall be awarded as per schedule.
Submit first safeguards monitoring report to ADB	31-07-2016	PSC submitted to KNNL on 01.10.2016.
Loan Amendment to be signed by KNNL	30-Jun-16	Loan amendment is submitted to DEA by State Govt. on 8/07/16
QPR to be submitted one month after reporting period	15-05-2016	QPR is submitted to KNNL on 11 November 2016.
PPMS and PMIS made operational	30-09-2016	Software has been procured. PPMS developed and ready for hosting. PMIS under development
Recruitment and mobilisation of MIS and GIS communication expert.	30-06-2016	Communication expert mobilised in July 2016 as per approval letter of ADB on 23 June 2016; MIS/GIS under recruitment.
Second Withdrawal application (WA) submitted to CAAA	7/05/2016	WA application amounting to INR 6.51 Cr is submitted on 09-06-2016 in two withdrawal applications. The same has been reimbursed as of 11 July 2016.
APFS for 2015-16 submitted to ADB	15-05-2016	Submitted as per schedule.
Updated FAM submitted to ADB	31-05-2016	Updated FAM submitted to ADB on 29 June



Action Point	Time Frame	Current Status
		2016.
Obtain CWC's final approval of the VNC and TLBC DPR	30-09-2016	CWC Approval received on 19 May 2015
Submission of draft VNC feasibility study	30-06-2016	PSC prepared and submitted VNC Feasibility Study Report on 20 September 2016 which was examined and submitted to ADB on 29 October 2016 by PD.
Submission of draft VNC bid documents to ADB for review and prior approval.	31-12-2016	Draft bid document will be ready for submission by 15 Nov 2016.
Submission of draft TLBC feasibility study	30-11-2016	Experts have been mobilised and studies initiated.
Implementation of Action Plan from TPRM 30-31 Jan, 2016		
Re-allocation of loan proceeds, DEA to provide its concurrence to WRD's proposed loan re-allocation and submit the request to ADB.	Immediate	Loan amendment is submitted to DEA from State Govt. on 8/07/16.
Initiate disbursements and submit withdrawal application. Process advance payments to consultants and telemetry contractor, and request reimbursements.	Immediate	Advance payments of Consultants, telemetry contractors and Gondri civil works contractors is paid and the same has been reimbursed by ADB.
Actions taken with regard to agreed actions at the Monitoring committee review meeting for EAPs held on 30-05-2016		
Compliance report to the minutes of latest TPRM/Aide memoire to be sent to FD and the same to be incorporated in the monthly progress report	Within a week	Compliance to Aide Memoire submitted vide letter no.3144 dated 10-06-2016. The same is incorporated in this report.

1.7 PROGRESS MONITORING

The details of reports submitted by PSC which aid in progress monitoring from time to time are given in **Table 7**.

Table 7: Important deliverables for Project-1 activities

#	Report	Deadline	Status
1	Inception Report	Draft submitted within 2 months of mobilization and finalized within 3 months of mobilization	Submitted
2	Quarterly Progress Reports	Within 30 days of the end of each quarter	Ongoing; July-September QPR 2016 submitted.
3	Annual Reports	Within 30 days of the end of each calendar year)	Due in January 2017
4	Midterm Report	Middle of year 2 for Project-1	Not due
5	Project Completion Reports	Draft submitted 3 months prior to Project completion and finalized within 3 months after Project completion	Not due



1.8 GONDHI CIVIL WORKS

Gondhi canal modernisation civil works contract became effective from 26.02.2016 and expected to be completed by 26.02.2018. Most civil works are expected to be constructed during the canal closure periods over two years. PSC experts have been making necessary field visits. The Contractor has already established the office including the Concrete Batching Plant in the office premise. Only limited quality control laboratory equipments were seen at the site office. A detailed assessment of laboratory arrangement adequacy will be carried out when the Contractor later updates about the progress of the laboratory establishment.

1.8.1 PHYSICAL PROGRESS

As of now, civil works limited to clearance of vegetation alone have been carried out to prepare access road to the construction site. About 14.5 km and 74.7 km of LBC and RBC has been cleared, and about 1.4 km of LBC and 0.6 km of RBC lined in the tail reach.

1.8.2 FINANCIAL PROGRESS

Agreed contract value is INR 112.22 crores. A mobilisation advance of INR 6.45 Cr. has already been paid to the contractor against Bank Guarantee.

1.9 FLOW MEASUREMENT AND TELEMETRY SYSTEM

The contract for flow measurement and telemetry- supply and installation has been awarded to M/s HydroVision GmbH in JV with Canary's Automation Pvt Ltd on 23.11.2015. The Contract period is 24 months for supply and installation plus 5-year operation and maintenance. The proposed distribution of flow measurement installations for installation in Tranche 1 is listed in **Table 8**.

Table 8: Summary of locations of telemetry for flow measurement in Tungabhadra Sub-basin

Components	Required quantity	Remarks
Transit Time flow meters – full system	24	Travel time flow meters
Rader Flow meters – full system	76	Surface velocity flow meters
Hand Held ADCPs	3	For velocity profile and distribution in the cross section
Boat Mounted ADCPs	1	
Hand Held Military grade tablet PCs	4	Field configurations
Automatic weathers stations – rain, temp, humidity, solar radiations, atmos pressure, wind direction and speed	6	Weather parameters in command area
Solar panel 100 watts, charge controller, batteries 65ah – 100ah	100	Powering the instruments
Sheds with steel doors and mounting cantilever	100	Protection and storage of instruments
GSM/GPRS Telemetry data transmission modems/ SIM cards to be purchased in the name of KNNL	100	Data transmissions



1.9.1 PHYSICAL PROGRESS

All 100 locations for installation have already been identified in the Tungabhadra basin including 20 locations in Gondhi system. A KNNL Quality Inspection Team visited Germany for quality inspection. The Telemetry equipments were shifted to the project location in the month of June 2016. The installation of the telemetry systems is progressing. The current status is given in Table-9.

Table 9: Installation of Telemetry Systems-Status

S. no.	Projects	Required Quantity	Instrument type	Security shed-Status	Solar power – status	Installation calibration
1	Bhadra	9	Transit Time Flow	Completed	Completed	By 22 Nov 2016
2	Bhadra	24	Radar flow meters	Completed	Completed	By 22 Nov 2016
3	Gondhi	20	Radar Flow meters	-	-	-
4	Upper Tunga Project	6	Transit Time Flow meters	Ongoing	Ongoing	By Jan 2017
5	Upper Tunga Project	5	Radar Flow meters	Ongoing	Ongoing	By Jan 2017
6	Singataluru LIS	3	Transit Time Flow meters	Ongoing	Ongoing	By Jan 2017
7	Singataluru LIS	10	Radar Flow meters	Ongoing	Ongoing	By Jan 2017
8	TungaBhadra	6	Transit Time Flow meters	Ongoing	Ongoing	By Jan 2017
9	Tunagabhadra	1	Radar Flow meters	Ongoing	Ongoing	By Jan 2017
10	Vjyanagara Canals	16	Radar Flow meters	Ongoing	Ongoing	By Jan 2017
	Total	100				

1.9.2 FINANCIAL PROGRESS

The agreed contract value is INR 2.81 crore and Euro 1.94 million. A mobilisation advance of INR 28 Lakhs and Euro 194,502 has already been paid to the contractor against Bank Guarantee.



2 PROJECT ACTIVITIES DURING THE REPORTING PERIOD (JULY-SEPTEMBER 2016)

The Quarterly Progress Report submitted herewith is for Quarter 3 (July-September) of 2016 (Q3Y2). This does not include Output 1 as the same will be reportedly submitted by ACIWRM separately.

2.1 WATER USER COOPERATIVE SOCIETIES

The role of WUCS is critical to the success of Gondhi Modernization Project. Hence, PSC thought of conducting a baseline assessment of the status of WUCS. The Support Services Team (SST) of PSC which has been in place since 15 September 2016, has been visiting all the 10 WUCS regularly and interacting with the members with an aim to: (a) make them active by conducting regular meetings, and carrying out activities as per bye-laws; (b) prepare them for active participation in the ongoing Gondhi Project Modernization by informing them about the project, broad details of modernization and the need for their taking up CAD packages, and (b) the roles and responsibilities of WUCS in Participatory Irrigation Management.

2.1.1 BASELINE SURVEY OF WUCS

To assess the current status of the WUCS, PSC has taken initiative to plan and conduct a study during the reporting period. For this purpose, a Baseline survey format was developed and data collected from all the 10 WUCS on certain identified parameters that reflected the performance of WUCS. Based on the analysis, a report has been prepared in relation to their functioning, office maintenance, physical and financial performance etc. (**Annexure I**).

The following are some of the key findings from the baseline assessment report:

- The survey report indicates that most of the WUCS are found to be dormant and need to be revitalised.
- The PSC experts and the SST has been making several visits and working towards creating awareness on institutional strengthening through increased participation in WUCS activities. As part of the efforts to revive the WUCS, they have specifically interacted with WUCS past and present leaders and elders.
- During the reporting period, SST has motivated successfully 2 out of the 4 WUCS pending to enter into MoU with KNNL (Doddaguppenahalli and Sigebage) for CAD works and O&M. SST also facilitated opening of Bank account of Doddaguppenahalli WUCS. Remaining two WUCS are in process for MoU for which is expected to complete by November 2016.



Sigebagi WUCS Revitalised

Sigebagi WUCS does not have an office. Since formation in 2001, the Sigebagi WUCS did not conduct formal meetings and have not maintained documents or records. However, some work was happening based on discussions among office bearers on informal basis in a temple premises. The WUCS did not conduct any elections and as such the same Executive Committee which was formed in the year 2001 continued. SST mobilised the members as well as the Directors and organised a meeting. The SST explained to them about the ongoing Gondhi Participatory Irrigation Management Project and the proposed CAD Works for their WUCS. They have also motivated them to conduct meetings regularly and follow the bye-laws. Further, upon the encouragement from SST, Sigebagi WUCS Directors identified an unused room in the government middle school, and handed over the same to the DEO in person requesting permission

2.1.2 WUCS WORKSHOP

A workshop was organised by PSC for WUCS on 20 October 2016 for the purpose of: (a) informing the WUCS about the KISWRMI Project; (b) mobilising and motivating them to participate in the Gondhi Modernization; (c) to participate in the proposed CAD works packages, and (d) to remind them of their roles and responsibilities in participatory irrigation management.

The SST members of PSC have interacted with the WUCS members several times and motivated them to attend the workshop. As a result, representatives from all the 10 WUCS attended the workshop. A highlight of the workshop was an interactive session with the Chief Engineer KNNL and Administrator CADA. A successful WUCS from Hosahalli from Tunga Command made a presentation which helped motivate Gondhi WUCS to enhance their level of participation (**Annexure II**).

2.1.3 DOCUMENTATION OF LOCAL WELL PERFORMING WUCS

PSC has identified a model WUCS in Hosahalli of Shivamogga taluka under Tunga command which can be showcased as a working model. The WUCS has not only been operational for the past ten years, but has been doing very well in terms of water tax collection. During the past six years or so, the WUCS water tax collection has increased beyond the target for that year indicating that the members have been becoming more and more participatory. They are also carrying out CAD works and maintaining the canals with the result that all the members are able to get their due share of irrigation water.

PSC has documented this experience by visiting the field and interacting with the WUCS, details are in Kannada language, enclosed in **Annexure III**. This is being printed and shared with all Gondhi WUCS for motivating them to participate in the forthcoming CAD package works.

2.1.4 COMMUNICATION MATERIAL

During the reporting period, six communication materials have been developed to support the process of WUCS formation, awareness building and capacity enhancement. The communication material included four brochures and two posters. The brochures contain



information about Gondhi Modernization Project, roles and responsibilities of WUCS, and sustainable agriculture. The posters related to roles and responsibilities of O&M of canals and alternative cropping methods are given in **Annexure IV**.

2.2 CAD PACKAGE WORKS

The KISWRMIP has CAD package works to be implemented directly by WUCS. There are 10 WUCS in Gondhi Modernization Project. The progress in this context during the reporting period is given below:

- The CAD works of Gondhi Project are to be directly accorded to the 10 WUCS as per the ADB Contract agreement. Preparation and initiation of implementation of CAD works packages for 10 WUCS by December 2016 is an important milestone.
- As per the advice of the ADB Mission, vide *aide memoire* of April 2016, one CAD Package is to be prepared and submitted to ADB for approval. The Package should also have the resolution passed by the concerned WUCS indicating that the WUCS is in agreement with the CAD works planned, and that they will be participating in the implementation of the CAD works.
- Similarly, the bid documents for CAD package works and the cost estimates to be prepared as per ADB guidelines and submitted for approval. The rest can follow the approved format.
- *Progress during the reporting quarter:*
 - As stated in the ADB vide *aide memoire* of April 2016, the CAD Package for one WUCS, namely, Kagekodamagge, is in advanced stage of preparation.
 - *Process adopted:* A Consultant appointed for field surveys (Nandi Consultants) made a few visits to the WUCS during the reporting period, interacted with the farmers and completed the survey in consultation with Bhadra CADA engineers during the reporting period. Basing on the survey data, Bhadra CADA engineers have prepared cost estimates of CAD package works. A team comprising Survey Consultant, CADA engineers, KNNL and SMEC visited Kagekodamagge on 24.10.2016 for obtaining resolution by Kagekodamagge WUCS. During the meeting, CADA engineers have explained about the various activities proposed, their cost estimates and other relevant details. After asking for some clarifications, and verifying inclusion of their requirements expressed during field visits, the WUCS Directors and members passed a resolution unanimously agreeing to the cost estimates.
 - The PSC through its SST facilitated the entire process of social interaction in all the stages from field survey to resolution.
- The PSC has also prepared a draft MoU and a Contract Agreement based as per CADA guidelines which is under examination by the CADA for finalisation.

2.3 AGRICULTURE

PSC experts have visited the Krishi Vigyan Kendra as well as Agriculture and Horticulture University in Shivamogga. During the meeting with the vice chancellor and the Registrar, it was



agreed to enter into a MoU for collaboration for training and Agriculture extension activities. This will be followed up during the next reporting quarter.

PSC experts have also collected some communication material from KVK and modified the same to suit the requirements of Gondhi WUCS. The same was distributed among the WUCS.

2.4 GONDHI O&M PLAN

For the purpose of preparing an Operation and Maintenance Plan (OMP) for Gondhi Irrigation System, the PSC O&M specialist carried out field visits of the Gondhi project area, reviewed the Gondhi FSR and DPR and interacted with a cross section of WUCS representatives to understand the current operation practice and appreciate with the canal infrastructures.

During the next quarter, the PSC O&M Specialist will be initiating and completing the O&M plan.

2.5 INITIAL ENVIRONMENTAL EXAMINATION (IEE)

During the reporting quarter, the PSC Environmental Specialist reviewed the EMP implementation by the Contractor RPP Infra Projects selected by KNNL to execute the Gondhi Irrigation System modernization project. After the first meeting with the Contractor's representatives in the previous quarter (April-June 2016), a second meeting was held during this quarter with the Contractor's representatives at the KNNL Executive Engineer's office on 23 August 2016. The PSC Environmental Consultant reiterated the actions to be taken by the Contractor to comply with the environmental safeguards requirements under the Contract and the need to submit a modified EMP immediately. Thereafter, the Contractor submitted a modified EMP on 30 Aug. 2016 which has been once again reviewed by the Consultant.

The modified Construction Environment Management Plan (CEMP) submitted by the Contractor on 30 Aug 2016 was found to be general in nature and does not report specific plan of actions expected of the Contractor as stipulated in the Contract. However, the CEMP identified personnel responsible for implementing the CEMP at the construction sites.

The organizational chart presented by the Contractor is reproduced below as **Figure 2**.

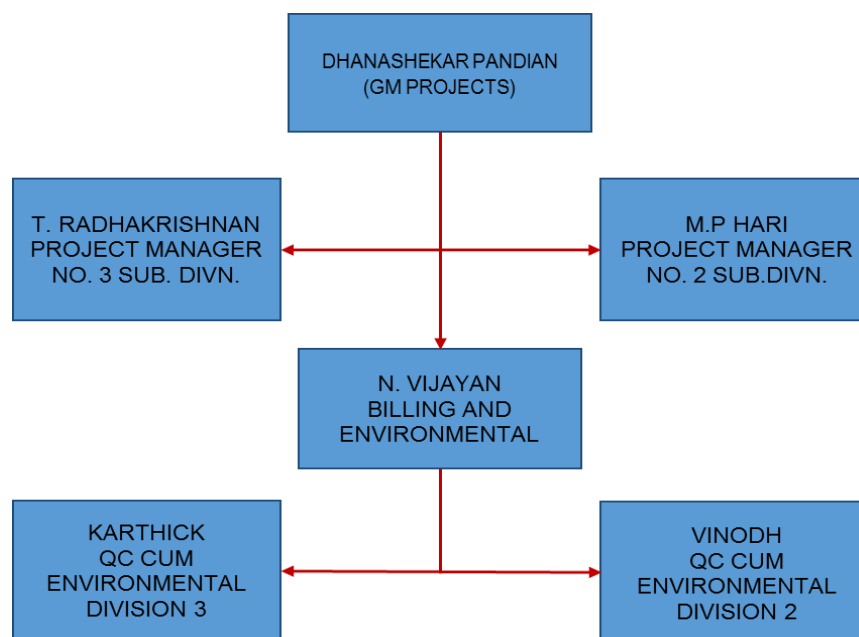




Figure 2: Contractor's Organization Chart for Implementing EMP

Another Safeguards Monitoring Report for the period April – September 2016 was submitted on September 29, 2016. The SMR addressed the shortcomings of the CEMP prepared by the Contractor and provided suggestions including plan of action to be carried out by the Contractor in order to comply with the environmental safeguard requirements as per the Contract. The Contractor was instructed to immediately comply with the following requirements as these were critical for the stage at which the project is in:

1. Obtain and Submit all approvals for the use of land for the Batching Plant;
2. Obtain and submit all approvals pertaining to vehicles and equipment utilised for the project activity;
3. Obtain and Submit all approvals for the use of private / public land for disposing the silt;
4. Conduct survey of all trees along the construction route and make an afforestation plan, if necessary;
5. Obtain and document baseline information of all environmental media (i.e., air, water, noise, soil, landuse etc.) all along the construction sites;
6. Organize awareness workshop on health and other project issues for labourers, workers and the local community to prevent any untoward issues during the project period.
7. All other requirements are covered in the Safeguard Monitoring Report submitted by the Consultant.

Notably, the Contractor has carried out the following actions as evidenced by PSC Environmental Specialist in his subsequent field visits:

1. Obtained all approvals pertaining to vehicles and equipment utilised for the project activity;
2. Obtained approvals for the use of farmers' land for disposing the silt;
3. Obtained approvals from the Quarry Owners;
4. Conducted survey of all trees along the construction route and identified the ones that are located in the encroached areas and need to be cut. Also, the Contractor is in discussions with the local community and KNNL for cutting the trees, wherever necessary.
5. Has kept a register to record the baseline information of all construction sites and made arrangements to document the construction site closure.
6. Has kept a register to document Health and Safety initiatives;
7. Has kept a register to seek suggestions for improving the EMP, wherever necessary.

In addition, the Contractor has initiated the following actions:

1. Based on the request from the local community and communicated to the Contractor by the Consultant, the Contractor has initiated discussion with the local community at Holehonnuru for replacing a 'Bilva' tree that was cut. The 'bilva' tree is utilised for



temple rituals. However, the tree was initially located on encroached property and had to be cut to make way for the modernization works.

2. Secure written approvals from the local community for locating the Batching Plant. At present, the Contractor has secured verbal approvals.
3. Installation of appropriate safety sign boards for utilising the village roads to transporting vehicles;
4. Sought additional information from the Quarry Owners regarding the implementation of their EMP;
5. Organize awareness workshop on health and other project issues for labourers, workers and the local community to prevent any untoward issues during the project period;
6. Shall prepare a presentation to be delivered to the ADB Mission Team on the implementation of the EMP. The presentation shall be reviewed by the Consultant prior to the mission date.

2.6 TRAINING & CAPACITY BUILDING

The present incumbent has reported as Water Institutional Specialist (WIS) at the KISWRMP at Shivamogga on 7th Sept 2016 as a replacement to his predecessor who had resigned.

The following progress is made during the reporting period:

- A Field visit (9th Sept 2016) to Gondhi anacut, left bank and right bank canals with SMEC experts, KNNL and Bhadra CADA engineers to meet and interact with beneficiary farmers, WUCS members and office bearers and other stakeholders. The physical progress of modernization works and issues related to optimal usage of water from the head works till the tail end farmers and role of WUCS was discussed.
- Reviewed progress made so far under this component by perusing office files, correspondence, project documents and field visit reports.
- It is proposed to visit the following institutions to understand their role and training activities carried out so far:
 - i. Advanced Centre for Integrated Water Resources Management (AC-IWRM), Bangalore;
 - ii. Water & Land Management Institute (WALMI), Dharwad;
 - iii. Regional Institute of Cooperative Management (RICM), Bangalore;
 - iv. Engineering Staff College, Karnataka Engineering Research Station, K R Sagar;
 - v. Directorate of Command Area Development Authorities, and
 - vi. Water Resources Development Department, Govt. of Karnataka, Bangalore.
- An explorative visit to Regional Institute of Cooperative Management (RICM), Bengaluru was made along with Dy. Team Leader. A detailed discussion with the Director and a few faculty members was happened and reviewed the training infrastructure and other facilities. Another visit will be made during December 2016 to assess the methodology, pedagogy and curriculum of WUCS. This was agreed to with the Director of RICM.



- Prepared an '**Action Plan for Training for Capacity Building (AP-TCB)**'. The broad contents and components are arranged in three **Sections** as listed below:

SECTION 1: Introduction/context;

SECTION 2: Approach and Strategy - Contact Drive; Review, Assessment and proposed Visits to identified Training Institutions;

SECTION 3: Conducting Training Needs Assessment (TNA); Plan of Conducting TNA; Types of Training for Capacity Building (TCB) courses; Institutional networking workshops of trainers and training institutions.

- A Check List is under preparation as part of **Institutional Assessment** for compilation and assessment of training institutions named above. The check list contains information regarding the existing faculty and training facilities. The Check List contains details of:

Constitution; Institute Faculty; External/Visiting/Guest Faculty and their remuneration/charges; Training Infrastructure; facilities for lodging and boarding; Library; Training Programmes conducted during the past five years; Workshops, Seminars, Conferences, brain storming sessions, FGDs etc. conducted during the past five years; Categories of Trainees; Training course Modules; Pedagogy (Inhouse, class room, Group Discussions, Interactive sessions, Field Visits); Faculty Improvement Programmes (FIP) and Places/locations for FIP; Evaluations – Post Training Evaluations (PTE) and Action taken Report; Annual Impact Evaluations (AIE) and Action Taken Reports; Collaborations with other Institutions.

Activities planned for next quarter (October-December 2016):

- Follow up meeting with RICM, Bengaluru, for institutional assessment and review of ongoing training programmes for WUCS members.
- Review of the Institutional assessment of six institutions to be continued and completed.
- Survey of TNA of cross section of engineering staff members of CADA and KNNL to be initiated and completed.

2.7 PROGRAM PERFORMANCE MANAGEMENT SYSTEM

The Program Performance Management System (PPMS) under Gondhi Irrigation Project has 3 Sub Modules developed as given below:

1. Financial Module;
2. Physical Module, and
3. Procurement Plan Module.

For developing the PPMS, several meetings and discussions were held during the past few months with concerned engineers of KNNL as well as AC-IWRM on the design of PPMS, based on which key indicators for the above three modules were developed. During the reporting quarter July-September 2016, PSC has developed the application in consultation with the KNNL and AC-IWRM. The application has been handed over to the third party (VMD Technologies) in October 2016 for hosting on their server and testing. Based on the testing, any



modifications required will be carried out shortly. The plan for the next quarter October-December includes modifications post testing and making the PPMS operational.

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(ಕರ್ನಾಟಕ ಸರ್ಕಾರದ ಉದ್ಯಮ)

Karnataka Integrated and Sustainable Water Resource Management Investment Programme

(ADB Loan No:0085-IND/Loan No:3172)



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NEW DOCUMENTS

Annexures -2



-  Feasibility Report Vol-II
-  DPR of Gandhi (LBC & RBC)
-  DPR of Vijaynagar Channel Tungabhadra Project Vol-I: Report
-  DPR of Viavnaagar Channel


Welcome to KISWRMIP MORE +

Karnataka state (the State) in the south of India, is water stressed with increasing inter-sector water demands. Two major river basins, the Krishna and Cauvery, flow through the State however its water



KISWRMIP - PPMS




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You must be the change you wish to see in the world

Mahatma Gani



Project Wise Contract Award

Project	Planned CA	Actual CA
Project-1 (Gandhi)	147,530,188	74,182,810

CA - Contract Award

CONTRACT DETAILS

package Number	Description	Estimated Value	Year	Quarter	Item	Sub Item	Cost Center	Output	Contract Awarded	Firm
Gandhi-NCB-1	Gandhi Civil Work	16,000,000	2015	Q4	1 Civil Works	1 Civil Works	PMU	OUTPUT-2	YES	RPP
FMT- ICB-2	Telemetry Services	3,500,000	2015	Q1	1 Civil Works	1 Civil Works	PMU	OUTPUT-2	YES	
PSC-1	Project Support Consultant	3,700,000	2014	Q1	6 Support Consultant	6A International	PMU	OUTPUT-3	YES	SMEC



PMIS

PMIS is a tool for monitoring the key indicators to facilitate analysis of outcomes of a project. The PMIS of KSIWRMIP contains the following sub-modules:

1. Socio Economic module;
2. Agriculture;
3. Environment, and
4. WUCS Information.

For PMIS, the architecture has been developed and shared with KNNL. PSC is now developing a code which will be tested, and hosted on KNNL server or as decided. The PMIS shall provide updated information on all the modules which will help prepare and monitor periodic progress.

It is planned to make the PMIS operational as early as possible during the October-December 2016 quarter.

2.8 TRANCHE 2 SUBPROJECTS FEASIBILITY STUDY

2.8.1 MODERNIZATION OF VIJAYANAGARA CHANNEL SYSTEM PROJECT

Vijayanagara Channel (VNC) system is spread over 3 districts namely Bellary, Raichur and Koppal. The Geographical area lies between latitude 14° 30' to 16° 34' N and Longitude 75° 40' to 77° 35' E.

To being with, the DPR provided by the government was examined and after minor modifications made. The PSC experts made several field visits, carried out community consultations and surveys in VNC subproject areas to finalise the Initial Environmental Examination (IEE), Social Management Framework (SMF), Gender Action Plan (GAP), Resettlement Plan and Indigenous People's Assessment.

Based on this DPR, and the above assessment reports, a VNC Feasibility Study Report was prepared. The VNC FSR consists of four volumes:

- Volume 1: Executive Summary and Main Report
- Volume 2: Initial Environmental Examination
- Volume 3: Socio-Economic Assessment, and
- Volume 4: Financial & Economic Analyses.

2.8.1.1 MODERNIZATION INTERVENTIONS

A survey was carried out along with the KNNL engineers to assess the condition of channels and structures. Looking at the poor state of the channel infrastructure, modernization estimate was prepared incorporating dismantling and reconstruction of dilapidated structures and providing concrete lining throughout the length of the channel to enable conveyance of water to tail ends of the channel and to prevent seepage losses, thereby saving water.



The engineering designs and cost estimates are largely based on the Detailed Project Report (DPR, 2013) prepared by ICZ KNNL Munirabad which has obtained CWC approval. The cost estimates are prepared using IS standards and other industry practices and Standard Rates prevalent in India and Karnataka.

An estimate for INR 407.51 Crores is prepared for various works envisaged in the project. The cost estimate is based on the latest schedule of rates of WRD, Bangalore (2013 -14). This includes 25% extra weightage for the closure period as provided in the SR.

2.8.1.2 INITIAL ENVIRONMENTAL EXAMINATION OF VNC

During the reporting quarter July-September 2016, the PSC conducted an assessment of the likely impact of the Modernization of the Vijayanagar Channel System Project on the environment including the World Heritage Area at Hampi through which a portion of the canals do pass.

The assessment was conducted through field visits, primary and secondary data collection and analysis and discussions with the various stakeholders. A draft Initial Environmental Examination (IEE) Report to meet the requirements of the Feasibility Report on the Modernization of the Vijayanagar Channel System Project was submitted on 27 July 2016.

As per ADB Safeguard Policy Statement 2009, "Modernization of the Vijayanagara Channel System" is classified as Environmental Category B because no significant impacts are envisioned. Accordingly, Initial Environmental Examination (IEE) has been prepared. The IEE is based upon the ADB Environmental Assessment Guidelines 2003 and the updates provided in the publication ADB Environmental Safeguards Good Practices Sourcebook 2010. Further, the IEE also has considered the relevant Indian environmental regulations, the Detailed Project Report, and field visits by PSC experts. Secondary data was collected to characterize the environment. A series of stakeholder consultations were conducted and potential impacts examined. An Environmental Management Plan (EMP) outlining the specific environmental measures to be adhered to during implementation of the project has been prepared. This is to ensure that the project will conform to all Government regulations, policies and standards.

A detailed monitoring plan prepared as part of this IEE will further mitigate negative environmental impacts during implementation.

Focus Group discussions (FGD) were conducted in different localities by ethnicity, type of farmers and other locally specific characteristics as part of the assessment and preparation of social management and gender plan. A multi-disciplinary team visited project villages in and around the Vijayanagara Canal (VNC) during May and July 2016. Out of the 16 canals, the team visited 14 canals and interacted with the community members and farmers residing across 31 villages. Altogether, 258 men and 58 women participated in the consultations and focus group discussions. The communities were explained about the modernization work of canals and need for their active participation for effective implementation of the project. The roles and responsibilities of WUCS and other stakeholders were also explained. The social screening was based on both primary and secondary data collected during field visits and discussions conducted with the people residing in subproject area.



Overall, the stakeholder consultations and focus group discussions indicated that the farmers are interested and confident about the project and its impact on enhancement of their living standards.

2.6.1.3 Involuntary Resettlement

During the stakeholder consultations and field visits, it has been found that resettlement and rehabilitation of people is not considered a major issue in the canal areas. Based on the overall assessment, the project falls under “Category C” consistent with the ADB Involuntary Resettlement policy “*project has no involuntary resettlement impacts.*”

2.8.1.3 INDIGENOUS PEOPLE

The term Indigenous People (IP) is not only co-terminus with the communities defined by the Constitution of India as scheduled tribe but also often includes backward communities, as per the recommendation of the Karnataka Backward Classes Commission.

The impact on Indigenous People have been determined according to the ADB Safe Guard Policy statement. Considering the nature of interventions proposed under the program, no specific adverse impacts are anticipated for the STs (Indigenous People) compared to other communities.

Based on the overall assessment, “*the project is likely to fall under the Category C and the proposed project is not expected to have adverse impacts on indigenous peoples. No further action is required*”. However, if there is any physical relocation of STs in any future Tranche, a combined plan including Resettlement Plan and Indigenous People’s Plan will be prepared.

2.8.1.4 WATER USERS COOPERATIVE SOCIETIES IN VNC

Water Users Cooperative Societies (WUCS) are critical for participatory irrigation management and sustainability of infrastructure created as part of modernization. There are WUCS already existing in the Vijayanagara Canal System; however, many of these WUCS need handholding support to enable them to function as vibrant irrigation management institutions.

As part of PIM and IWRM, WUCS will be responsible for construction of field channels and drains. It is proposed to constitute WUCS where necessary and strengthen existing ones so that the proposed CAD works are executed through them and O&M taken care of.

2.8.1.5 CROP WATER REQUIREMENT

The Channel network of Vijayanagara Channel system is partially lined leaving a major portion unlined. Now, to optimize utilization of water, it is proposed to line the entire Channel system (from main Channel to field irrigation channels). Crop water requirements are calculated using “Modified Penman Method” considering field application efficiency as 85% of ponded crops and 65% for non-ponded crops and conveyance efficiency as 75%.

After modernisation, the cropping intensity is expected to significantly increase to about 146%. The crop water requirement for the proposed cropping pattern calculated using Modified Penman’s method, was estimated to be 5.8 TMC. Crop water requirement including peak design discharge for all major canals was also calculated and conveyance systems designed accordingly.



2.8.1.6 SOCIAL MANAGEMENT FRAMEWORK (SMF) AND GENDER ACTION PLAN (GAP) FOR VNC

During the reporting period, the social management framework and gender action plan for Tranche 2 projects such as VNC and part of TLBC was prepared. As part of this, stakeholder consultations and socio economic surveys have been carried out. Also, public consultations and Focus Group discussions were conducted in different localities by ethnicity, type of farmers and other locally specific characteristics. To facilitate meaningful participation of the communities, PSC team explained about the modernization work and the need for their active participation including community contribution for effective implementation of the project. Interactive sessions were conducted specifically with the Directors of WUCS and were explained their roles and responsibilities.

2.8.1.7 FINANCIAL & ECONOMIC ANALYSES

The economic viability of the VNC Subproject is assessed by estimating its economic internal rate of return (EIRR) and economic Net Present Value (ENPV) over an expected scheme life of 25 years. Sensitivity analysis was undertaken for the key perceived risks. The social discount rate for NPV is assumed at 12% normally assumed for development projects assisted by ADB. Which is high compared to other investment opportunities, Project benefits relate to delivery of water in the canal as the current supply is planned to cease reducing a total production loss of 20%, changed cropping patterns and improved yields.

2.8.1.8 VIABILITY OF THE VNC FSR

Based on various technical, socio-economic, environmental and economical assessments, the VNC Feasibility Study concluded that the VNC modernisation proposal is technically and financially feasible, socially acceptable, environmentally sustainable, and economically viable, and is recommended for implementation.

2.8.2 TUNGABHADRA LEFT BANK CANAL FSR

The TLBC FSR will be initiated in the next quarter. In the meanwhile, preparatory work has been initiated in the form of discussions with the concerned division on the DPR available for the entire TLBC, and approach for identifying demarcated areas has been agreed upon. Studies related with the TLBC FSR will be initiated during the next quarter.



3 PROJECT STAFF MOBILISATION

3.1 MOBILISATION DURING THE REPORTING PERIOD

The detailed inputs of PSC specialists during the reporting period are in given **Table 10**.

Table 10: Staff mobilization during the reporting period

Expert	July	Aug	Sep	Total
IS/TL	0.47	0.10	0.73	1.30
pim/DTL	0.00	0.00	0.80	0.80
AGRI	0.80	0.00	0.00	0.80
CMS 1	0.20	0.13	0.00	0.33
CMS 2	0.33	0.20	0.23	0.77
COM	0.20	0.37	0.27	0.83
ENV	0.63	0.20	0.37	1.20
MIS	0.37	0.33	0.17	0.87
OMS	0.37	0.00	0.00	0.37
AE/FMS	0.43	0.00	0.50	0.93
PROC	0.00	0.00	0.00	0.00
SD&GS	0.67	0.83	0.93	2.43
WIS	0.00	0.00	0.80	0.80

3.2 OVERALL MOBILISATION STATUS

All the experts of PSC as well as SST are in place subsequent to approvals by the client and the ADB for replacements as requested.

The DTL/PIM specialist joined on 7 September 2016. The SST is also in place since 15 September 2016.



4 PLANS FOR NEXT REPORTING PERIOD (OCTOBER-DECEMBER 2016)

CAD Package Works in Gondhi:

The CAD Package works in the case of the rest of the 9 WUCS will be continued. However, the model Kagekodamagge WUCS CAD Package works submitted to ADB for approval will be adopted, incorporating any suggestions or modification advised.

Strengthening of WUCS: Basing upon the Baseline Assessment Report findings, further actions in terms of setting up of WUCS offices, records, registers, communication material etc. will be followed up by PSC. For this, necessary guidance and handholding support will be provided by PSC through SST.

Training for Capacity Building:

Further interaction with RICM is planned during the next quarter for the purpose of improving training curriculum, methodology and pedagogy. This is because RICM is mandated to train all the WUCS in the Karnataka state.

Exposure visit to Hosahalli and other places will be initiated for the purpose of motivating the WUCS.

Training Needs Assessment for the identified institutions will be initiated and completed.

Skills training for SST such as in documentation, case study preparation, photography and editing will be carried out by PSC. For this, some interested and motivated personnel from CADA and WUCS will also be invited.

Agriculture Development:

MoU with KVK and Agriculture & Horticulture University, Shivamogga will be entered into. More detailed discussions will be held in terms of demonstrations, field days and trainings to be carried out for Gondhi WUCS.

Gondhi Asset Management plan:

Work on the Gondhi Asset Management Plan for O&M will be initiated by the O&M expert being mobilised from 7 November 2016 onwards.

VNC FSR and Bid Documents:

As part of Tranche 2 subprojects, the VNC FSR will be submitted during the initial period of the next reporting quarter. Further, the bid documents will also be finalised for submission well before the visit of the ADB Mission from 17-22 November 2016.

TLBC FSR and Bid Documents:

PSC has already initiated work on the TLBC by having a meeting with the CE, SE, EE and other engineers at Munirabad. Good progress is expected during this quarter in terms of identification of demarcated areas, preparation of DPR for the demarcated areas, and other studies such as the environment, social, financial and economic analysis. PSC has made preparations for mobilisation of concerned experts towards this.



Performance Management Monitoring System-PPMS and PMIS:

PPMS will be made operational in terms of testing and hosting of the application and data entry. Necessary orientation programmes will be held for concerned engineers.

PMIS activity will be initiated and completed during the next quarter.

Environmental safeguards:

PSC expert will undertake the quarterly visit to the field sites for monitoring environmental safeguards by the civil contractor and submit a report. He will also finalise and implement the QA/QC process for Gondhi civil works quality control.



5 ISSUES, CHALLENGES AND MITIGATION MEASURES

5.1 REPLACEMENT OF PSC SPECIALISTS

The following PSC specialists have been replaced upon due approval from the client and ADB.

- Deputy Team Leader/PIM Specialist: Dr Srinivas Mudrakartha, w.e.f 7 September 2016;
- Water Institutions Specialist : Dr M. Nageswara Rao, w.e.f 7 September 2016;
- Construction Management Specialist: Mr. Nanjunda Swamy, w.e.f 2 July 2016;
- Communication Specialist : Mr. Mallikarjuna, w.e.f 4 July 2016.

O&M Expert will be mobilised from 7 November onwards and Agriculture Expert from 13 November 2016.

Support Services Team, w.e.f 15 September 2016:

- Male Community Organiser : Mr. Veeresh A.M., w.e.f 15 September 2016;
- Female Community Organiser : Mrs. Manjula, w.e.f 15 September 2016;
- Agriculture Extension Agent : Mr. JS Swamy, w.e.f 15 September 2016;
- Water Management Extension Agent: Mr. Shivanna, w.e.f 2 November 2016.

5.2 DELAY IN PREPARATION OF CAD WORKS PACKAGE

The mobilisation of SST and PIM/DTL replacement took place in September. The CAD package works have been initiated and the preparation of one model package for Kagekodamagge WUCS is in advanced stage. Some delay happened due to the reason of establishing coordination arrangement between KNNL and CADA and the modalities to be followed for CAD package preparation, etc. The process of interactions with WUCS to explain to them about the activity, organising a WUCS workshop, Kagekodamagge WUCS sharing their preferences of CAD works and revising the CAD package followed by a resolution process by WUCS contributed to the delay. Nevertheless, by the end of the reporting period, the WUCS model package for Kagekodamagge was in advanced stage which is since completed and sent to ADB through proper channel for approval.



6 ACTIONS ON COMMENTS AND SUGGESTIONS OF THE CLIENT AND OTHER STAKEHOLDERS

6.1 MASSCOTE TRAINING PROPOSAL

The MASSCOTE Training has been conducted by ACIWRM details of which will be included in their QPR.

6.2 QA/QC STUDY TOUR PROPOSAL

The capacity building activity of KISWRMIP includes the capacity building of KNNL and CADA engineers in Quality Control of civil works. In this context, this study is being organised for engineers involved in the modernisation of Gondhi Irrigation System.

The objectives of the study tour are:

- Firstly, build the capacity of KNNL and CADA engineers in the Quality Control supervision of civil works through classroom lectures, on the job training and exposure visits; and
- Secondly, thereby achieve the best possible quality in the Gondhi civil works.

With this perspective, PSC prepared and submitted a training proposal for about 10 engineers of KNNL and CADA to visit the large-scale ongoing irrigation modernisation construction works in Sharda Sahayak and Lower Ganga Canal systems of UP under the World Bank program, where SMEC is a third party quality control supervision consultant. The training program could not proceed as expected before the onset of the monsoon when the construction works stop due to wet conditions.

During the next reporting quarter, this visit will be explored.

6.3 ASSET MANAGEMENT PLAN AND DATABASE

The Asset Management Plan and database which is a loan covenant and flagged by the April ADB aide memoire will be initiated during the next reporting quarter. The PSC O&M expert will be in place from 7 November and will be tasked with this activity, among others.

6.4 STUDY VISIT TO THE BARIND MULTIPURPOSE DEVELOPMENT AUTHORITY

The preparatory work on this visit will be initiated in the next quarter.



PHOTO GALLERY

	
<p>PSC explaining various safeguard issues to Contractor</p>	<p>Make-shift shelter with Water and Sanitation Facilities for labour provided by Contractor</p>
	
<p>Safety Achievements displayed at the Workers' Quarters</p>	<p>PSC Staff at site to inspect Silt Disposal Practices</p>
	
<p>Temporary Shelters for labourers</p>	<p>Septic Tank at Workers Quarters</p>



Kagekomagge WUCS AGM 19 October 2016



WUCS workshop on 20 October 2016 at Bhadra CADA Conference Hall



LBC Cart Bridge Work in progress at RD km 7.4 and km 11.5



Canal lining work in LBC tail end