

KARNATAKA NEERAVARI NIGAM LTD



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

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

Quarterly Progress Report
October-December 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.

December 2016



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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
KISWRMIP	Karnataka Integrated and Sustainable Water Resource Management Investment Program
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



KARNATAKA INTEGRATED AND SUSTAINABLE WATER RESOURCES MANAGEMENT INVESTMENT PROGRAM

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 select 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, 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 effective from 13 July 2015 is scheduled for closing on 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
Monitoring Management Cell		
7.	Eswara Chandra K.S.	Program Officer (Additional charge)
8.	Sourcing from ACIWRM	MIS & GIS Communication Expert
Irrigation Management Cell		



Sl. No.	Name	Designation
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 fourth Quarterly Progress Report (QPR) for the period October-December 2016. The QPR presents key programmatic 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; Total \$225 million (ADB INR750 Cr, GoK INR375 Cr; Total INR1125 Cr) @INR50/\$
5	First Tranche 2014-2019	ADB \$31 million, GoK \$17 million; Total \$48 million (ADB INR155 Cr, GoK INR85 Cr; Total INR240 Cr) @ INR50/\$
(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	<p>(i) State and basin institutions strengthened for IWRM (by 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)</p> <p>(ii) Irrigation system infrastructure and management modernized (by KNNL) Modernization of irrigation system infrastructure and management in the Gondhi sub-project, including strengthening of water user cooperative societies (WUCS), installation of Flow Measurement equipment & Telemetry system in the Tungabhadra sub basin.</p>



Project Basic Data

		(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: INR112,21,88,261.00
(ii)	Flow Measurement & Telemetry System	Contract Awarded- Work Under Progress Tender Value: INR2,81,50,161.00 + Euro 1,945,020.00
(iii)	Project Support Consultants	Contract Awarded- Work Under Progress Tender Value: INR10,42,79,758.00 + AUD 644,392.00 + USD 602,051.00

10. Financial Progress: Cumulative Expenditure and Disbursement upto Dec-2016

(i)	Reimbursement Target to be achieved as per ADB for CY 2016 (As agreed in Jan 30-31, 2016 TPRM)	Q1	Q2	Q3	Q4	Total
	(in Millions)	\$ 0.6	\$ 0.7	\$ 3.2	\$ 1.1	\$ 5.6
	@ 1 \$ ≈ INR 65.5540 (in Crores)	₹ 3.933	₹ 4.588	₹ 20.977	₹ 7.211	₹ 36.709
(ii)	Amount reimbursed till Dec-2016 (in Crores)	-	-	₹ 17.95	₹ 7.030	₹ 24.980
(iii)	Achievement of targets cumulatively (%)	-	-	60.85 %	68.05 %	68.05 %
(iv)	Withdrawal Applications (WA) submitted	WA for Rs. 7.55 Cr (\$ 1.15 Million) is submitted to CAAA, DEA on 22-12-2016 for reimbursements. Progress including the above submitted claim = 88.61 %				

Review meetings of the Project Progress

11	Tripartite Review Meetings	a) 7 Dec 2015, Delhi b) 30-31 Jan 2016, Jaipur c) 16-17 Sep 2016, Delhi
12	Dates of ADB Missions	a) Special Project Administration Mission – 27 to 28 July 2015 b) Loan Inception Mission - 6 to 10 Nov 2015 c) Loan Review Mission - 26 to 5 May 2016 d) Loan Review Mission - 17 to 25 November 2016
13	Project Coordinating Committee (PCC)	Constituted Vide Govt. Order no. WRD 51 MBI 2015 (P1) Dt. 27 Nov 2015



Project Basic Data		
14	External Aided Project Monitoring Committee meeting under the Chairmanship of Additional Chief Secretary to Govt.	a) 1 st Meeting held on 6 th Aug 2015 b) 2 nd Meeting held on 7 th Jan 2016 c) 3 rd Meeting held on 30 th May 2016 d) 4 th Meeting held on 6 th August 2016 e) 5 th Meeting held on 16 th December 2016
15	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
16	Review meeting of KISWRMIP activities under the Chairmanship of Deputy Secretary (ADB II), DEA	22 nd 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.	INR112,21,88,261.00	26-02-2016	74%
ICB-2 Flow Measurement, Telemetry –Supply & Installation (FMT-ICB-2)	INR2,81,50,161.00 + Euro 1,945,020.00	23-11-2015	82%
PSC-1 Program Support Consultants (including WUCS strengthening support)	INR10,42,79,758.00 + AUD 644,392.00 + USD 602,051.00	20-11-2015	85%



Procurement Item	Contract Amount	Date of Award	ADB Financing
EFFM 5 Effects Monitoring	Recruitment of Effects Monitoring Consultant is kept on hold..		
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.



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	
	INR	1,99,85,243	74%	1,58,75,284	1,47,89,080	
	INR	2,90,12,200	74%	2,14,69,028	2,14,69,028	
	INR	10,21,43,705	74%	7,55,86,342	-	Submitted to DEA on 22/12/2016
FMT-ICB-2 : Flow Measurement & Telemetry System- Supply & Installation	Euro	1,47,82,152	80%	1,16,65,094	11665094	
	Euro	11,77,90,411	82%	9,57,87,991	9,57,87,991	
	Euro	1,46,60,000	82%	1,20,21,200	1,14,32,600	
	INR	28,15,016	82%	22,52,013	22,52,013	
	INR	7,70,869	82%	6,32,112	6,32,112	
	INR	63,22,874	82%	51,84,757	51,84,757	
PSC-1 Program Support Consultants (including WUCS strengthening support)	INR	98,44,802	100%	98,44,802	98,44,802	
	INR	53,22,591	85%	43,45,146	43,45,147	
	AUD	32,92,833	85%	27,98,908	25,50,313	
	AUD	58,38,174	85%	49,62,447	45,21,691	
EFFM 5	-	-	-	-	-	
Effects Monitoring						
Gondhi DC Multiple Lots	-	-	-	-	-	
Command Area Development works						
AC-IWRM	INR	782,30,400	Varied %	52,83,835	52,83,835	As per info from 5 th EAP monitoring committee report
	USD					
TOTAL		47,53,11,270		31,54,38,959	23,74,88,463	

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 31 December 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"> Part of ACIWRM reporting. (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 ha 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. <i>Lining of GLBC:</i> 6.62 km of GLBC out of 14.1¹ km has been completed. Out of 74 structures, 51 are completed. <i>Lining of GRBC:</i> 4.46 km of GRBC out of 73.476 km has been completed. Out of 378 structures, 120 completed. <i>Distributaries Lining:</i> Out of 26.096 km (of GRBC), 6.4 completed. Out of 223 structures, 25 completed.

¹ Including structures, it is 14.735 km for GLBC, and 74.239 for GRBC.



Item	Performance Targets and Indicators with Baseline	Status as of 31 December 2016
		<ul style="list-style-type: none"> • Renovation of Division Office, Bhadravati: Completed. • Anicut repair works started.
(ii) Irrigation system infrastructure and management modernized	<ul style="list-style-type: none"> • Gandhi irrigation subproject main-system asset management (operation and maintenance) plan developed (baseline = 0) 	<ul style="list-style-type: none"> • due for submission by 31st Dec 2016. Collection of data/information is in progress.
	<ul style="list-style-type: none"> • Telemetry systems operational for at least 100 locations within the sub-basin. 	Installation in Progress (Table 9)
	<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, • As per ADB aide memoire of November 2016, the Project rating is “potential problem” because of low disbursement. However, good progress has been made in terms of cumulative contract awards amounting to \$17.38 mn (99%) against \$17.65 mn. Cumulative disbursements are low, at \$2.68 mn against projected \$3.67 mn (73%).



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
KNNL		
Submit draft SST sub-contract to ADB for review and prior approval.	7-May-2016	The proposal received formal approval 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.	31-Dec-2016	The first pilot Kagekodamagge CAD package comprising 9 works has been prepared, resolution by WUCS obtained and ADB approval received. All internal approvals and procedures completed; Work Order and contract prepared; Contract signing and award to WUCS scheduled in a public function during January 2017.
Award of at least 30 CAD package works to WUCS	31-Dec-2016	Four more CAD packages comprising 36 civil works are ready; internal approvals and procedures completed. Work Order and Contract prepared for signing in a public function during January 2017. Total CAD Civil works initiated is 45 as against the target of 30 works. Rest of WUCS packages are under various stages of preparation.



Action Point	Time Frame	Current Status
Submit (first) safeguards monitoring report to ADB	31-Dec-2016	PSC submitted first safeguards report to KNNL on 1 st October 2016. Updated safeguards report submitted on 15 January 2017.
QPR to be submitted one month after reporting period	30-Jan-2017	QPR for October-December submitted on 28 January 2017.
PPMS and PMIS made operational	31-Dec-2016	PPMS developed and hosted on KNNL website, and is operational. PMIS under development; various formats developed; planned for completion by end of February 2017.
Recruitment and mobilisation of MIS and GIS communication expert.	31-Dec-2016	Since at present, the role of MIS and GIS Communication Officer is limited to updation of project progress in PPMS and PMIS, this role shall be executed by PMU staff itself in coordination with PSC.
Submit Withdrawal application (WA) submitted to ADB	10-Dec-2016	WA application amounting to USD 0.3 Million is approved and reimbursed by ADB. WA for USD 1.1 M is submitted to ADB on 22 Dec-2016.
Submit APFS for 2015-16 to ADB	Immediately	Submitted on 22-12-2016.
Updated FAM submitted to ADB	[31-Jan-2017]	Updation of FAM in progress.
Obtain CWC's final approval of the VNC and TBP DPR	31-Dec-2016	VNC and TBP DPRs are under revision. Expected to be completed by Final approval to be obtained on revised DPRs by 31 December 2016.
Submission of draft VNC feasibility study	31-Dec-2016	PSC submitted VNC Feasibility Study Report to KNNL and PIO, Tranche 2 on 20 September 2016 which was further examined and submitted to ADB on 29 October 2016 by PD. The ADB Mission during 17-22 November held a detailed review and gave suggestions and guidelines for the social, environmental and financial and economic studies, including some templates. The revised VNC FSR is expected to be submitted to KNNL by 28 February 2017.
Submission of draft VNC bid documents to ADB for review and prior approval.	31-Dec-2016	The Bid documents prepared by PSC were discussed in a meeting with Chief Engineer, and his staff, KNNL and SMEC on 5 January 2017 in KNNL Bangalore for finalization. The Bid Documents expected to be submitted to KNNL by 28 February 2017.
Submission of draft TBP feasibility study	31-May-2017	Experts have been mobilised and studies initiated. Areas demarcated in consultation with KNNL and DPR Consultant. Modified DPR preparation to be initiated shortly.



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; October-December 2016 submitted on 28-01-2017
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

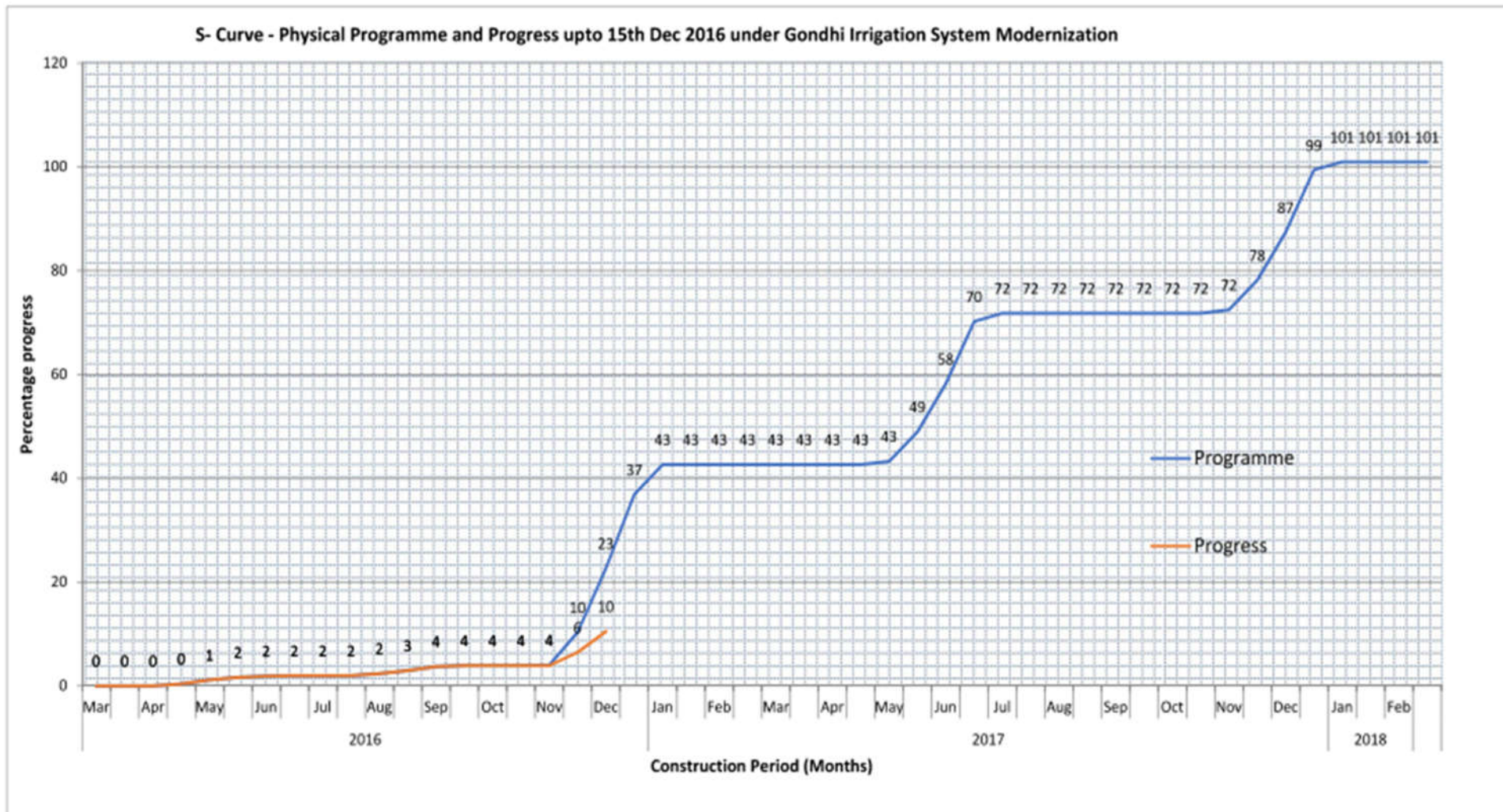
1.8 GONDHI CIVIL WORKS

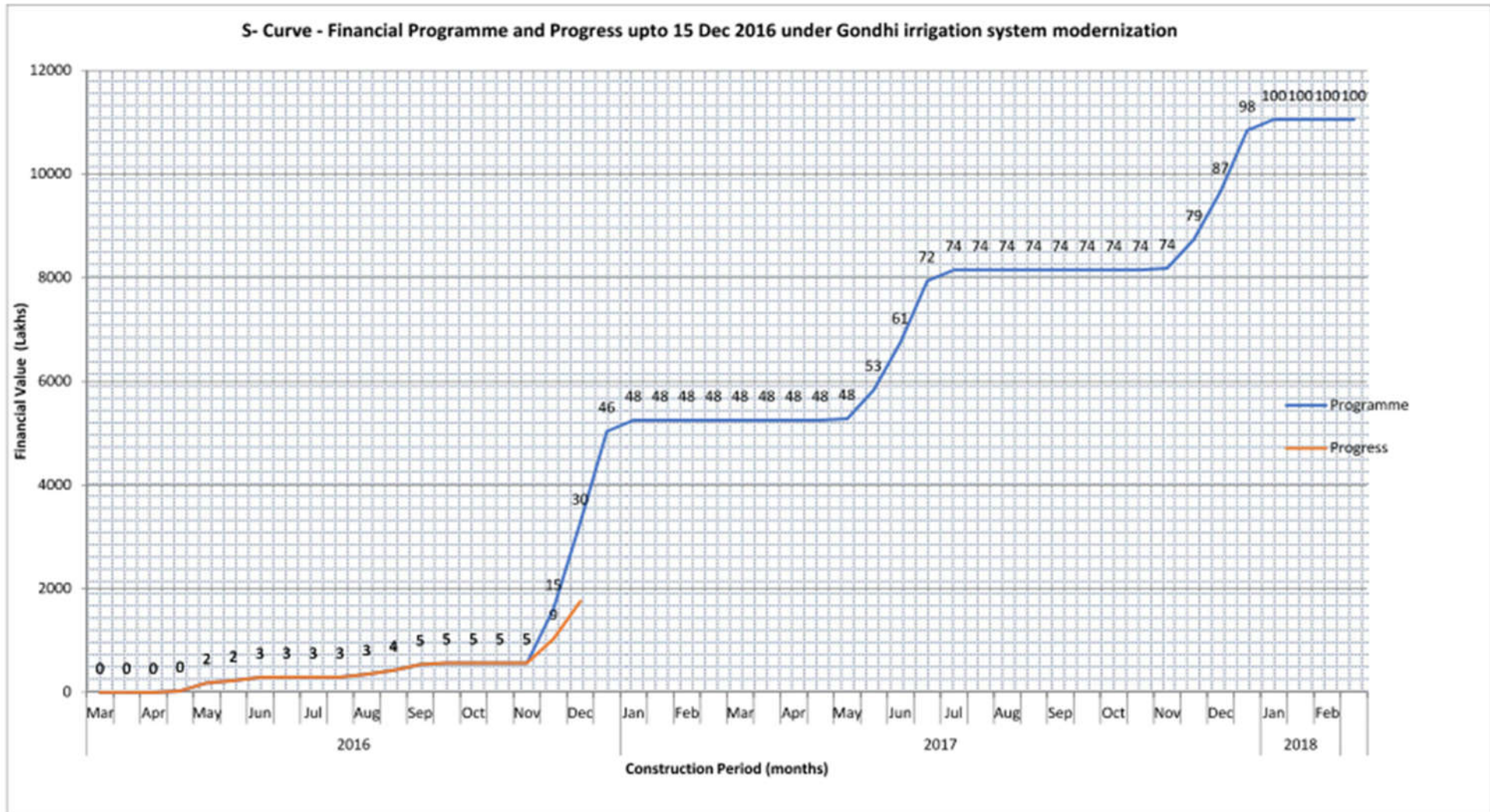
Gondhi canal modernisation civil works contract became effective from 26.02.2016 and expected to be completed by 25.02.2018. The construction of structures, and lining in the tail end reaches of the main canal has been going on during on and off period of the canal. The Canal closure has begun from 20 November 2016. The Contractor has made advance preparation for mobilisation of men, material and equipment so that the work could begin as soon as canal became dry after closure on 20 November. Civil works such as lining and structures have since been resumed.

The Contractor has already established his office in Bhadravathi and in DB Halli along with quality control laboratories and two Concrete Batching Plants.

Overall Physical and Financial Progress:

The overall physical and financial progress is captured in the S Curves given below based on data procured from KNNL, followed by detailed description of physical and financial progress, item wise.





The overall physical progress is 10% against 23% of the total work planned, as of 15 December 2016. The overall financial progress achieved as of 15 December 2016 is Rs.17.58 crores against Rs.32.66 crores. This works out to 16% against 30% work planned of the total work. The overall progress upto first fortnight of November 2016 was at par with program. However, it appears that the progress has slowed down reportedly due to silt and earth work problem in the canals. Senior officials of KNNL are apprised of the matter.

The Chief Engineer conducted meetings with both departmental officials as well as the contractor to hasten the progress and achieve the targets. He has instructed the contractor to mobilize more manpower and machinery. Similarly, he instructed officials to closely monitor the progress. The Chief Engineer is taking fortnightly reviews and carrying out field inspections.

1.8.1 PHYSICAL PROGRESS

The physical progress as of 31.12.2016 is as follows:

- 6.62 km of GLBC out of 14.1 km has been completed. Out of 74 structures, 51 are completed.
- 4.46 km of GRBC out of 74.5 km has been completed. Out of 378 structures, 120 completed.
- *Distributaries Lining*: Out of 26.096 km (of GRBC), 6.4 completed. Out of 223 structures, 25 completed.

Gondi Civil Works- Physical Progress as of 31 December 2016							
S. No	Item of Work	Lining (km)		Achievement %	Structure (nos.)		Achievement %
		Estimate	Achievement		Estimate	Achievement	
1	Left Bank Canal	14.100	6.62	46.95	74	51	68.92
2	Right Bank Canal	73.476	4.46	6.07	378	120	31.75
3	Distributary	26.096	6.4	24.52	223	25	11.21



Canal Lining



Pipe Cart Bridge



<p>Slab Cart Bridge</p>	<p>Canal Lining</p>
<p>Pipe Culver</p>	<p>Inlet</p>

1.8.2 DIVISIONAL OFFICE

Repairs and improvements to the existing Divisional office building at Bhadravati have been completed during reporting quarter. Office has started functioning in the renovated building in December 2016. Payment released is INR 60 lakhs against tendered amount is INR61.882 lakhs.

1.8.3 AQUEDUCT

Repairs to all the three aqueducts is under progress. Payment released is INR49.48 lakhs as against tendered amount of INR438.58 lakhs.



1.8.4 SECURITY OFFICE & ANICUT REPAIRS

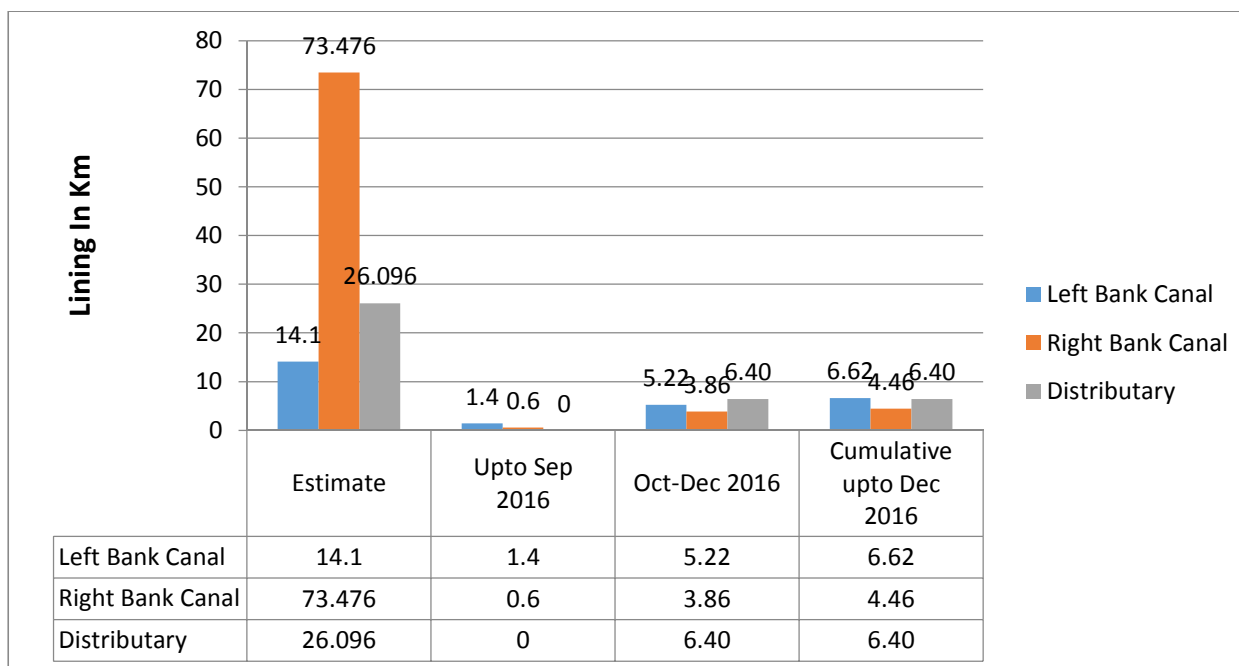
The preliminary work in terms of identification of site for construction of Security Office is underway. Repairs to Gandhi Anicut has started in this quarter.

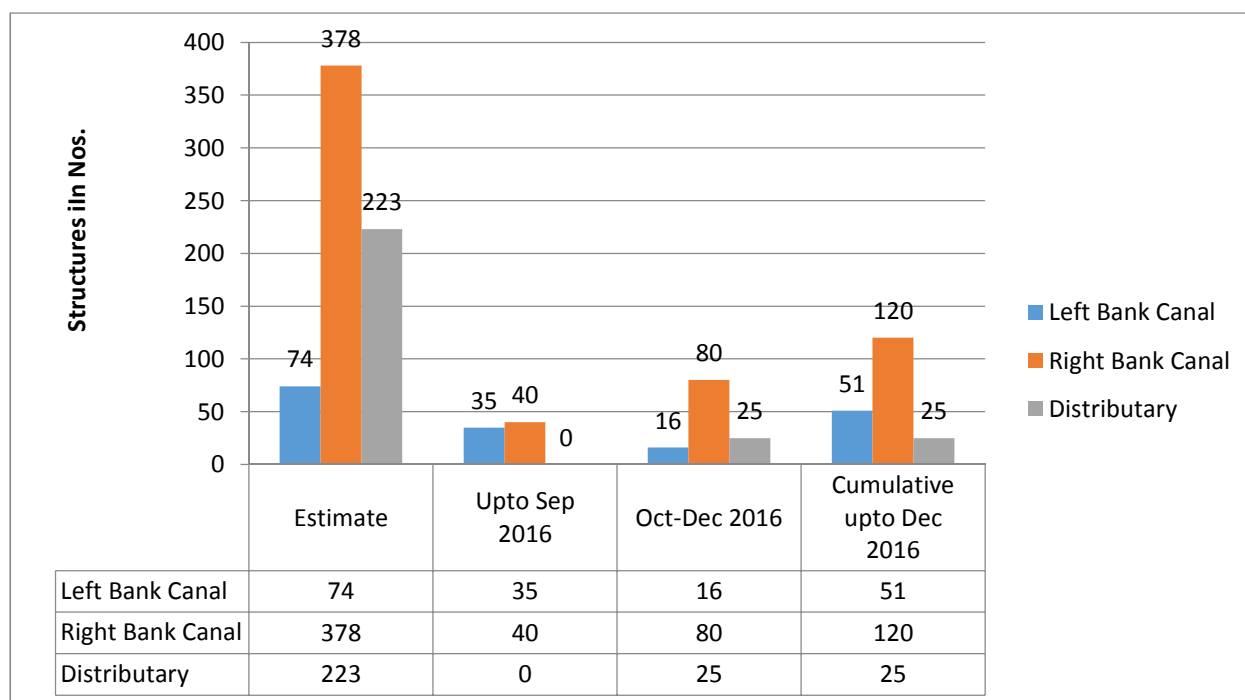
1.8.5 FINANCIAL PROGRESS

Agreed contract value is INR112.22 crores. A mobilisation advance of INR6.45 Cr. has been paid to the contractor against Bank Guarantee. Payment released to the contractor is INR16.06 crores as of 31 December 2016.

Physical Progress under Gandhi Irrigation System

Gondhi Civil Works-Cumulative Physical Progress as of 31 December 2016													
S No	Item of Work	Lining In Km						Cumulative Achievement In %	Structures in Nos.				Cumulative Achievement In %
		Estimate	Upto Sep 2016	Estimate	Upto Sep 2016	Oct-Dec 2016	Cumulative upto Dec 2016		Estimate	Upto Sep 2016	Oct-Dec 2016	Cumulative upto Dec 2016	
1	Left Bank Canal	14.1	1.4	14.1	1.4	5.22	6.62	46.95	74	35	16	51	68.92
2	Right Bank Canal	73.476	0.6	73.476	0.6	3.86	4.46	6.07	378	40	80	120	31.75
3	Distributary	26.096	-	26.096	-	6.40	6.40	24.52	223	-	25	25	11.21





1.9 FLOW MEASUREMENT AND TELEMETRY SYSTEM

The contract for flow measurement and supply and installation of telemetry 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 of operation and maintenance. The proposed distribution of flow measurement equipment in Tranche 1 is listed in **Table 8**.

Table 8: Equipment details for flow measurement in Tungabhadra Sub-basin

Component	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 65 Ah – 100 Ah	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 telemetry installation in the Tungabhadra basin have been identified including 20 locations in Gondhi system. A KNNL Quality Inspection Team visited Germany for learning and quality inspection. The Telemetry equipment was shifted to the project location in the month of June 2016. Due to non-availability of water in the canals, the installation and calibration are progressing slowly. **Table-9** gives the status.

Table 9: Installation of Telemetry Systems-Status

S. no.	Project	Quantity	Instrument type	Security shed-Status	Solar power – status	Installation calibration
1	Bhadra	9	Transit Time Flow	Completed	Completed	In progress
2	Bhadra	24	Radar Flow meters	Completed	Completed	In progress
3	Gondhi	20	Radar Flow meters	Awaiting modernization		
4	Upper Tunga Project	6	Transit Time Flow meters	Ongoing	Ongoing	By Feb 2017
5	Upper Tunga Project	5	Radar Flow meters	Ongoing	Ongoing	By Feb 2017
6	Singataluru LIS	3	Transit Time Flow meters	Ongoing	Ongoing	By Mar 2017
7	Singataluru LIS	10	Radar Flow meters	Ongoing	Ongoing	By Mar 2017
8	Tungabhadra	6	Transit Time Flow meters	Ongoing	Ongoing	By Mar 2017
9	Tungabhadra	1	Radar Flow meters	Ongoing	Ongoing	By Mar 2017
10	Vijayanagara Canals	16	Radar Flow meters	Awaiting Modernization		
	Total	100				

1.9.2 FINANCIAL PROGRESS

Out of the contract value of INR2.81 crores and Euro 1.94 million, an expenditure of INR0.914 crores and Euro 1.94 million respectively has been incurred. A mobilisation advance of INR28.0 Lakhs and Euro 194,502 has been paid to the contractor against Bank Guarantee.



2. PROJECT ACTIVITIES DURING THE REPORTING PERIOD (OCTOBER-DECEMBER 2016)

The Quarterly Progress Report submitted herewith is for Quarter 4 (October-December) of 2016 (Q4Y1). This report does not include Output 1 as the same will be reported by ACIWRM separately.

2.1 WATER USER COOPERATIVE SOCIETIES

The role of WUCS is critical to the success of Gondhi Modernization Project. Most of the WUCS were in dormant state. Hence, PSC continued to focus on institutional building of WUCS.

Towards this, the PSC supported by experts and its Support Service Team (SST) members (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 in terms of holding regular meetings, and carrying out activities as per bye-laws; (b) prepare them for active participation in the ongoing Gondhi Modernization Project by informing them about the project, broad details of modernization and the need for their taking up CAD packages, along with (c) the roles and responsibilities of WUCS in Participatory Irrigation Management. The PSC has also been focusing on women so as to improve their participation and formal role in both the WUCS and the project.

The following are some of the several activities taken up by PSC:

- Introduction of the concept of IWRM in the modernization programme and its integrated approach;
- Listing out the main physical works and other components of the programme;
- Disseminating information on the roles and responsibilities of various stakeholders (KNNL, CADA, PSC, Agriculture, Rural development, etc.);
- Social mapping of the area with the help of WUCS, with focus on prevalent water supply systems and water availability, including to tail end reaches;
- Educating farmers on the process of implementation of CAD packages;
- Sharing the implementation plan of each WUCS, including water tariff collection, operation & maintenance, monitoring etc.
- Mapping livelihood activities carried out under various government schemes (as that of Department of women & Child development, Panchayat, MNREGA, etc.)
- Sharing background information on ADB Safeguard principles and communication strategy during meetings for better comprehension of the role of different stakeholders.

Alongside, PSC has been focusing on improving participation of women in the modernization program, which is described below with examples of response:

- Encouraged women participation in the meetings held from time to time by conducting women's focus group discussions, and informal interactions. This has started showing results: three women members have been selected in the subcommittees of two WUCS-Dasarakahalli and Seegebagi. The WUCS has also resolved to take into consideration the convenience of women while fixing dates of sub-committee meetings.



- It was resolved to increase the presence of women in sub committees and WUCS by 30% by incorporating more women Directors.
- It is observed that the level of participation and understanding of women members in WUCS has substantially improved; their interest is also enhanced: the women members were present in the Seegebagi WUCS meeting on CAD package till the end on 9 January 2017. Women members are now very keen to take part in the implementation of CAD package work as well.

2.1.1 SECOND BASELINE ASSESSMENT OF WUCS

The first round of Baseline Assessment was carried out in September/October 2016. The assessment made against 29 parameters indicated poor institutional performance of WUCS. Based on the findings an Action Plan was developed and implemented during September and December 2016.

To implement the Action Plan, the PSC adopted the approach of strengthening and keeping continuous contact with the WUCS directors in particular and the members in general. This was done through regular meetings, conducting focus group discussions and through informal interactions. Gram Panchayat was also a point of interaction what with so many common members in WUCS. The subjects discussed in the meetings included:

- Creating awareness among WUCS/members on the Gandhi Modernization project objectives and activities, and their role in it;
- Establishing and registering WUCS where they are not yet formed;
- Establishing WUCS Office, equipping WUCS with relevant information and records and helping them update their records;
- Creating awareness among farmers about the roles and responsibilities of WUCS in irrigation service delivery including crop water planning, water management, minor and CAD system O&M, water charge collection and remittance;
- Formation of Sub committees as required by the bye-laws;
- Mobilizing non-member farmers to become members of their WUCS.

In addition, PSC organised to collect maps of each WUCS area, and arranged for display the coloured map in their 'office space'. Similarly, communication material developed earlier is also displayed.

Another point of focus was promoting discussion with the aim of encouraging WUCS to sign MOU with KNNL. Post this, the WUCS will also be eligible for a one-time grant.

PSC has been carrying out intensive field visits, meetings and focus ground discussions to bring about improvement in the baseline status of the WUCS revealed in the first assessment. To assess the change brought about in two months, a second round of baseline assessment of WUCS was conducted during later part of December 2016. Analysis of data collected indicates that there has been significant improvement in the functioning of the WUCS leading on to the path of institutional strengthening (see Annexure 1 for report).

The following are the preliminary findings:

- All the WUCS now have identified an office, set up registers, files and records.
- All the WUCS now have appointed a secretary to assist them in office administration.
- All the WUCS have conducted a General Body meeting in September.
- All the WUCS are now registered; MoU with KNNL is in progress and expected to be completed by end December.



- Some WUCS who have not obtained one-time grant are encouraged to pursue.
- All the WUCS are now aware of the ADB supported KISWRMIP and are in preparation for entering into MoU with KNNL.

Further,

- Some WUCS, namely, Kagekodamagge, Dasarakallhalli, Seegebagi, Tallikatte and Barandur have completed audit with the support of PSC. Others are in progress.
- Kagekodamagge and Tallikatte WUCS have now begun collecting water charges based on the cropping pattern under the guidance of the PSC. Others are also being encouraged.
- Guiding WUCS members to elect new committees as per norms: Dasarakallhalli WUCS is in the process of completing elections.

Renewing MoU with a defunct WUCS

One WUCS, namely, Sri Veerbhadreswara Holehonnur WUCS, was declared defunct by CADA because the AGM and other mandatory audit processes were not carried out from the year 2010 onwards. Interaction of PSC with CADA for recommendation and with the Director of Cooperatives on regular basis led to recognition of WUCS by the Director of Cooperatives.

Exposure Visit to WALMI , Aurangabad and PIM project

An exposure visit comprising five senior officials of KNNL, CADA and SMEC headed by the Chief Engineer, KNNL, Shivamogga visited WALMI Aurangabad during 5-8 January 2017. After introductory sessions, briefing and WALMI institutional visit, the team visited Mula Participatory Irrigation Management Project in Ahmednagar district. During the field visit, the team interacted with the Water User Association (WUA) members, WRD engineers and others. The team was highly impressed with PIM practised there. The team has noted that although seven years have lapsed since partial (that is, 20% only) canal improvement has been carried out, the system is being maintained efficiently by the WUAs. Water collection is almost 100%. Further, the WUAs collect higher charges than fixed by the Maharashtra state government. The rates charged are Kharif Rs.300/acre; Rabi Rs.400/acre, summer Rs.600/acre. Compared to Karnataka, the water levy is quite higher.



Visit to Agriculture Lab in WALMI



Syphon demonstration in WALMI campus



Team visiting the volumetric measurement device



Group Discussion with Jagadamba WUCS Secretary



PSC facilitation for 2 WUCS in addressing their water related Issues

1. *Koppadoddakere WUCS has an irrigation tank which was encroached by some farmers for cultivation. PSC encouraged and guided the WUCS to approach the District Commissioner and Tahsildar of Revenue Department for removal of the encroachment. In response to this, the Tahsildar has written to the WUCS to take immediate action to vacate the encroachment. The WUCS has also requested the Tahsildar to take up repair of the Koppadoddakere tank. This is because Gondhi water flowing to tank was overflowing due to the damaged sluice gate.*
2. *During one of the PSC meetings in Doddaguppenhalli WUCS, members shared about the severe problem of Bhadravathi city underground drainage water getting mixed with the Gondhi canal water (GLBC). The same contaminated water flows down to Gondhi command area where farmers using the water irrigation were facing health issues in addition to air pollution. PSC after thoroughly discussing the issue, helped them take the issue to the notice of Karnataka Water Supply and Sewerage Board. The Board assured the WUCS that appropriate remedial action will be taken as part of the Amrut scheme. PSC fetched a DPR of Amrut and explained the scheme to the WUCS members.*

2.1.2 GONDHI WUCS STRENGTHENING PROPOSAL

The ADB Mission of November has agreed to the PSC proposal for a separate Gondhi WUCS Strengthening budget. As advised in the aide memoire, PSC has prepared and submitted the *Gondhi WUCS Strengthening proposal* to KNNL on 30 December 2016.

2.1.3 CONSTRUCTION MANAGEMENT WORKSHOP

During the reporting period, PSC has conducted a workshop on *Construction Management* to equip WUCS with information and knowledge necessary for implementing the ensuing CAD works. The workshop held on 17 December 2016 was attended by 2-3 representatives from each of the 10 WUCS. In addition to PowerPoint presentations and discussions, PSC has also demonstrated construction material, and quality assurance. The main objective was to prepare the WUCS to take up the upcoming CAD package works.

The second half of the workshop was on *Communication Strategy and Safeguard Measures* as per ADB Safeguard Policy, 2009. The communication strategy dealt with sharing of information, communication channels, tools and methods. The discussions were around safeguard measures to be taken during implementation of civil works. To aid good quality documentation, trainees were also taught about techniques of photography and videography, in addition to case study documentation.



Workshop for WUCS on Construction Management, Communication Techniques and Social Safeguards at CADA Conference Hall, Shivamogga on 17.12.2016.

2.2 CAD PACKAGE WORKS

The KISWRMIP has a component 'CAD package works' to be implemented directly by WUCS. There are 10 WUCS in Gondhi Modernization Project. Significant progress has been made during the reporting period in terms of achieving the milestone as described below:

Progress made during the reporting quarter:

- Preparation and initiation of implementation of 30 CAD works by December 2016 is an important milestone. As against this, 45 CAD works belonging to 5 WUCS are ready, waiting for contract signing between CADA/KNNL and WUCS. The delay is due to the process for formal involvement of CADA. PSC has been pursuing the matter, at all levels; the signing is expected by end of January 2017.
- The CAD Package for one WUCS, namely, Kagekodamagge, has been prepared, and resolution adopted by WUCS to the effect that the CAD works are in agreement with their priorities, and that they will be participating in the implementation of the CAD works. The process adopted was:
 - For ensuring acceptance of the WUCS, to begin with, a joint walk was organised during which options were discussed such as regarding location and number of pipe outlets and structures.
 - For the resolution, PSC organised a meeting in which KNNL and CADA engineers and SMEC were present. CADA engineers explained about the various activities proposed in the DPR, 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 has 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 as per CADA guidelines.
- A public function for the signing of the Contract Agreement between KNNL/CADA and WUCS in the presence of the CADA Chairman, Administrator and the Chief Engineer KNNL is scheduled for the end of January 2017.



CAD Package Acceptance Meeting in Kagekodamagge



CAD Package Acceptance Meeting in Tallikatte

CAD Package Acceptance Meeting in Nagathibelagalu



*CAD Package Acceptance Meeting in
Doddagoppenahalli*

CAD Package Acceptance Meeting in Seegebagi

Progress on other CAD Packages



- Four more CAD packages comprising 35 civil works have been prepared simultaneously; internal approvals and procedures have been completed. Work Order and Contract prepared for signing in a public function scheduled for the end of January 2017.
- Total CAD Civil works initiated thus is 45 belonging to 5 WUCS as against the milestone of 30 works.
- Rest of WUCS packages are under various stages of preparation.

Challenge faced and addressed

One of the challenges that has caused a slight delay in the launch of CAD packages relates to formal involvement of CADA in the entire process. Although as per project proposal, CADA is expected to play a key role in terms of preparation of the CAD packages and entering into implementation agreement with WUCS-in addition to monitoring implementation-there have been no formal instructions given to CADA. PSC has put in a lot of effort into addressing this grey area through discussions with the Chief Engineer, KNNL, Administrator, CADA, and MD-KNNL office. This has been finally addressed and the signing of the CAD packages is expected to be completed shortly.

2.3 AGRICULTURE

During the previous quarter, PSC experts have visited the Krishi Vigyan Kendra as well as University of Agriculture and Horticulture in Shivamogga. During the meeting with the vice chancellor and the Registrar, it was agreed to enter into a MoU for collaboration on training and Agriculture extension activities.

During the reporting period, the canal closure season has begun from November 20. PSC has utilised this lean season to share details about government agriculture schemes with WUCS with the idea of dovetailing them. PSC has also been collecting and compiling agriculture related communication material and sharing the same with WUCS during its regular meetings and interactions with WUCS.

Currently, PSC is pursuing two ways to strengthen the agriculture component. First, since there is no budget allocated for promoting agricultural activities in the project, some activities in the form of crop demonstrations, field days, trainings and exposure visits have been incorporated into the proposal *Gondhi WUCS Strengthening*, and submitted to KNNL/ADB for approval. Second, an idea is mooted to develop an agriculture program to support the project objectives and seek funding support from KNNL. The program shall contain actions that lead to preparing farmers to the anticipated cropping pattern envisaged in the Gondhi Feasibility Study, in addition to exploring dovetailing of government schemes.

2.4 GONDHI O&M, AND ASSET MANAGEMENT PLAN

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

During the reporting period, formats have been developed and shared with KNNL for obtaining information regarding existing asset management scenario, and operational and maintenance costs. It is expected that during the ensuing quarter, the O&M plan and asset management plan will be completed.

2.5 SAFEGUARD MONITORING FOR GONDHI IRRIGATION SYSTEM

During the reporting quarter, PSC reviewed the EMP implementation of the Gondhi Irrigation System modernization project by the Contractor RPP Infra Projects.



The PSC expert visited the Contractor's office and the Batching Plant site during 4-5 November 2016 to look into the progress made by the Contractor in implementing the EMP. The following actions have been taken by the Contractor:

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;
8. Installed appropriate safety sign boards for utilising the village roads for transporting materials through company trucks, and
9. Has secured written approvals from the local community for locating the Batching Plant.

Further, on the social safeguards measures, the PSC found that there are no resettlements and Indigenous People related issues. However, the contractor has been requested to maintain record of incidents of resettlement issues, if any, of Indigenous People, and periodic awareness programs conducted on HIV/AIDS.

As part of regular interactions with WUCS, PSC focused on ensuring attendance of women in the meetings. In particular, efforts are underway to encourage women to become part of the sub committees which are being formed as part of WUCS strengthening. Similarly, PSC has been focusing on encouraging participation of vulnerable groups.

Interestingly, based on the request from the local community and communicated to the Contractor by the Consultant, the Contractor has replaced a 'Bilva' tree (Botanical Name, Aegle marmelos) that was cut at Holehonnuru. The 'Bilva' tree is utilised for temple rituals. However, the tree was initially located on canal area and had to be cut to make way for the modernization works.

In addition, the Contractor has initiated the following actions, as well:

1. Sought additional information from the Quarry Owners regarding the implementation of their EMP;
2. Organizing awareness workshop on health and other project issues for labourers, workers and the local community to prevent any untoward issues during the project period;
3. Testing of water, air and noise samples at construction sites.



2.6 SOCIAL MANAGEMENT FRAMEWORK AND GENDER ACTION PLAN FOR GONDHI SYSTEM MODERNIZATION

The 1st baseline assessment has shown that the participation of women is not up to the mark in WUCS, which they themselves were not active save for one or two WUCS. During the reporting period, PSC has put in special efforts to mobilize women to attend meetings, also to take part in the sub committees currently under formation under each WUCS.

To achieve this, a strategy was devised according to which: (a) PSC identified active women displaying leadership qualities and started training them to carry out specific tasks and actions; (b) Gradually build up a network of women leaders and train them to participate in the implementation of activities-ongoing or proposed; (c) Information dissemination on various aspects of the project to enhance awareness and knowledge of women, and to make them more comfortable to participate, and (d) Specifically, make them aware of bottlenecks that inhibit women to participate in WUCS activities and ways of addressing them.

One decision that all the WUCS have taken is to induct more women members in WUCS activities and decision making. The 2nd baseline assessment has shown that the level of comprehension in the women members about the project, and the proposed CAD works participation has increased. This has also led to their increasing participation in various events gradually. For instance, the last WUCS meeting in Seegebagi held on proposed CAD package works on 9 January 2017 has seen at least 30 women members attending the meeting and getting prepared to participate in the implementation of CAD package work.

Further, with a view to achieving the target of at least 30% women as Directors in WUCS, a few separate women's groups are planned to be formed to include their perceptions and priorities in WUCS activities.

As part of awareness, mapping of existing livelihood programs carried out under various governmental schemes such as the Department of Women and Child Development, MNREGA and Panchayat Raj Department has been initiated.

Particular focus is also made to mainstream the landless, tail end farmers and socially disadvantaged communities.

2.7 TRAINING & CAPACITY BUILDING

The capacity building component is being carried out across various components of the project and is reported contextually. However, some specific efforts under this component are described below:

During the reporting period, a Desk Review has been carried out followed by visits to some of the select institutions to assess the institutional strengths along with training activities carried out. The desk review sourced information from the institutions' websites and other secondary sources of information.

An institutional assessment report has been prepared which is attached as Annexure 2. The report contains summary of observations and findings that include training facilities available, staffing pattern, types of courses offered and categories of trainees. This is followed by identification of activities to be performed and actions to be taken.

Consequent upon approval of the *Gondhi WUCS Strengthening proposal* submitted by PSC to KNNL/ADB, a formal agreement shall be made with some identified institutions for specific training support.



Activities planned for next quarter (January-March 2017):

- Finalization of the Institutional Assessment report.
- Continue to support/conduct training programs as part of other project components.
- Facilitate Construction Management training programs.
- Orientation programs for engineering staff of KNNL and CADA on IWRM and PIM. A visit to the Administrative Training Institute (ATI), Mysore to explore training opportunities for senior engineers/officers on soft skills (personnel management, personality development etc.). Similarly, visit to WALMI is also planned.

2.8 PROGRAM PERFORMANCE MANAGEMENT SYSTEM

The Program Performance Management System (PPMS) under Gondhi Irrigation Project has been *made operational* during the quarter. PSC has worked with the Consultant agency (for hosting hired by KNNL), and hosted the application on the server maintained by the agency. Dummy data has been entered and demonstrated to KNNL and ACIWRM. Both KNNL and ACIWRM have to enter the data and start using the application for generating reports as necessary.

URL: <http://kiswrmp1.vmdtechnologies.com/>

Category Item	Category Number	Category Sub Item	Expenditure for the Period	%	Claimable Expenditure for the Period
Civil Works	1	Civil Works	5,690,219	74%	4,210,762
Equipment & Supplies	2	Equipment & Supplies	0	82%	0
Training	3	Training	0	90%	0
SST for WUCS	4	SST for WUC's	0	95%	0
Survey and Study	5A	Effects Monitoring	0	90%	0
	5B	Survey, Design and Studies	0	64%	0
Support Consultant	6A	International	392,467	85%	333,597
	6B	National	0	85%	0
	6C	Consultancy Service	0	85%	0
Staff Cost		Staff Cost	0	0%	0

Screen shot of Category Claimable Expenditure Report

PMIS

During the quarter, formats have been developed for the WUCS, Agriculture and Civil Works components. The coding is completed. After testing, necessary modifications will be carried out, and finalised. Other themes will be included shortly. The PMIS hosting will be done by end of January and tested. By end of February, the PMIS will be fully operational.



Field	Value	Field	Value
Project Name:	-- Please Select --	WUCS:	-- Please Select --
Year:	-- Please Select --	Office:	<input checked="" type="radio"/> NO <input type="radio"/> YES
Office:	<input checked="" type="radio"/> NO <input type="radio"/> YES	Bylaw:	<input checked="" type="radio"/> NO <input type="radio"/> YES
Hydraulic particulars:	<input checked="" type="radio"/> NO <input type="radio"/> YES	Farmers list:	<input checked="" type="radio"/> NO <input type="radio"/> YES
Farmers list:	<input checked="" type="radio"/> NO <input type="radio"/> YES	Women farmers list:	<input checked="" type="radio"/> NO <input type="radio"/> YES
Women farmers list:	<input checked="" type="radio"/> NO <input type="radio"/> YES	Registration Certificate:	<input checked="" type="radio"/> NO <input type="radio"/> YES
Registration Certificate:	<input checked="" type="radio"/> NO <input type="radio"/> YES	Governing Body Meeting Minutes Register:	<input checked="" type="radio"/> NO <input type="radio"/> YES
Governing Body Meeting Minutes Register:	<input checked="" type="radio"/> NO <input type="radio"/> YES	Cash Book:	<input checked="" type="radio"/> NO <input type="radio"/> YES
Cash Book:	<input checked="" type="radio"/> NO <input type="radio"/> YES	Income and Expenditure Register:	<input checked="" type="radio"/> NO <input type="radio"/> YES
Income and Expenditure Register:	<input checked="" type="radio"/> NO <input type="radio"/> YES	Board:	<input checked="" type="radio"/> NO <input type="radio"/> YES
Board:	<input checked="" type="radio"/> NO <input type="radio"/> YES	Paid Secretary:	<input checked="" type="radio"/> NO <input type="radio"/> YES
Paid Secretary:	<input checked="" type="radio"/> NO <input type="radio"/> YES	Cadastral map:	<input checked="" type="radio"/> NO <input type="radio"/> YES
Cadastral map:	<input checked="" type="radio"/> NO <input type="radio"/> YES	Members List:	<input checked="" type="radio"/> NO <input type="radio"/> YES
Members List:	<input checked="" type="radio"/> NO <input type="radio"/> YES	Crop Particulars Details List:	<input checked="" type="radio"/> NO <input type="radio"/> YES
Crop Particulars Details List:	<input checked="" type="radio"/> NO <input type="radio"/> YES	Governing Body Members list:	<input checked="" type="radio"/> NO <input type="radio"/> YES
Governing Body Members list:	<input checked="" type="radio"/> NO <input type="radio"/> YES	Meeting Notice File:	<input checked="" type="radio"/> NO <input type="radio"/> YES
Meeting Notice File:	<input checked="" type="radio"/> NO <input type="radio"/> YES	Annual Audit Report:	<input checked="" type="radio"/> NO <input type="radio"/> YES
Annual Audit Report:	<input checked="" type="radio"/> NO <input type="radio"/> YES	Letter Head:	<input checked="" type="radio"/> NO <input type="radio"/> YES
Letter Head:	<input checked="" type="radio"/> NO <input type="radio"/> YES		

PMIS Screen shot for entering the WUCS Details

Project Website

During the reporting period, the project website <http://knnlindia.com/kaveri2/adb.html> has been updated with all project related documents, events and photo-gallery.

2.9 TRANCHE 2 SUBPROJECTS FEASIBILITY STUDY

2.9.1 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.

The VNC Feasibility Study Report (VNC FSR) has been submitted to KNNL/ADB on October 19, 2016. Based on the DPR and the assessment reports, namely, Initial Environmental Examination (IEE), Social Management Framework (SMF), Gender Action Plan (GAP), Resettlement Plan and Indigenous People's Assessment, a VNC Feasibility Study Report was prepared.

The VNC FSR consisted 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.

The ADB mission during November 17-22, 2016 had reviewed the VNC FSR submitted and has given feedback and guidelines, along with some templates to facilitate better analysis and reporting.

The ADB Mission advised examining the following and includes remedial actions:

- Channel wise mapping of all the 16 Canals of the VNC for settlements, erosion, and issues related to canal width etc. as part of social and gender component;



- Revise the social safeguard due diligence report as per guidelines provided in the aide memoire to support ADB approval to both IP and IR safeguard for Tranche 2 as “C” in accordance to ADB SPS 2009;
- Rename the Socio-Economic Assessment report as Poverty and Social Assessment (PSA);
- Financial and Economic analysis to be conducted for full project and all the subprojects, and that each subproject should meet the economic threshold. A reporting format has been advised. For each subproject, the affected WUCS be identified and surveyed specific for the head, middle and tail reaches, measure the crop types, intensities, areas and yields. Crop yield responses to watering should be estimated by comparing crop yields to the number of watering for each crop. For this purpose, it is advised that informal canal wise interactions with farmers are sufficient.
- Since at least 12 Vijayanagar canals with their anicuts fall under protected areas, the Mission recommended an Environmental Impact Assessment (EIA) as per guidelines annexed to the aide memoire.

The PSC is revising the VNC FSR according to the above feedback, and other comments and guidance given in the aide memoire of November ADB Mission. The progress is as follows: (a) *Social and Environmental Safeguards*: Field studies along all the 16 canals for social and environmental safeguards aspects are completed, strip maps of all canals prepared, and data analysis is in progress. (b) *Poverty and Social Analysis* is in progress. (c) *The Resettlement Framework* has been updated in view of the *Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act 2013 (RFCTLARR Act 2013)*. (d) As part of the initial environmental examination, PSC conducted field visits, collected primary and secondary data which was analysed and findings discussed with the stakeholders. A total of 9 canals are located in the Otter Conservation Area and appropriate mitigation measures have to be incorporated while carrying out the construction work. Further, based on the *Good Practices for the Collection of Biodiversity Baseline Data* document prepared for the Multilateral Financing Institutions Biodiversity Working Group, PSC has prepared a format for collection of data for *the Rapid Biodiversity assessment* in VNC. The format is being shared with ADB for approval. An expert has to be identified and engaged for conducting the rapid assessment. (e) *Draft Social Safeguard Due Diligence report* has been prepared and shared with ADB consultant for his comments a couple of times, revised, and shared with KNNL. (f) *Financial and Economic analysis*: Informal meetings along all the 16 canals completed; data analysis is in progress. (g) Data related to *crops and cropping pattern* has been collected from the department. Other agriculture data such as impact of watering on yield is being collected to feed into EFA analysis. (h) Canal wise EFA is under progress; there is a delay due to the data required being collected from various sources, including primary surveys. VNC FSR expected to be completed by this month (January) end; this will also include results from MASSCOTE training undergone by KNNL/CADA engineers with ACIWRM. The Rapid Biodiversity Assessment shall be completed within the stipulated date, that is, by mid-April 2017. During the reporting period, based on the ADB/WB guidelines, the PSC has prepared a check list and shared with ADB Consultant.

VNC Bid Document

During the reporting period, PSC has prepared draft Bid documents and shared with engineers of KNNL, Munirabad. After detailed discussions with the engineers, the bid documents were modified and submitted to KNNL, Munirabad on 30 December 2016. Following this, another meeting was conducted by the Chief Engineer-ICZ, Munirabad, on 5 January 2017 at KNNL, Bangalore, to discuss and finalise the bidding document. Matters related to the project duration, number of packages, employer, and Schedule B, among others, were discussed.



Feedback from PSC procurement specialist was considered, manual procurement incorporated as required by ADB norms, and time frame discussed. Another meeting in the office of the CE-ICZ is scheduled on 17 January 2017 to finalise the Bid Document, after which approval from CWC has to be sought from KNNL before submission to ADB.

Number of packages in VNC Bid Document

The VNC tender will be International Competitive Bidding as per ADB procurement guidelines. ADB has advised to have the entire VNC as one package. Looking at the Gondhi experience of not able to get suitable response in the first instance, resulting in loss of time, the CE-ICZ Munirabad has written to the MD KNNL to permit two packages as against one.

TBP Feasibility Study

During the previous reporting period, a few meetings were held with KNNL to discuss and demarcate the areas for TBP. The November ADB Mission has specified that: (a) the investment should be preferred in under-performing areas within the Right Bank system, and (b) the area should be continuous. Due to non-availability of continuous area in the TLBC, the ADB Mission during November advised to include TRBC also; hence the nomenclature hence forth will be Tungabhadra Project (TBP) in place of TLBC.

During the reporting period: (a) In addition to informal interactions, a formal meeting of all concerned engineers and SMEC was held with Design Consultants on 24 November 2016 at Bangalore; (b) Another meeting of engineers of ICZ-Munirabad and SMEC was held in KNNL office at Bangalore on 6 January 2017 to discuss criteria and suitability of areas for TBP; (c) A final meeting to finalise the demarcated areas is scheduled for 17-18 January 2017 at Munirabad (hence held) after which the DPR will be prepared, and CWC approval obtained by KNNL before submission to ADB.

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.



3. PROJECT STAFF MOBILISATION

3.1 MOBILISATION DURING THE REPORTING PERIOD

Table 1 below gives the details of inputs of PSC specialists.

Table 10: Staff mobilization during the reporting period

Expert	Oct	Nov	Dec	Total
IS/TL	0.00	0.00	0.00	0.00
PIM/DTL	1.03	1.00	0.87	2.90
AGRI	0.00	0.20	0.37	0.57
CMS 1	0.00	0.00	0.00	0.00
CMS 2	0.70	1.00	1.03	2.73
COM	0.23	0.17	0.20	0.60
ENV	0.10	0.50	0.60	1.20
MIS	0.23	0.40	0.00	0.63
OMS	0.00	0.83	0.83	1.67
AE/FMS	0.00	0.00	0.40	0.40
PROC	0.00	0.00	0.00	0.00
SD&GS	0.67	0.73	0.73	2.13
WIS	0.97	1.00	1.03	3.00

3.2 OVERALL MOBILISATION STATUS

The CV of TL has been submitted for approval to KNNL. The MD KNNL has invited recommendation of the Chief Engineer. Upon favourable recommendation of the CE, KNNL, Shivamogga and approval of ADB, the TL will be able to join within a month.



4. PLANS FOR NEXT REPORTING PERIOD (JANUARY-MARCH 2017)

Gondhi WUCS

- All the 10 WUCS would be entering into MoU with KNNL during this period.
- **Proposal on Gondhi WUCS Strengthening:** Subject to approval of the proposal, a lot of activities planned in the proposal will be initiated towards strengthening of WUCS during the January-March 2017 quarter.
- The 2nd Baseline Assessment has indicated that there is a lot of improvement in the functioning of the WUCS. The strengthening process will continue.

A 3rd Baseline Assessment will be conducted in March 2017.

Gondhi CAD Package Works:

- The contract signing of the CAD works with 3 WUCS is expected to be completed in January 2017 post which implementation will begin almost immediately.
- The rest of the 7 WUCS CAD packages will be completed during this quarter and implementation initiated.

Gondhi Asset Management plan:

- Gondhi Asset Management Plan, and O&M Plan would be completed. Discussions with concerned officials initiated and formats for data collection are under preparation.

Gondhi Communication Strategy:

The draft which is in progress will be completed. Some tools such as a Youtube channel, Newsletter and Radio programme series would be initiated after obtaining formal permission from the MD KNNL. Some short videos will be developed to capture the progress and change of various components of the ongoing civil works.

VNC FSR and Bid Documents:

- VNC FSR shall be submitted by February 2017. All studies such as are expected to be completed and included in the FSR. Rapid Biodiversity Assessment shall be initiated, and progress made. Similarly, EIA would be initiated and progress made.
- VNC Bid Documents shall be submitted to KNNL by February 2017.

TBP FSR and Bid Documents:

- TBP FSR will be initiated, and studies therein would have made good progress.
- Bid Documents would be prepared following the DPR preparation.

PPMS and PMIS:

- PPMS will be made completely operational. Necessary orientation programmes will be held for concerned engineers.
- PMIS activity will be completed.

Environmental safeguards:



- PSC shall make the regular 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 Gandhi civil works quality control.

5. ISSUES, CHALLENGES AND MITIGATION MEASURES

- One of the challenges that has caused a slight delay in the launch of CAD packages relates to formal involvement of CADA in the entire process. Although as per project proposal, CADA is expected to play a key role in terms of preparation of the CAD packages and entering into implementation agreement with WUCS-in addition to monitoring implementation-there have been no formal instructions given to CADA. PSC has put in a lot of effort into addressing this grey area through discussions with the Chief Engineer, KNNL, Administrator, CADA, and MD-KNNL office. This has been finally addressed and the signing of the CAD packages is expected to be completed shortly.



Annexure 1

Gondhi WUCS Administration: *Second Baseline Assessment*



Project Support Consultant
SMEC International Pty. Ltd. Australia
in association with
SMEC (India) Pvt. Ltd.

December 2016



SECOND BASELINE ASSESSMENT REPORT ON GONDHI WUCS ADMINISTRATION

1.1 INTRODUCTION

As part of the ongoing *Karnataka Integrated and Sustainable Water Resources Management and Investment Programme* (KISWRMIP) supported by Asian Development Bank, it is proposed to form/strengthen the Water Users Cooperative Societies (WUCS) under the Gondhi Modernization programme. Some of the WUCS though existing are not active.

Under the KISWRMIP, it is aimed at strengthening/forming WUCS to promote Participatory Irrigation Management (PIM) for increasing water use efficiency through involvement of all stakeholders in various management activities. To assess the status of the ten (10) WUCS in the Gondhi Irrigation System, a baseline assessment was carried out during September/October 2016. Subsequently, based on the findings of the assessment, an Action Plan was developed to enhance the institutional performance as well as knowledge and skills base of the WUCS office-bearers and members.

During December 2016 last week, a second round of baseline assessment was carried out.

1.1.1 OBJECTIVE OF 2ND ROUND OF BASELINE ASSESSMENT

The objective and purpose of the second round of baseline assessment of WUCS in Gondhi Irrigation Project is to assess the change in status of all the 10 WUCS in terms of performance as well as managerial competencies; further based on the performance status, modify the action plan for the forthcoming Quarter.

1.1.2 METHODOLOGY AND DATA COLLECTION

For the second round baseline assessment, the methodology used for the first assessment was employed. The format used for the first baseline comprising 29 indicators was adopted. The PSC has visited each of the 10 WUCS, conducted meetings which included both the office bearers as well as a cross section of members including women. Along with the indicators, qualitative discussions were also held to understand the process of change.

Table – 1 provides the change between the first and second rounds of assessment.



Table – 1: Gondhi WUCS: Performance Indicators – 1st round (September/October) and 2nd round (December 2016)

SI No	Activity	Dodda Guppenhalli		Barandur		Seegebagi		Tallikatte		Koppa Doddakere		Baballi		Nagati belagalu		Holehonnur		Kage Kodamagge		Dasarakallhalli	
		1 st rnd	2 nd rnd	1 st rnd	2 nd rnd	1 st rnd	2 nd rnd	1 st rnd	2 nd rnd	1 st rnd	2 nd rnd	1 st rnd	2 nd rnd	1 st rnd	2 nd rnd	1 st rnd	2 nd rnd	1 st rnd	2 nd rnd	1 st rnd	2 nd rnd
1	WUCS Office	x	√	x	√	x	√	√	√	x	√	x	√	x	√	x	√	√	√	x	√
2	WUCS Board	x	√	√	√	x	√	√	√	x	√	X	√	√	√	x	√	√	√	√	√
3	Availability of Secretary	x	√	x	√	√	√	√	√	√	√	x	√	x	√	x	√	√	√	√	√
4	WUCS Byelaw	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
5	Total farmers list	√	√	x	x	√	√	√	√	√	√	√	√	x	√	x	√	√	√	√	√
6	List of shareholders /membership	√	√	x	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
7	Registration certificate	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
8	GB members list	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
9	General Body meeting minutes register	x	√	x	√	x	√	x	√	x	√	x	√	x	√	x	√	x	√	x	√
10	Governing Body meeting minutes register	x	x	x	x	x	x	√	√	√	√	x	x	x	√	x	√	√	√	x	√
11	Meeting notice file	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	x	√
12	Cashbook	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
13	Annual audit report	x	x	x	x	x	x	√	√	√	√	√	√	x	√	x	x	√	√	√	√
14	Income and expenditure register	x	√	x	x	√	√	√	√	x	x	x	x	√	√	x	x	√	√	x	√
15	Letterhead	x	√	x	x	x	√	√	√	√	√	x	√	√	√	√	√	√	√	√	√
16	Inward & Outward	x	√	x	x	x	√	x	√	x	√	x	x	x	√	x	x	√	√	x	√



	Register																					
17	PAN Card	x	x	x	x	x	√	√	√	√	√	√	√	x	√	x	x	√	√	x	x	
18	TIN	x	x	x	x	x	√	x	x	x	√	x	√	x	√	x	x	√	√	x	x	
19	Name of the Bank, Account Number and address	x	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
20	Amount deposited with bank account	x	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
21	Governing Body attended training	x	x	√	√	x	x	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
22	Exposure visit to WUCS in Karnataka and other places	x	x	x	x	x	x	x	x	x	x	x	x	x	x	√	√	√	√	x	x	
23	Cadastral, soil & land use maps	x	√	x	x	x	x	x	√	x	x	x	x	x	√	x	x	x	x	x	x	
24	Crop particulars detail list	x	x	x	x	x	x	x	x	x	x	x	x	x	√	x	x	√	√	x	x	
25	MOU with KNNL	x	√	x	x	x	x	√	√	√	√	x	x	√	√	x	x	√	√	√	√	
26	One time functional grant	x	x	x	x	x	x	√	√	√	√	x	x	x	x	x	x	√	√	x	x	
27	Works taken up by WUCS	x	x	x	x	x	x	√	√	√	√	x	x	x	x	x	x	√	√	x	x	
28	Collecting water charges	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	√	√	x	x	
29	Any O & M activity done	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	√	√	x	x	

1.1.3 KEY FINDINGS:

S. No	Status-1 st round (September/October 2016)	Status-2 nd round (31 December 2016)
1	<ul style="list-style-type: none"> 8 out of 10 WUCS do not have offices; 5 WUCS do not have Secretaries; 4 WUCS need to organize letterheads. 	All the 10 WUCS have established offices, printed their letterheads and appointed the Secretaries.
2	<ul style="list-style-type: none"> 3 WUCS do not have total farmers list; one WUCS needs to prepare List of shareholders; all 10 WUCS do not maintain general body meeting register; 3 WUCS to maintain governing body meeting register. 	All the 10 WUCS have: (i) prepared list of farmers; (ii) prepared list of shareholders; (iii) have been maintaining General body meeting and (iv) Governing body meeting Registers.
3	<ul style="list-style-type: none"> WUCS do not maintain cadastral, soil use and land use maps. 	All the 10 WUCS are now maintaining cadastral, soil use and land use maps in the office.
4	Only 5 WUCS completed last annual audit report	8 WUCS have completed the annual audit reports
5	Only 3 WUCS maintain income and expenditure book.	5 WUCS have started maintaining income and expenditure book; others are in progress.
6	Only 1 WUCS obtained TIN number.	2 WUCS now have TIN number; 3 WUCS have applied.
7	Only 3 WUCS obtained PAN card.	7 WUCS now have PAN card; rest 3 have applied.
8	Only 1 WUCS is maintaining inward and outward register.	4 WUCS are maintaining inward and outward register.
9	5 WUCS only signed MOU with KNNL;	<ul style="list-style-type: none"> 7 WUCS have signed MOU with KNNL; 2 WUCS have sent request letter to KNNL; MOU of one WUCS is in process.
10	3 WUCS mobilized one-time grant.	7 WUCS mobilized one-time grant.
11	1 WUCS was collecting water charges.	1 WUCS was collecting water charges.
12	-----	5 WUCS have passed resolutions to take up works under CAD packages; remaining are in progress.



Action Plan for achieving the balance findings as mentioned above:

Activity	Action	By whom
Exposure visits	Organize exposure visits of WUCS to successful PIM projects within and outside state	Upon approval of <i>Gondhi WUCS Strengthening</i> proposal submitted to KNNL.
Book Keeping training for WUCS secretaries	Organize with support of CADA/ plan for training	PSC shall facilitate.
Crop particulars details list	Facilitate WUCS to collect crop particulars	PSC shall facilitate.
Improve upon convergence	Organize training programmes with related line departments	PSC shall facilitate.
Ensure Annual Audit Reports, obtaining PAN and TIN, MOU with KNNL and collecting water charges	PSC and WUCS Committee members shall follow up with necessary application procedures.	PSC shall continue to facilitate.
For one-time functional grant	PSC and WUCS committee members pursue the matter with CADA	PSC and CADA
For CAD civil works to be taken up by WUCS	WUCS shall extend support and cooperation in preparation of draft and submission of estimates to KNNL	PSC shall facilitate.



Annexure 2

Summary of
**Desk Review and Assessment of
Training Institutions for Capacity Building**



Project Support Consultant
SMEC International Pty. Ltd. Australia
in association with
SMEC (India) Pvt. Ltd.

December 2016



Summary of Desk Review and Assessment of Training Institutions for Capacity Building

1. PROJECT BRIEF

With the support of the Asian Development Bank (ADB), the State Government of Karnataka has launched the Karnataka Integrated and Sustainable Water Resources Management Investment Program (KISWRMI Program), which is expected to improve water availability for competing water demands in select river basins by implementing integrated water resources management (IWRM) and improving irrigation services delivery in the State. It will support increased water use efficiency to provide economic opportunities, particularly to women and improve rural incomes.

The KISWRMIP is to include modernization of 3 irrigation areas, one of which is Gondhi Irrigation system, which is a sub-area of the Bhadra Irrigation System (Tranche 1).

One of the components of the ToR under the institutions capacity building for the Project Support Consultants (PSC) is to 'support actions that promote the organizational excellence of AC-IWRM, WALMI, Karnataka Engineering Research Station KERS (including Karnataka Engineering Staff College) etc.' and in 'upgrading and updating their training programs (in general and) with a particular focus on staff training and training of trainers (ToT) for the WUCS.

2. SUMMARY OF DESK REVIEW AND ASSESSMENT OF TRAINING INSTITUTIONS

As a part of the component of ToR for Project Support Consultants (PSC), the activities of a desk review and assessment of training institutions for irrigation engineers and WUCS in Karnataka was prepared based on the websites, note prepared during a brief visit of one of the Consultants of PSC and other secondary sources of information of five training institutions during the earlier Quarter. They are:

- | | |
|---|--|
| <p>1. Karnataka Engineering staff college,
(Under administrative control of the Director (Chief Engineer), Karnataka Engineering Research Station),
Krishnaraja Sagar - 571607,
Mandya District</p> | <p>4. Regional Institute of Cooperative Management,
67, Padmanabhanagar,
BSK 2nd Stage,
Bangalore – 560070
Tel: 080-26690584/26692036/26692886; Fax:
080-26692537</p> |
| <p>2. Water & Land management Institute (WALMI),
Belur, Industrial area, P.B.No.6, PB Road
(Post) Mummigatti,
Dharwad-580001
Phone-0836-2486893, Fax-0836-2486889
Email:walmidharwad@sify.com</p> | <p>5. Advanced Centre for Integrated Water Resources Management (AC- IWRM)
No.1/1, First Floor,
KSFC Bhavan, Thimmaiah Road,
Near cantonment railway Station,
Bangalore – 560052
Phone - +91-80-22262042/43/44; Fax +91-80-22262045
Email: aciwrms2012@gmail.com</p> |
| <p>3. Administrative Training Institute
Lilith Mahal Road,
Mysore – 570011 Tel: 0821-2443839/2522142/2443264/2520906; Email:
dqatimysore@gmail.com</p> | |



The summary of the observations and findings that include the available training facilities, staffing pattern, types of courses offered and categories of trainees are presented here. This is followed by the identification of activities to be performed and actions to be taken.

2.1 KARNATAKA ENGINEERING RESEARCH STATION AND ENGINEERING STAFF COLLEGE, K. R SAGAR, MANDYA DISTRICT, KARNATAKA

2.1.1 INTRODUCTION

The **Karnataka Engineering Research Station (K.E.R.S.)** was established in the year 1944 and is located at Krishna Raja Sagar. The KERS is headed by the Director of the rank of Chief Engineer. He is assisted by 104 engineers including Engineering Staff College categorized as below:

Chief Research Officers (Executive Engineers),	4
Research Officers (Assistant Executive Engineers),	19
Assistant Research Officers (Assistant Engineers)	62
Junior Research Officers (Junior Engineers).	19

The Research Station is well equipped with Laboratories, Computer facilities and a Library.



Karnataka Engineering Research Station

2.1.2 ACTIVITIES OF THE KERS

The main activity of the KERS is to suggest remedial measures for the critical problems arising during the construction stage of Civil Engineering structures.

The KERS is also catering to the technical needs of Water Resources Department, Public Works Department and other Central & State Government Departments as well as quasi & Private Organizations. The various activities of KERS are being carried out by the technical staff.

The activities of the KERS are functionally grouped under the following four Divisions. The Chief Research Officer of the rank of Executive Engineer heads each Division and these Divisions are located at Krishna Raja Sagar.

1. Hydraulics Division
2. Technical Services Division
3. Soil Mechanics and Foundation Engineering Division
4. Coastal Engineering Division.



2.1.3 ENGINEERING STAFF COLLEGE, KRISHNA RAJA SAGAR, MANDYA DISTRICT

The Engineering Staff College is located at KERS, Krishnarajasagar, Mandya District. It was established in the year 1971 to commemorate the silver Jubilee of KERS.

The aim of the Institute was to impart training to the in-service engineers and administrative staff as well as the newly appointed A.E.Es, A.Es and J.Es of Public Works, Water Resources & other Engineering Departments.

The Engineering Staff College is working as an independent unit under the administrative control of the Director, KERS with effect from 01.04.1988.

2.1.4 ACTIVITIES OF ENGINEERING STAFF COLLEGE

The mandate of the Institute consists of:

- i) Conducting Orientation Courses for the newly recruited Assistant Executive Engineers, Assistant Engineers and Junior Engineers.
- ii) Conducting short-term refresher courses of both Technical & Administrative nature for the in-service Engineers & Administrative staff.
- iii) Conducting basic training courses on computers.
- iv) Conducting short term technical courses under Continuity Education Programme (CEP) in Eight Engineering Colleges
- v) Conducting short term courses under National Water Policy.
- vi) Conducting short term courses under procurement procedures & methods.

Engineering Staff College is identified as one of the suitable training venues for the above training to be taken up under World Bank Assistance for imparting training for the identified target groups such as implementing agency officers (Junior Management Engineers), lower level functionaries, procurement trainees and contractors & suppliers.

2.2 WATER AND LAND MANAGEMENT INSTITUTE (WALMI), DHARWAD

P. B. Road, DHARWAD-580 011, Phone No 0836-2486893, Fax no 0836-2486889,
E-mail walmidharwad@sify.com

2.2.1 INTRODUCTION

To maximize returns from investments made in irrigation projects in the State, it is necessary to manage water and land in a systematic and scientific way. This requires capacity building of Government Staff as well Water Users. To meet the capacity building needs, Water and Land Management Institute (WALMI) started functioning at Dharwad in April 1986 and was later registered as a Society under the Karnataka Societies Registration Act, 1960 on 16-06-1986.

WALMI is located 13 kms away from Dharwad in the Belur - Dharwad Industrial Area on Belgaum Road. WALMI Campus is developed on about 135 acre lands and consists of: Administrative, Faculty and Residential Buildings and Demonstration farm.

The activities of WALMI include:

- i) Rendering technical assistance to Government and Water Users Organisations; imparting training for in service staff of Water Resources Department, Nigams, cadas and WUCS;
- ii) Advising Government on legal, policy, organisational and procedural changes;
- iii) Organizing demonstrations in collaboration with other organizations,



- iv) Conducting special studies and bringing out publications.

2.2.2 STAFFING PATTERN

The WALMI is headed by a Director in the rank a Karnataka Engineering Services (KES). There are three divisions with different departments. Each department consists of Professors, Assistant Professors with suitable qualifications and they are supported by Technical, Accounts and Administration staff.

2.2.3 TRAINING PROGRAMMES

A list of training programmes that are being conducted shows that they are covering topics necessary for the WUCS as well as to the engineering staff on the topics related to sustainable and participatory water and land management.

2.2.4 TRAINING CHARGES

During the brief visit of WIS to WALMI in February, 2016, some details about the training charges for different types of training programs have been collected. These are summarised in **Table 1**.

WALMI has been conducting training programs for WUCS members, Secretaries, staff of CADA and farmers at village level. It may be noticed that based on the unit rates, the cost of conducting a four days program for a batch of 40 WUCS Secretaries was about Rs. 1,00,000. The cost components consist of Boarding, lodging, training kit, fees for invited guest lecturers and other minor components. Similarly, the cost of three day training of WUCS per batch of 50 members was Rs. 90,000, training of a batch of 30 CADA staff for 4 days program was Rs.80,000 and for a village level one day training for farmers was Rs. 6500.

Table-1: Training Charges at WALMI

Items	Unit Rates (per person, per day) Rs.	WUCS (3 Days, 50 persons per batch) Rs.	WUCS Secretaries (4 days, 40 persons per batch) Rs.	CADA Staff (4 days, 30 persons per batch) Rs.	WUCS (One day, village level training) Rs.
Boarding charges	250	37500	40000	30000	Rs. 90 x 50 =4500
Lodging charges	125	18750	20000	15000	
Training Kit	300	15000	12000	9000	Rs. 30 x 50 = 1500
Honorarium for 3 Guest lecturers	800 +TA	8200 (7200+1000)	10600 (9600+1000)	10600 (9600+1000)	----
Boarding Charges during travel	120	6000	4800	3600	-----
Misc/contingencies	50	2500	2500	2000	500
Field visit	----	----	10000	10000	----
TOTAL	----	87950	99900	80200	6500
TOTAL	----	90,000	1,00,000	80,000	6,500

Source: Compiled from the data collected from WALMI



2.3 REGIONAL INSTITUTE OF COOPERATIVE MANAGEMENT (RICM), BANGALORE

69, BSK 2ND Stage, Padmanabhanagar, Bangalore 560070;
Email: rdpaban@yahoo.co.in

2.3.1 INTRODUCTION

The institute has been established in 1980. The main objective is to prepare young professionals with commitment through an Innovative Management Education and Training. It caters to the training requirements of executives of cooperative enterprises, personnel of cooperation, other departments of Government of Karnataka and other State Governments in the southern states. As a management development institute, it is actively involved in creating business culture and entrepreneurial spirit in the cooperative sector. It has all the necessary infrastructural facilities and cohesive environment. RICM is networked with world-class institutions and affords the implementation of best-in-class practices across the knowledge delivery and application spectrum.

The RICM is recognized and approved by the AICTE and affiliated to Bangalore University. It has also been awarded Best Performing Institute among 19 Institutes. The RICM offers diploma, long term and short term training courses in the areas of.

- i) Cooperative Management .
- ii) Urban Banking.
- iii) Cooperative Marketing Management.
- iv) Cooperatives including Self-help Groups and Water users.

2.3.2 FACILITIES

The core staff and faculty of the RICM consist of a Director, three Dy. Directors, four Faculty Members and is supported by necessary administrative staff.

A variety of teaching and learning techniques are employed to impart knowledge and skills to students at RICM, Bangalore spread over various departments.

Air-conditioned halls for group discussions, AC rooms for interviews Halls are equipped with LCD Projectors, Computers and Internet Connectivity and Cafeteria.

2.4 ADMINISTRATIVE TRAINING INSTITUTE (ATI), LALIT MAHAL PALACE ROAD, MYSORE

Telephone: +91-821-2443839; 2520906(Director Gen);
E-mail : dgatimysore@gmail.com



Administrative Training Institute, Mysore



2.4.1 LOCATION

The campus of Administrative Training Institute (ATI) is spread over about 35 acres in the serene surroundings at the foothills of Chamundi Hills abutting the Karanji Lake. The State Institute for Urban Development (SIUD) and Abdul Nazi Sab State Institute for Rural Development (ANSSIRD) are also located in this campus.

2.4.2 VISION AND MISSION

The vision of the Institute is 'to emerge as a Center of Excellence in Capacity Building and Human Resource Development for Government Officers.' The mission of the ATI includes:

- To Transform the Functionaries involved in the process of Governance by building their capacity and enhancing their competence to respond to needs of people,
- To systematically move towards need based training and learning.

ATI is the apex training institute of the Government of Karnataka.

The training programmes that are conducted on regular basis include:

- i) Foundation Course for Gazetted probationers of the State Civil Services,
- ii) Orientation courses for IAS / IFS probationers allotted to Karnataka cadre,
- iii) Refresher courses for Senior Officers,
- iv) Training of Trainers and,
- v) Training on Gender Issues, Financial Management, Legal Issues and Computer Applications.

ATI at Mysore caters mainly to the needs of Grade A and Grade B Officers.

There are 28 District Training Institutes (DTIs) which conduct training programmes for Group 'C' and Group 'D' employees.

The institute has a conference hall that can accommodate 70 people equipped with modern facilities.

2.4.3 HOSTEL

To cater the needs of Group "A" and "B" officers, a well furnished dual sharing rooms are provided. There are 52 rooms each having computer, internet, television and intercom facility. There are two dining halls one of which is open dining hall capable of accommodating 50 persons.

2.4.4 STAFFING PATTERN

The total staff of the ATI consists of 35 persons. The number of Core Faculty is 9, the outsourced faculty is 3. The remaining personnel consists of administration and other supporting staff like System Analysts, Library staff etc.

2.4.5 COSTS OF TRAINING PROGRAMS

The ATI has posted in their website a draft componentwise cost estimates prepared by ATI, Mysore (2015-16) for their training programs. The summary of the costs are presented in Table-2.

The cost of providing a three day training for a batch of 30 participants is Rs. 85829=00.

**Table :2: Cost Estimates for Three day Training Program – ATI, Mysore**

	Cost Component	Unit Cost (Rs)	For a batch of 30 participants (Rs.)
A	Training Kit	74	2231
B	Hall charges & equipment	4000 per day	12000 / 3 days
C	Photocopying & stationary	41	1213
D	Boarding &lodging	600=00 per day per participant	54000=00 for 3 days
E	Honorarium and TA for resource persons	1600=00 for 5 persons Rs. 200 as TA for 3 persons	8600=00
	Sub total	----	78026=00
F	Miscellaneous (administration and institutional charges)	10% of sub total	7803=00 (savings to the Institute)
	TOTAL	-----	85829=00

Source: ATI-Project Management Training-B.pdf

2.5 ADVANCED CENTRE FOR INTEGRATED WATER RESOURCES MANAGEMENT

(AC-IWRM); NO.1/1, FIRST FLOOR, KSFC BHAVAN, THIMMAIAH ROAD, (NEAR CANTONMENT RAILWAY STATION), BANGALORE – 560052

2.5.1 INTRODUCTION

The Government of Karnataka (GOK) committed to the establishment of an **Advanced Centre for Integrated Water Resources Management (ACIWRM)** in the 2011-12 financial year budget. The ACIWRM is the first of its kind in India. The rationale for this initiative was to create an enabling environment for the GOK to pursue its objective of moving towards achieving water and food security in the declared Irrigation Decade (2011 – 2020). The IWRM framework provides the opportunity to integrate the land and water related management aspects at the sub-basin and river basin levels.

The ACIWRM is acting as a think tank to the government's Water Resources Department (WRD). It is engaged in policy analysis, research, planning, capacity building and develop the knowledge base for gearing up the department up to its future vision 2030. The ACIWRM works with the various Departments, civil society, the private sector, farmers and water user associations and other organizations to produce integrated advice to the WRD for managing the state's water resources.

2.5.2 ORGANIZATIONAL STRUCTURE

The AC-IWRM is managed and administered by i). Governing Body, ii). Executive Committee and iii). Management Committee.

The AC-IWRM is involved in a number of state and national initiatives including preparing the State Specific Climate Change Policy, the World Bank's National Hydrology Project, and the forthcoming World Bank's National Groundwater Program.

2.5.3 RESOURCING AND WORKING MODALITY

The AC-IWRM is a small organization which comprises of a Government Procedures and Administration Division under the management of the AC-IWRM Registrar (SE level) and a Technical Division under the leadership of the Technical Director.



There are six full time staff members comprising of:

- i) Training and capacity building;
- ii) Farmer and stakeholder involvement;
- iii) River basin management;
- iv) Hydrology and irrigation;
- v) Land and water management; and
- vi) Water resource information systems.

The AC-IWRM is supported on a needs basis by short term contract staff recruited for particular projects.

The AC-IWRM is financed by the Government of Karnataka and supported by the Asian Development Bank's Karnataka Integrated and Sustainable Water Resources Management Investment Program (KISWRMIP). Tranche 1 of this program will run from 2015 to 2019. The KISWRMIP supports the involvement of international specialists, namely, a Chief Technical Advisor for IWRM, a River Basin Hydrological Modeller, and a Hydrologist.

2.5.4 STAFFING PATTERN

The Institute is headed by a senior Officer in the rank of an IAS and duly supported by qualified staff consisting of Registrar (SE), a technical Director, a technical team of different subject specialists and administrative personnel.

2.5.5 CAPACITY BUILDING ACTIVITIES

AC-IWRM has prepared an overall strategy for the CB of government staff and farmers so that water resources can be managed sustainably. The strategy will assess training needs of various stakeholders and include activities such as in-depth technical and management training, national and international study tours, work placements, and twinning arrangements to learn from other organisations.

In the short term, WRD staff will be trained in AC-IWRM so that it can be increasingly adopted in their daily work. The AC-IWRM with the IISc and local Universities and assisted by UNESCO-IHE, are preparing a Certificate Course at AC-IWRM for 600 junior to mid level engineers. Training in IWRM will be extended to additional staff, including more senior staff in due course.

A priority activity of this project is to broaden the successful experience with Water Users Cooperative Societies (WUCS) in parts of the State. WUCS activities will increase the extent and effectiveness of farmers' participation so that irrigation systems are managed and water shared equitably. WUCS will be strengthened to manage system sustainability and operation, improve agronomic practices, water use efficiency, productivity and farmer livelihoods. Governance arrangements surrounding WUCS will be strengthened.

The ACIWRM has several partnership activities including with the Karnataka Remote Sensing Applications Centre, the Indian Institute of Science, UNESCO-IHE. It is actively developing additional partnerships with other institutions, both national and international to support its goals.

3. CONCLUSIONS

From the above desk review of the training institutions and keeping in view the requirements of the Project, the following conclusions are drawn:

- i) The **KERS-Engineering Staff College at K.R. Sagar** is regularly conducting foundation/induction training courses for newly recruited staff, refresher courses for middle level technical and administrative staff of Water Resources Department. It has all the training facilities and faculty members experienced in subjects and topics.



- ii) The mandate of **WALMI, Dharwad** is to meet the capacity building needs, imparting training for in service staff of Water Resources Department, Nigams, CADAs and WUCS and to manage water and land in a systematic and scientific way. It is also mandated to render technical assistance to Government and Water Users Organizations in the state. The clientele for the WALMI are both WUCS and the middle and junior level engineers.

It is noticed that:

- WALMI's training programmes are currently restricted to CADA and WUCS only. Since 2013 -14 training of KNNL engineers have been stopped as "no deputations received for officers trainings because of scarcity of staff in the department".
 - There is also problem of lack of adequate staff at WALMI. Out of 47 posts sanctioned 37 are now vacant. There are only two full time faculty members now. For many years there is no full time director at WALMI.
 - Presently there is no collaboration with other institutions like KERS, AC-IWRM in undertaking training and capacity building programmes.
 - Capacity building of their own (WALMI) faculties is also required as they have hardly undergone trainings in other institutions especially in recent times.
 - There is a good potential for utilizing the experience of WALMI with appropriate up gradation of faculties and their training programmes to suit the capacity building requirements under the project.
- iii) **The Regional Institute of Cooperative Management (RICM)** basically caters to the training requirements of executives of cooperative enterprises, personnel of cooperation, other departments of Government of Karnataka and other State Governments in the southern states. Only a small fraction of the clientele belongs to WUCS for courses on 'cooperation'. Such topics may be covered by KERS/Engineering Staff College at K.R.Sagar.
- iv) **Administrative Training Institute (ATI), Mysore** is the apex training institute of the Government of Karnataka. Its main function is to cater to the needs of Grade A and Grade B Officers. Hence the ATI may be explored to provide some executive development programmers for senior level officers and engineers.