

Attachment 1.	Workflow Schedule	and Activity Results

The 2 nd Phase	2018 2019	2nd Year	Sep Oct. Nov. Dec. Jan. Teb Mar. Apr. May Un. Jul. Aug. Sep Oct. Nov. Dec. Jan. Feb Mar Apr. May Jul. Aug. Sep		ss Completed		Station by Country State Count	With the part of t	Description of the second of t	state Section Section	WANVAS spinning for the App 6.7, 8th September 1 through for the Committee failure.	Dia		The Education for where the Control of the Control	Standurks in the 3rd term	State of the state	be conducted in the 3rd the				Mary Start Mary Short Shi NRW Shi		List Frice Study for implementation of "Droft and Study for implementation of "The Control of Indian Study for implementation of Indian Study for Ind		urillaring i to GANNA	2 -			0	[Traning period for WSPs in Pre-stage] (Kisumu WSP, Nakuru WSP, Ruiru-Jija WSP, Myahururu WSP)							A CASTA CALCADA MANAGA	sentation at WASPA's evel Panel	Ver.1 (in Japanese) was completed	(P) A CALLED AN W. CALLED AND W. CALLED AN W	▲ ZndWP	▲ 3rd JCC meeting		
The 1st Phase	2016 2017	151	Nov. Dec. Jan. Feb. Mar. Apr. May Jun. Jul.						1												STATE STATE OF STATE				F	- Sase-line survey in the Output											1			GW	st WP	▲1st JCC meeting	▲-▼ Management	
Project phase	Calender year	Project year	Activities Month Oct.	Dromotion and coordination of NIBW radiation activities by MMI NIBW I Init are strengthoned	1.1 MWS&I NRW Unit, in cooperation with WASREB, produces NRW annual reports which include	NRW reduction data. 1.2 MWS&I NRW Unit plans and implements NRW reduction sensitization activities for the Counties.	1.3		1.4	1.5 MWS&I NRW Unit conducts reviews of WASREB's NRW reduction activities.	1.6 MWS&I NRW Unit ensures the budget for the support mechanism based on its NRW reduction Mid-term vision.	of	2.1 WASREB conducts survey of the usage of current NRW reduction standards.	2.2 Based on the survey result as well as Output 4 and 5, WASREB revises the NRW reduction standards.	2.3 WASREB promotes revised NRW standards through workshop(s).	2.4 WASREB incorporates the review results of NRW reduction activities by MWS&I NRW Unit in their	activities. 2.5 WASREB monitors and evaluates the usage of revised NRW standards.	NRW related training capacity of KEWI is strengthened.	3.1 KEWI studies current status of NRW reduction courses and its challenges.	3.2 KEWI reviews NRW reduction training strategies and course contents.	3.3 KEWI, in collaboration with leading WSPs (Embu and Meru, etc.), conducts on-site NRW trainings.	유명 3.4 KEWI reflects the study results on the status of NRW trainings into NRW course contents and	3.6 KEWI conducts trace studies of NRW reduction course participants.	NRW planning and/or implementation capacity of pilot Urban WSPs is enhanced.	4.1 The Project team conducts a survey of Urban WSPs and selects pilot Urban WSPs.	4.2 Each Pilot WSP conducts analyses of current NRW reduction activities and identifies its challenges.	4.3 Each Pilot WSP identifies measures to solve challenges and formulates the NRW reduction plan.	4.4 Each Pilot WSP formulates the annual NRW reduction plan including financial schedule based on	4.5	(1) Pilot Project for Leading WSPs (Meru & Embu WSPs)	(2) [Pre-stage] Pilot Project for 4 Pilot WSPs	(3)[Post-stage] Pilot Project for 3 Pilot WSPs	4.6 Each Pilot WSP evaluates and analyzes implementation results and revises the plans.	4.7 Each Pilot WSP produces the NRW reduction activity report annually.	4.8 Each Pilot WSP holds regular NRW reduction meetings attended by relevant departments of WSP.	Experiences and knowledge of NRW reduction activities are shared among Urban WSPs.	7.T		5.3 The production of the brief notes.	Reports/Documents/Meetings	Legend Work Plan A Work Orange Soloring bars) Monitoring sheet	JCC meetings	Training in Japan Progress report, Completion report	- I made:

	3rd Phase 2021 2027 2027 2027 2027 2027 2027 2027	
A STATE OF THE STA	4thYear SthYear GthYear	
Activity Plan Promotion and coordination of NRW reduction activities by NIWS NRW Unit are strenathened.	OCT NOW DEC JAIN FED MAIR ADIV JAIN JAIN ANG SED OCT NOW DEC JAIN FED MAIR AND JAIN JAIN ANG SED OCT NOW DEC JAIN FED MAIR AND TAIN AND SED OCT NOW DEC JAIN FED MAIR AND TAIN	Apr May Jun.
1.1 MWS&I NRW Unit, in cooperation with WASREB, produces NRW annual reports which	▼ Apriliates to 2 var	Annual report ver. 3
indude NRW reduction data. 1.2 MWS&I NRW Unit plans and implements NRW reduction sensitization activities for the	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	A A See A A A A A A A A A A A A A A A A
	▼ r Naryold	▼ in Embu
1.3 MWS&I NRW Unit plans and implements NRW reduction campaigns.		- 1
1.5 MWS&I NRW Unit conducts reviews of KEWI NRW courses.	all committee until feb 2000 V Suggestions as the Womening Goup	
1.6 MWS&I NRW Unit conducts reviews of WASREB's NRW reduction activities.		
Use of NRW reduction standards by Urban WSPs are promoted by WASREB.		
ards.	Committee in the 1st & 2nd Physical	
2.2 Based on the survey result as well as Output 4 and 5, WASREB revises the NRW Reduction	Market in the second se	
-		I
_	Revis was t	
in their activities.	A Driving Richards (Haldward)	were held in NK isumu,
	(not implemented during the project.)	
3.1 KEWI studies current status of NRW reduction courses and its challenges.	(Complete in the 2nd Phase)	
3.2 KEWI reviews NRW reduction training strategies and course contents.	Min Jajan	
3.3 KEWI, in collaboration with leading WSPs (Embu and Meru, etc.), conducts on-site NRW	W. Short traditing WAS P. Regular NRW Short Mar Short Regular	V Short
trainings. (Regular NRW short training course in the phase 3)	Web 地方型型では Web Manager 1980 Chart reference ratios at an of Contact of Journal and Contact of Contact	
3.4 KEWI reflects on-site NKW trainings into NKW course contents and materials.	to conduct the right and why strong which is a particular.	
3.5 KEWI incorporates the results of review by MWS&I NRW Unit into NRW course contents.	Connecting a text of Connecting a text of the	g a test-run of
3.6 KEWI conducts trace studies of NRW reduction course participants.	cente for titive; control titive con	Conducting the 1st
_	eduction by the	with 2 WSPs of Limuru
MDW shaning and for implementation and all the UNAW training course for light level start	circum (1/5 circum) a deport circum) was a circum c	0
A.1 The Project team conducts a survey of Urban WSPs and selects pilot Urban WSPs.		
4	(Completed in the 1st Phase)	
ction activities and identifies its	(Completed in the List Phase)	
4.3 Each Pilot WSP identifies measures to solve challenges.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- 1
4.4 Each Pilot WSP formulates the NRW reduction plan including financial plan.		,
4.5 Each Pilot WSP implements the NRW reduction plan.	Mevoko WSP. Eldoret WSP and Kilff-Marikein WSB ar the three mini targets of Phase 3. However, the support for the other of WSPs will continue. (Table 2.4.1 of Othere 2 and details.)	! ! ₩
·		
1) [B] GIS, NRW Monitoring, Zoning & Water Balance Analysis		
2) [C] Reduction of Commercial Water Losses (i.e. Data Handling & Meter Accuracy Errors, and Illose)		
3) [D] Reduction of Physical Water Losses (i.e. Bursts, Leaks & Overflows)		
4.6 Each Pilot WSP evaluates and analyses implementation results and revises the plans.	Rempte training from Japan by the expert	
4.7 Each Pilot WSP produces the NRW reduction activity report annually.	with the local staff	^ - -
A O Fort Nicht Wife Letter and a MINUTAGE distance and a fine of the column of the col	A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	^ y
4.6 Each Filot Way flows regulative reduction meetings alterated by retevant departments of WSP.		I I I
Experiences and knowledge of NRW reduction activities are shared among Urban WSPs. 5.1 The Project presents results and become of Dirtnit & and other NRW artivities during	Presination of WASPA's Presidential WASPA's Presidential or Pr	4SPA's
	Denot-marking Seminar Bench-marking Seminar Brinorbity meeting Birmorbity meeting Birmorbity meeting Birmorbity meeting	
	Workshow	Workshop
	Ver. 2	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
Additional supports to Donation of Chemicals for water treatment process the pilot WSPs due to	Survey/Hender etc. III Delivery EDelivery	
Procurerment of leak a Producing of sentisation tools on effe	— Surveyt renderZamping g.c. ■ Arriving a renderZamping to WSPs Planning/Edfrig/Vide Recording	ecording, etc.
Reports/Dooument	Strain 1	
Legend Work Han Monitoring Sheet Monitoring Sheet	A.31'd Place 2 A.10'er. 5) A.10'er. 5) A.10'er. 10 A.10'er. 10 A.10'er. 10	▲ (Ver. 11)
Acutual Activities	▲ 77b - 1C meeting ▲ 81b - CC meeting ▲ 81b - CC meeting A 91b - CC meeting	▲ 11th JOC
Training in Japan Completion Report	(Cincled by Code.19)	roject Completion Report ▲
	1-1 May 200 May 3-4 May 100 Ma	
Development of the Covid-19 pandemic		
Periods of working / suspension of the Experts visit to Kenya	Period for usually lowking: Suspended Period for the Epoert to skittle Kelya	kerrya

Attachment 2. Results of Dispatch of JICA Experts

1. On-site work

	NI-			Number						P	hase 1							ise 1
	Name (Expert)	Grade		of trips abroad		2016						2017					Total number of	Total number o
				ubroud	October	November	December	January	February	March	April	May	June	July	August	September	days	M/M
	Masayuki IGAWA Chief Adviser/NRW	2	Plan	4	20	30	10	20	10	30	1				1	30	150	5.00
	management 1		Performance	3	(10/10) 22	30	8 (12/8)	(1/23)		(21)	(5/6)	26	4 (6/4)				120	4.00
	Yasukazu NAGAO NRW reduction specialist 2	3	Plan	2	20			15									35	1.17
	(No.1)	,	Performance	1	(10/12) 12	10/23											12	0.40
	Noboru SAITO	2	Plan	0													0	0.00
	NRW reduction specialist 2 (No.1)	3	Performance	1				(1/23)		(14)							23	0.77
	Masayuki TAGUCHI		Plan	4	20	30	10	20	30	10	30	3				30	183	6.10
	NRW reduction specialist 2 (No.2)	4	Performance	2	(10/10) 22	30	8 (12/8)	(1/23)	28	23	(3/23) (5/7	25	8				153	5.10
	Shozo MORI		Plan	5	20	30	10	20	30	10	(3/23) (5/7	30	(6/8) (6/	30		30	210	7.00
	Water distribution Network (Mapping & Network analysis)	3	Performance	3	(10/10) 22	30	8 (12/8)	9	28	23		25	5 (6/26)				179	5.97
	Junichi TAKAHASHI		Plan	0	-		(12/8)	(1/22)			(3/22) (5/	7)	(6/5)		7/24)		0	0.00
ork	Flow, Pressure and Leakage	4															0	0.00
On-site work	Monitoring (No.1)		Performance	0	20	30	10	20	30	10								
On-s	Shinichi SEKIMOTO Flow, Pressure and Leakage	4	Plan	2	(10/10) 22			9		23							120	4.00
	Monitoring (No.2)		Performance	2	(10) 22	30	8 (12/8)	(1/23)	28	23	(3/23)						120	4.00
	Customer management /	4	Plan	0													0	0.00
	Billing collection (No.1)		Performance	0													0	0.00
	Naoki HARADA Customer management /	4	Plan	2	20	30	10	20	30	10							120	4.00
	Billing collection (No.2)	·	Performance	2	(10/12) 20	30	8 (12/8)	(1/23)	28	25	(3/25)						120	4.00
	Satoru SHIBAZAKI		Plan	3	20	30	10	20	10	15	30	15					150	5.00
	Training management (Training strategy)	3	Performance	2	(10/ <u>10) 22</u> (11			(1/23)	28	7 (3/7)	(5/7	25	30 (6/30)	(7/14)			150	5.00
	Hiroko SUGIMOTO		Plan	0	,	-, .			7	8			(6/30)	(7/14,		7	22	0.73
	Information/ Public relation management	4	(On-site) Performance	0				(0./04	22,28)	3							6	0.20
			(On-site) Plan	22	140	180	60	135	147	93	60	48	0	30	0	97	990	33.00
	Subtotal		Performance	16	142	165	40	63	178	104	0	101	47	30	· ·		883	29.44
			1 criormance	10	172	103	40	03	170	104	V	101	47				003	27.4
. Wo	ork within Japan		1	1	Is				1		1		1				1	
	Masayuki IGAWA Chief Adviser/NRW	2	Plan	-	<u></u>												5	0.25
	management 1		Performance	-	3												5	0.25
	Shozo MORI Water distribution Network	3	Plan	-	2												5	0.25
	(Mapping & Network analysis)		Performance	-	5												5	0.25
	Hiroko SUGIMOTO		Plan (Nairobi)	-				7	15	_8						16	46	2.27
an	Information/ Public relation management	4	Performance	_			(1)	23,24,25)	13	14		1(5/1	7) 4	2			37	1.85
ı Japan	. Lone reaction management		(Nairobi)					(2/7~2/	/20、2/23~2	7) (3/6~10	3/13~17, 3	√20 ~ 23) (6	3/9, 21, 22, 29	(7/5, 7)				1.03
within.	Ryosuke NAKAMORI Acceptance work for training in	5	Plan	-									□ ⁷				7	0.35
rk	Japan 1		Performance	-									_7_(6,	12~14, 6/1	2 1, 6/23)		7	0.35
Wol	Mitsutoshi KIDOKORO	-	Plan	-									6			· · · · · · · · · · · · · · · · · · ·	6	0.30
	Acceptance work for training in Japan 2	5	Performance	-									4	(6/15~17, 6	(22)		4	0.20
	Noboru SAITO	1	Plan	-									4				4	0.20
	Acceptance work for training in Japan 3	5	Performance	-									4	(6/15~17, 6	(22)		4	0.20
		1	Plan	_	10	0	0	7	15	8	0	0	17	(6/15~17, 6 0	(22)	16	73	3.62
	Total		Performance	_	10	0	0	3	13	14	0	1	19				62	3.10
			l									-	17				02	5.10
.ege	end:	■ Plann	ed work		Actual wo	rk		At-cost to the compa		c===	Scheduled	work			Total	Plan	1,063	36.62
									-						1 Offil	Performance	945	32.54
					▲[Phase]]												
tc.				Work Plan					fre				[Phase 1]			fyr1:		
Report, etc.		Check	Monito list for managir	ring Sheet					[Ver.1]▲		•	[Ver.2]▲				[Ver.3]▲		
ерог		CHECH	JICA Project															
ĸ			ant work month		A	A	A	A		A	A	•		A	A	A		
	Pr	ogress Re	port/Completic	on Report												【Phase 1】▲		

actural 60.70

	N.I.			Number										Pl	nase	2											Total of	Phase 2
	Name (Experties)	Grade		of trips	20)17					2	018										2019)				Days	Monthly
	(Experties)			abroad	Nov.	Dec.	Jan.	Feb. N	√ar.	Apl. N	1ay Jur	ı. Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apl.	May	Jun.	Jul.	Aug.	Sep.	basis	basis
	Masayuki TAGUCHI	2	Plan	7	2	21	15	28	17	15	30 22		15	30	30	15		30	15		30	30			30		375.00	12.50
	NRW reduction specialist 1		Actural	7	1	21	18	28 1	7	15	31 13	24	31	28				19	28	11	30	11		18	31		375.00	12.50
	Noboru SAITO		Plan	4			15	15						30				30						ı	30		120.00	4.00
	NRW reduction specialist 2	3	Actural	4			16	9				9	24					18	15					9	20		120.00	4.00
	Shozo MORI		Plan	6			15	28	17	15	15 30	30			30	30					30				30		270.00	9.00
	Water distribution Network (Mapping & Network analysis)	3	Actual	6			18	28 1	7	12 29) 1	4 31	2		31	29					30		22	7			270.00	9.00
	Junichi TAKAHASHI		Plan	3							15 30	15			15	30					30	_15					150.00	5.00
=	Flow, Pressure and Leakage Monitoring (No.1)	4	Actual	4							6 30	24		21	24							-	28	17			150.00	5.00
ork	Shinichi SEKIMOTO		Plan	5	2_	21	15	28	24		15 30	15				_ 6			15	30							201.00	6.70
Works in Kenva	Flow, Pressure and Leakage Monitoring (No.2)	4	Actual	5	1_	21	18	28	<u>1</u> 4		19 30	11			12	24				=		15	8				201.00	
Kenv	Toshio KANO		Plan	2	-			15								15												6.70
Ž	Customer and Billing	4	Actual					4	11							15											30.00	1.00
	management (No.1)		Plan	4			7		25		15	15			15	30				15	30						30.00	
	Naoki HARADA Customer and Billing	4	Actual	4			12		19			7 31	3			22				15	30		1.5	_24			180.00	6.00
	management (No.2)		Plan	6	2	21	_	28		30	2	30			30						30		13		30		180.00	6.00
	Satoru SHIBAZAKI Training management	3		6		21		28			_		31	14	50	30			12	31		12	30	1			300.00	10.00
	(Training strategy)		Actual		<u>'</u>		13			7		_30	31	4	4			4	4	31	1/	1	30	- 1	3		300.00	10.00
	Hiroko SUGIMOTO Information/	4	Actual	0					4				2			2		_									27.00	0.90
	Public relation management		Actuai	0				3	6				2		² ∎	2			1	6				4 ■	1 ■		27.00	0.90
																							То	tol	Pla	ned	1653.00	55.10
																								cui	Act	tural	1653.00	55.10
	Hiroko SUGIMOTO		Planed					1 0	15					15	1 5			15	<u>1</u> 5						16		101.00	5.05
*	Information/ Public relation management	4	Actual			2	1	10	6	4	Á	3	1	6	7	. 4	3	2	5	- 5	. 3	4 .	8	10	12		101.00	5.05
[-l	Yasuhiro SEKITA		Planed														7						-		•••		7.00	0.35
and '	Acceptance work for training in Japan 1	5															7											
*) In-land Works			Actual																								7.00	0.35
ŝ	Mitsutoshi KIDOKORO Acceptance work for training in	5	Planed													- 1	= ⁴										4.00	0.20
	Japan 2		Actural														4										4.00	0.20
																							In-l		Pla	ned	112.00	5.60
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																									\Box
	Plan of Operation		•	[Pha	se 2]																				
	Work Plan				•	[Pha:	se 2]																		
Rep	Monitoring Sheet				•	[Ver	.3]					A	[Ver	.4]				•	[Ver.	.5]		[V	er.6]	•	
por	Chech list for managing of risks					•						A						•						•	
rts	JICA Project brief note											A													•
	Consultant work monthly report		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	ogress Report/Completion Report																					[Phase	2]	•

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_ `	Plan/ Actual	15 20	14					20 18		15 30	2	30 22	-	5 30	7 30	7	342 11.40
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4 A	Plan/ Actual									157/6		3	9	961	# 1		51
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_ `	Plan/ Actual	12 20															32
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	Plan/ Actual	4 18									15 30	30 18		15 30	20 30		210
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		-													Sub-total	Planed Actural 4	473.2 23.66 473.9 23.69
Plan of	Operation	▲ [Phase 3]															L
	Work Plan	4	[Phase 3]														_
	Monitoring Sheet	[Ver7]				4	[Ver.8]			4	[Ver.9]		≥ ◀	[Ver.10]	4	[Ver.11]	_
	Chech list for managing of risks	1				4				•			4		• ;		_
	Completion Report												•		LFna	_	< l
																	405

Attachment 3. Original R/D and M/M for Amendment of R/D

RECORD OF DISCUSSIONS

ON

PROJECT FOR STRENGTHENING CAPACITY IN NON-REVENUE WATER REDUCTION

IN

THE REPUBLIC OF KENYA

AGREED UPON BETWEEN

THE GOVERNMENT OF THE REPUBLIC OF KENYA

AND

JAPAN INTERNATIONAL COOPERATION AGENCY

Nairobi, March 7th, 2016

Chief Representative

JICA Kenya Office

Prof. Fred H.K.SEGOR

Principal Secretary

State Department of National Water

Services

Ministry of Water and Irrigation

The Republic of Kenya

Dr. Kamau THUC

Principal Secretary

The National Treasury

The Republic of Kenya

Based on the Minutes of Meetings on the Detailed Planning Survey on the Project for Strengthening Capacity in Non-Revenue Water (hereinafter referred to as "NRW") Reduction (hereinafter referred to as "the Project") signed on 4th December, 2015 between the Ministry of Water and Irrigation (hereinafter referred to as "MWI") and the Japan International Cooperation Agency (hereinafter referred to as "JICA"), JICA held a series of discussions with MWI and relevant organizations to develop a detailed plan of the Project.

Both parties agreed the details of the Project and the main points discussed as described in the Appendix 1 and the Appendix 2 respectively.

Both parties also agreed that MWI, Water Services Regulatory Board (hereinafter referred to as "WASREB"), and Kenya Water Institute (hereinafter referred to as "KEWI"), the counterparts of the Project, will be responsible for the implementation of the Project in cooperation with JICA, coordinate with other relevant organizations and ensure that the self-reliant operation of the Project is sustained during and after the implementation period in order to contribute toward social and economic development of the Republic of Kenya (hereinafter referred to as "Kenya").

The Project will be implemented within the framework of the Agreement on Technical Cooperation signed on 29th April, 2004 (hereinafter referred to as "the Agreement") and the Note Verbales exchanged on 10th and 16th July 2015 between the Government of Japan (hereinafter referred to as "GOJ") and the Government of Kenya (hereinafter referred to as "GOK").

Appendix 1: Project Description Appendix 2: Main Points Discussed

Appendix 3: Minutes of Meetings on the Detailed Planning Survey of the Project



PROJECT DESCRIPTION

Both parties confirmed that there is no change in the Project Description agreed on in the Minutes of Meetings on the Detailed Planning Survey on the Project signed on 4th December, 2015 (Appendix 3).

I. BACKGROUND

The National Water Master Plan 2030 recommends that water resources must be properly managed, conserved, developed and more efficiently utilized considering future impact of climate change and rapid increase of population, economic growth, etc. NRW ratio in Kenya is 42% as of 2015. This figure means that half of treated water produced in the entire country is lost which results in the loss of half of the revenue which could have been used for further improvement of water access. In Vision 2030, GOK aims to reduce NRW ratio to 25% by 2020 and 20% by 2030. GOK has therefore implemented "the Project for Non-Revenue Water Management" supported by JICA from 2010 to 2014. Under this Project, WASREB developed the Standards for NRW Reduction, which consists of the NRW Reduction Guideline for use by WSB, the NRW Reduction Manual for use by WSP and Handbooks for use by technical staffs. Furthermore, KEWI has established new training course on NRW reduction, so it is desired to actualize the reduction of NRW ratio by applying materials that have been developed and training courses.

For sustainable NRW reduction, GOK requested the GOJ technical cooperation to strengthen capacity of the responsible organization to enhance the basic knowledge and the technical capacity for tackling NRW issue.

II. OUTLINE OF THE PROJECT

Outline of the Project is described in the Logical Framework (Project Design Matrix: PDM) (Annex 1) and the tentative Plan of Operation (PO, Annex 2). The PDM and PO shall be finalized in the additional survey within 3 months after the Project commencement.

1. Input

(1) Input by JICA

JICA will take, at its own expense, the following measures according to the normal procedure under the Technical Cooperation.

(a) Dispatch of Experts

Chief adviser/NRW management NRW reduction specialist(s) Customer Management/Billing collection Training management Information/Public relation management Other experts if necessary

(b) Training

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Training in Japan (and/or in third country)

(c) Machinery and Equipment

The equipment to be provided to the Kenyan side in the Project are tentatively itemized shown in Annex-3

(2) Input by MWI, WASREB, KEWI and Pilot WSPs

MWI, WASREB, KEWI and Pilot Water Service Providers ("Pilot WSPs") will take necessary measures to provide at its own expense:

- (a) Assignments of counterpart personnel and support staff;
- (b) Payment of per-diem (daily allowance, transportation fee and accommodation fee) to the counterpart personnel;
- (c) Suitable office space with necessary equipment in MWI, KEWI, and Pilot WSPs;
- (d) Utilities charges such as electricity, water supply, if any;
- (e) Supply or replacement of machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than the equipment provided by JICA:
- (f) Costs of activities for sensitization and campaigns by MWI
- (g) Survey cost on the usage of current NRW reduction standards by WASREB
- (h) Expense for Training of Pilot WSPs at KEWI (short term course)
- (i) Expense for On-site training in Pilot WSPs by KEWI
- (j) Expense for On-site ToT in Pilot WSPs
- (k) Expense for NRW activities of Pilot WSPs
- (I) Information in obtaining medical service;
- (m) Available data (including maps and photographs) and information related to the Project:
- (n) Necessary facilities to the JICA experts for the remittance as well as utilization of the funds introduced into Kenya in connection with the implementation of the Project

2. Implementation Structure

Implementation Structure of the Project is given in the Annex 4. The roles and assignments of relevant organizations are as follows:

(1) MWI

(a) Project Director

Director of Department of Water Services, MWI will be responsible for overall administration and implementation of the Project.

(b) Project Manager

Deputy Director of Operation and Maintenance, State Department of National Water Services, MWI will responsible for daily operation of the Project, and administration and implementation of activities, related to output 1 and 5.

(2) WASREB

Chief Executive Officer, WASREB will be responsible for administration and implementation of activities, related to output 2.



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(3) **KEWI**

Director, KEWI will be responsible for administration and implementation of activities, related to output 3.

(4) Pilot WSPs

Managing Directors, Pilot WSPs will be responsible for administration and implementation of activities, related to output 4.

(5) JICA Experts

The JICA experts will give necessary technical guidance, advice and recommendations to MWI, WASREB, KEWI, and Pilot WSPs on any matters pertaining to the implementation of the Project.

(6) Joint Coordinating Committee (JCC)

Joint Coordinating Committee (hereinafter referred to as "JCC") will be established in order to facilitate inter-organizational coordination. JCC will be held at least twice a year and whenever deems it necessary. JCC will approve an annual work plan, review overall progress, conduct evaluation of the Project, and exchange opinions on major issues that arise during the implementation of the Project. A list of JCC members is shown in the Annex 5.

3. Project Site(s) and Beneficiaries

Project Area: Kenya

Beneficiaries: Staffs of MWI, WASREB, KEWI, Urban WSPs

Pilot WSPs would be selected during the additional survey for three (3) months from the commencement of the Project.

4. Duration

Five (5) years (including the additional survey within 3 months)

5. Reports

- (1) Monitoring Sheet on bi-annual basis until the project completion (every six (6) months).
- (2) Also, Project Completion Report shall be drawn up one (1) month before the termination of the Project.

6. Environmental and Social Considerations

MWI, WASREB, and KEWI agreed to abide by 'JICA Guidelines for Environmental and Social Considerations' in order to ensure that appropriate considerations will be made for the environmental and social impacts of the Project.

III. UNDERTAKINGS OF GOK

- 1. GOK will take necessary measures to:
 - (1) ensure that the technologies and knowledge acquired by the Kenya nationals as a result of Japanese technical cooperation contributes to the economic and social development of Kenya, and that the knowledge and

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- experience acquired by the personnel of Kenya from technical training as well as the equipment provided by JICA will be utilized effectively in the implementation of the Project; and
- (2) grant privileges, exemptions and benefits to the JICA experts above and their families, which are no less favorable than those granted to experts and members of the missions and their families of third countries or international organizations performing similar missions in the Republic of Kenya.
- 2. MWI will take necessary measures to conclude MOU with Pilot WSPs (in particular, Embu and Meru, which is supposed to start the NRW Reduction activities in the first year of the Project) and Counties responsible of Pilot WSPs for timely implementation of the Project for three purposes as below;
 - a) To involve Counties for smooth implementation of the Project;
 - b) To acquire budget for NRW Reduction activities of Pilot WSPs; and
 - c) To confirm and agree the inputs and undertakings of Pilot WSPs.

An example MOU is shown in Annex-6.

- 3. GOK will take necessary measures to:
 - (1) provide security-related information as well as measures to ensure the safety of the JICA experts;
 - (2) permit the JICA experts to enter, leave and sojourn in the Republic of Kenya for the duration of their assignments therein and exempt them from foreign registration requirements and consular fees.
 - (3) exempt the JICA experts from taxes and any other charges on the equipment, machinery and other material necessary for the implementation of the Project;
 - (4) exempt the JICA experts from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to them and/or remitted to them from abroad for their services in connection with the implementation of the Project; and
 - (5) meet taxes and any other charges on the equipment, machinery and other material, referred to in II-7 above, necessary for the implementation of the Project.
- 4.GOK will bear claims, if any arises, against the JICA experts resulting from, occurring in the course of, or otherwise connected with, the discharge of their duties in the implementation of the Project, except when such claims arise from gross negligence or willful misconduct on the part of the JICA experts.

IV. MONITORING AND EVALUATION

JICA and MWI, WASREB, KEWI will jointly and regularly monitor the progress of the Project through the Monitoring Sheets based on the PDM and PO. The Monitoring Sheets shall be reviewed every six (6) months.

Also, Project Completion Report shall be drawn up one (1) month before the



termination of the Project.

V. PROMOTION OF PUBLIC SUPPORT

For the purpose of promoting for the Project, MWI, WASREB and KEWI will take appropriate measures to make the Project widely known to the people of Kenya.

VI. Misconduct

If JICA receives information related to suspected corrupt or fraudulent practices in the implementation of the Project, MWI, WASREB, KEWI and relevant organizations shall provide JICA with such information as JICA may reasonably request, including information related to any concerned official of the government and/or public organizations of Kenya.

MWI, WASREB, KEWI and relevant organizations shall not, unfairly or unfavorably treat the person and/or company which provided the information related to suspected corrupt or fraudulent practices in the implementation of the Project.

VII. MUTUAL CONSULTATION

JICA and MWI, WASREB, KEWI will consult each other whenever any major issues arise in the course of Project implementation.

VIII. AMENDMENTS

The Record of Discussions may be amended by the Minutes of Meetings between JICA, MWI and The National Treasury.

The Minutes of Meetings will be signed by authorized persons of each side who may be different from the signers of the Record of Discussions.

Annex -1 Tentative Logical Framework (Project Design Matrix: PDM)

Annex -2 Tentative Plan of Operation

Annex -3 List of equipment

Annex -4 Implementation Structure of the Project

Annex -5 A List of Proposed Members of Joint Coordinating Committee

Annex -6 An example of MOU

Annex -7 Monitoring Form



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MAIN POINTS DISCUSSED

1. Roles NRW Unit of MWI

NRW Unit of MWI has the following roles:

- a) Formulation of national policies and strategies for NRW reduction;
- b) Coordination of NRW reduction activities of related organizations; and
- c) Promotion of NRW reduction activities including sensitization of Counties.

II. Additional Survey

Both sides also agreed that the additional survey (within 3 months) will be conducted to review/decide on the following items upon commencement of the Project:

- a) Activities of Output 1. As official roles of NRW Unit is yet to be approved;
- b) Pilot WSPs of Output 4. Other than leading WSPs (Embu and Meru), more detail capacity assessment of WSPs and coordination with other development partners are required:
- c) Necessary equipment for the Project;
- d) Training in Japan or the third country

III. Terminology of WSPs in the Project

For the clarification purpose, both sides agreed with the following terminology of WSPs:

(1) Target WSPs:

All Urban WSPs

(2) Pilot WSPs:

Urban WSPs that the activities of Output 4 are conducted.

(Selection Criteria is described in XII)

(3) Leading WSPs:

Pilot WSPs which have experiences of implementing JICA projects, and capacity and willingness to support other WSPs, namely Embu and Meru WSPs.

IV. Selection Criteria of Pilot WSPs

In addition to the two leading WSPs, as indicated above, the additional survey will be conducted at the inception stage of the Project to select seven (7) candidate WSPs, i.e., one (1) WSP each from seven (7) WSBs excluding Tana WSB using the following criteria. For project implementation, four (4) Pilot WSPs will be further prioritized as the first group of cooperation to be continued for three years. The remaining three (3) Pilot WSPs are the second group subject to review at the third year for their suitability and progress of the first group. For the selection of Pilot WSPs, factors such as capacity, ownership



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and geographical distribution will be considered in addition to the criteria below:

Criteria

- Urban WSPs (of Very Large, Large, and Medium, as defined by WASREB's Impact report);
- WSPs locations clarified by JICA's security guideline;
- WSPs that are not receiving other development partners' assistance with similar activities of the Project;
- WSPs that have established NRW units;
- O&M Cost Recovery is 80 % or more;
- Metering Ratio is 75% or more;
- Water Coverage Ratio is 30% or more; and
- Water Service Hours is 10 hour or more.

V. Related Activities of other development partners

The activities of many development partners, international/national governmental /non-governmental organizations in the water sector of Kenya. Other development partners have formulation plans or implementing NRW-related projects. The selection of Pilot WSPs should be considered carefully. The project activities should also be carefully studied to prevent the overlapping of activities by the other development partners.

VI. Concluding Memorandum of Understanding (MOU)

Upon the completion of selection of Pilot WSPs, MWI will take necessary measures for the signing of MOU between Water Services Board and Pilot WSPs (initially, Embu and Meru whose activities will commence from the first year of the Project) which will be witness by MWI and Counties responsible for Pilot WSPs for smooth implementation of the Project with the following purposes:

- a) to involve Counties for smooth implementation of the Project;
- b) to acquire budget for NRW reduction activities of Pilot WSPs; and
- c) to confirm and agree the inputs and undertakings of Pilot WSPs.

VII. Flexible change of the Project design, output and activities

Both sides agreed that the Project design, output and activities may be reviewed and changed if roles of each organization were changed by Water sector reform result.



PM Form 1 PDM

Version 0 Dated

Project Design Matrix

Prolect Title: Project for Strengthening Capacity in Non-Revenue Water Reduction

Implementing Agency: MWI,WASREB,KEWI

Target Group:Urban WSPs

Period of Project.5 years from the date when the first JICA Expert is dispatched

Project Site: The entire country of Key

Narrative Summary Objectively Verifiable Indicators Overall Goal Under NRW reduction support mechanism 1 X of 1 than WSPs naticinal a frameworks		Means of Verification Import	d others Important Assumption	Achievement	Remarks
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X of pijot Urban WSPs (annua NRW reduction p	continute achieving targets set by the lan for two years.	NRW reduction plans Platform (online) Impact reports Project reports JCC meeting minutes	NRW reduction remains as priority of MWI and WSPs.		
1-1 All County represent seminar(s). 1-2 NRW reduction cam 1-3 NRW reduction annu	atives participate NRW related paigns are conducted semi annually.	Materials for County seminar Project List of seminar participants securec Campaign materials NRW INRW INTRW reduction annual reports fulfilled. Project reports JCC meeting minutes	Project budget of the CPs is secured. NRW Unit staff positions are fulfilled.		
2-1 NRW reduction standards are n 2-2 Revised NRW reduction standa Urban WSPs through workshop (s).	<u>।</u>	ਂ ਰੱ	Current WASREB's role and authority remains.		
3-1 KEWI conducts NRW reduction con incorporating on-site trainings and revisings and revisions by the NRW course paid before the revision of course materials. 3-3 O% of NRW course participants for the course participants for the course participants for the course participants for the course participants.	rises with contents ed course materials, rticipants is higher than mulate the workplans.	Revised course materials Revised course syllabus Course participants evaluation sheets Project reports JCC meeting minutes NRW reduction annual reports Trace studies	KEWI continues to offer NRW short courses. Project budget of the CPs is secured.		



capacity of pilot Urban WSPs is enhanced.	4-1 More than X of pilot Urban WSPs continuously make the annual NRW reduction plan based on the review of previous year's implementation. 4-a More than X of pilot Urban WSPs continuously implement the annual NRW reduction plan formulated in 4-1. 4-3 More than X of pilot Urban WSPs are able to implement skills and activities that pilot Urban WSPs were not able to adopt prior to the Project. 4-4 More than X of pilot Urban WSPs are able to implement priority activities indicated in the NRW reduction plan. 4-5 More than X of pilot Urban WSPs train all of NRW personnel.	NRW reduction plans I rained personnel do not NRW reduction plans leave WSPs leave wstarchartecture and secure water resources. NRW reduction annual reports Project budget of the CPs is secured.	I rained personner on nor leave WSPs Drastic climatic chages such as draught will not affect the water resources. Project budget of the CPs is secured.		
5. Experiences and knowledge of NRW reduction activities are shared among Urban WSPs.	5-1 Case study and lessons learnt of Output 4 and other NRW activities are compiled and disseminated. 5-2 Regular meeting(s) of NRW is/are organized three times a year.	Compiled lessons learnt NRW reduction r NRW regular meeting minutes priority of WSPs, and list of participants Project reports JCC meeting minutes NRW reduction annual reports	NRW reduction remains as priority of WSPs.		
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1.1 MWI NRW Unit, In cooperation with WASREB, produces NRW annual report 2.2 MWI NRW Unit plans and implements NRW reduction sensitization activities 3.3 MWI NRW Unit plans and implements NRW reduction campaigns. 1.4 MWI NRW Unit conducts reviews of KEWI NRW courses. 5.4 MWI NPW Init conducts reviews of WEWI SRR SNRW reduction activities.	1.1 MWI NRW Unit, in cooperation with WASREB, produces NRW annual reports which include NRW reduction data 1.2 MWI NRW Unit plans and implements NRW reduction sensitization activities for the Counties. 1.3 MWI NRW Unit plans and implements NRW reduction campaigns. 1.4 MWI NRW Unit conducts reviews of KEWI NRW courses. 2.4 MWI NRW Unit conducts reviews of WASHER's NRW reduction activities.	on data.	The Japanese Side	The Kenya Side	Pre-Conditions
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Project Progress Report		Total Control	
Project Completion Report		(Actual 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Public Relations			

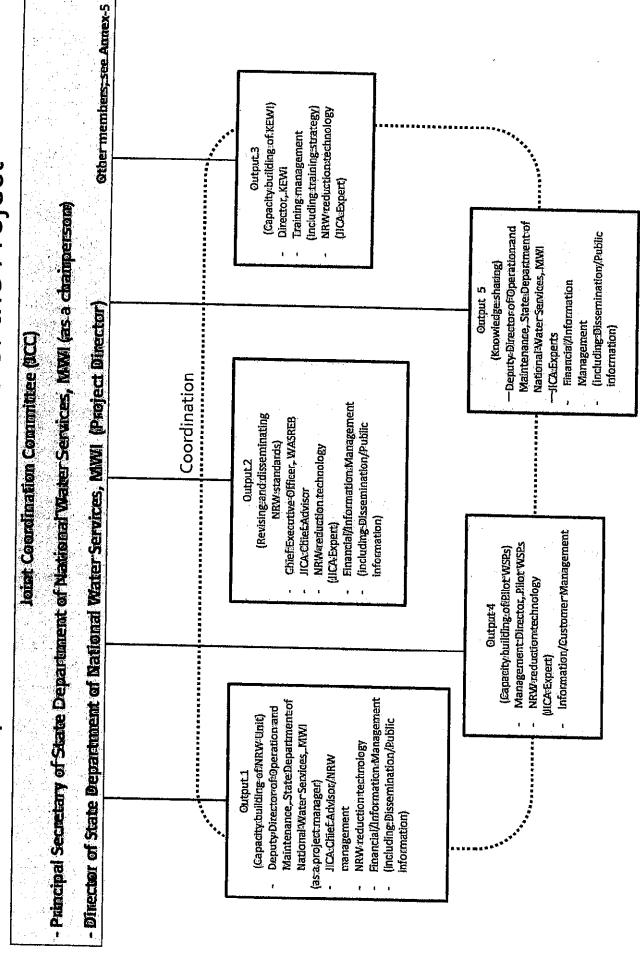
Note: 0: Main parson in charge O: Parson concerned

Table: Tentative List of Equipment

	Name of Equipment
_	Portable ultra-sonic flow meter(s)
_	Leak detector(s)
_	Water pressure gauge(s)
-	Bulk meter(s)
_	Data logger(s)
-	Water pressure gauge(s)
-	Meter test bench(s)
_	Noise leak correlator
-	Leak detection demonstration platform
_	GPS (s)
_	Laptop computer
-	Multi copy machine (Scanner, printer and copy functions. A-3 size)
-	Digital camera
	Projector
-	Other necessary equipment for monitoring and supporting NRW
ļ. 	reduction activities in Pilot WSPs



Implementation Structure of the Project





List of Members of Joint Coordinating Committee

Composition

1. Chairperson:

Principal Secretary, State Department of National Water Services, MWI

2. Project Director:

Director of Department of Water Services, MWI

3. Project Manager:

Deputy Director of Operation and Maintenance, State Department of National Water Services, MWI

- 4. Other Members
 - (1) The Kenya side:
 - 1) Head of Donor Coordination, MWI
 - 2) Chief Executive Officer, WASREB
 - 3) Director, KEWI
 - 4) Management Directors, Pilot WSPs (including, Leading WSPs)
 - 5) Other personnel assigned by Kenyan side
 - (2) The Japanese side:
 - 1) Chief Advisor
 - 2) Other experts
 - 3) Representatives of JICA Kenya Office
 - 4) Other personnel as mutually agreed upon

Note: Officials of the Embassy of Japan in the Republic of Kenya may attend the committee meeting.





(Example)

Memorandum of Understanding for "PROJECT FOR STRENGTHENING CAPACITY IN NON-REVENUE WATER REDUCTION"

This Memorandum of Understanding ("MoU") is made and entered by and among the following four parties:

[Name of WSB] as one party, represented by [Name, Position] ("[Abbreviated Name of WSB]");

and

[Name of Water Service Provider] as one party, represented by [Name, Position] ("[Abbreviated Name of WSP]");

witness by

Ministry of Water and Irrigation as one party, represented by [Name, Position] ("MWI");

and

[Name of County Government] as one party, represented by [Name, Position] ("the County");

1. Ground of the MoU

Based on the result of the survey conducted by JICA, [Abbreviated Name of WSP] has been selected as a Pilot Water Service Provider (WSP) of "Project for Strengthening Capacity in Non-Revenue Water Reduction" (the Project). This MoU is an agreement between the four parties specified above in regard to smooth implementation of the Project.



- Dates of Validation and Completion of the MoU
 This MoU shall be valid from the date of MoU signing, [Date, Month, Year] and till the completion of the Project,
- 3. Amendments of the MoU Any necessary amendments and additions to the MoU may be negotiated among the four parties. Agreed amendments and additions shall be evidenced by a written document signed by all the parties.





Terms of Reference

- The County shall support [Abbreviated Name of WSP], as its lawful owner, for the implementation of Non-Revenue Water Reduction activities of the Project.
- 2. [Abbreviated Name of WSP] shall be responsible for the following particulars during the period of the Project. Some of the particulars are for experts from Japan International Cooperation Agency (JICA). The County shall support [Abbreviated Name of WSP]'s smooth implementation of NRW reduction activities in regard to the particulars.
 - (a) Assignments of counterpart personnel and support staff
 - (b) Payment of per-diem (daily allowance, transportation fee and accommodation fee) to the counterpart personnel
 - (c) Provision of suitable workspace with furniture and equipment for JICA experts (for at least 4 personnel)
 - (d) Utilities charges such as electricity, water supply, if any
 - (e) Supply or replacement of machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than the equipment provided by JICA
 - (f) Expense for NRW activities
 - (g) Provision of information on available medical services for JICA experts
 - (h) Provision of available data (including maps and photographs) and information necessary for project activities

[Name]	[Name]
Chief Executive Officer	Managing Director
[Name of WSB]	[Name of WSP]
Witness by	
[Name]	[Position]
[Position]	[Department]
[Department]	[Name of County Government]
Ministry of Water and Irrigation	



TO CR of JICA Kenya OFFICE

PROJECT MONITORING SHEET

Project Title :	
Version of the Sheet: Ver.●● (Ter	m: Month, Year - Month, Year)
	Name:
	Title: Chief Advisor
	Submission Date:

I. Summary

1 Progress

- 1-1 Progress of Inputs
- 1-2 Progress of Activities
- 1-3 Achievement of Output
- 1-4 Achievement of the Project Purpose
- 1-5 Changes of Risks and Actions for Mitigation
- 1-6 Progress of Actions undertaken by JICA
- 1-7 Progress of Actions undertaken by Gov. of Republic of Kenya
- 1-8 Progress of Environmental and Social Considerations (if applicable)
- 1-9 Progress of Considerations on Gender/Peace Building/Poverty Reduction (if applicable)
- 1-10 Other remarkable/considerable issues related/affect to the project (such as other JICA's projects, activities of counterparts, other donors, private sectors, NGOs etc.)

2 Delay of Work Schedule and/or Problems (if any)

- 2-1 Detail.
- 2-2 Cause
- 2-3 Action to be taken
- 2-4 Roles of Responsible Persons/Organization (JICA, Gov. of the Republic of Kenya)

3 Modification of the Project Implementation Plan

- 3-1 PO
- 3-2 Other modifications on detailed implementation plan

(Remarks: The amendment of R/D and PDM (title of the project, duration, project site(s), target group(s), implementation structure, overall goal, project purpose, outputs, activities, and input) should be authorized by JICA HDQs. If the project team deems it necessary to modify any part of R/D and PDM, the team may propose the draft.)

4 <u>Preparation of Gov. of the Republic of Kenya toward after completion of the Project</u>

II. PDM&PO as Project Monitoring Sheet I & II



CO

MINUTES OF MEETING **BETWEEN** JAPAN INTERNATIONAL COOPERATION AGENCY

AND

MINISTRY OF WATER AND IRRIGATION THE REPUBLIC OF KENYA

ON

THE PROJECT FOR STRENGTHENING CAPACITY IN NON-REVENUE WATER REDUCTION

The Detailed Planning Survey Team (the Team) organized by the Japan International Cooperation Agency (JICA), headed by Mr. Yoshiki OMURA visited Kenya from November 14th to December 4th, 2015 for the purpose of conducting Detailed Planning Survey of the Project for "Strengthening Capacity in Non-Revenue Water Reduction" (the Project).

During its stay in Kenya, the Team exchanged views and had a series of discussions about the project outline with the Ministry of Water and Irrigation (MWI) and organizations concerned.

As a result of the discussions, both sides understood the matters referred to in the document attached hereto.

Nairobi, 4th December, 2015

Mr. Yoshiki OMURA

Leader

Detailed Planning Survey Team

Japan International Cooperation Agency

Professor Fred H. K. SEGOR

Principal Secretary

State Department of National Water Services

Ministry of Water and Irrigation

The Republic of Kenya



THE ATTACHED DOCUMENT

I. Major findings

 Current situation in Non-Revenue Water (NRW) reduction activities of Water Service Providers (WSPs)

The Team confirmed strong momentum towards NRW reduction among WSPs. Many WSPs have already established their NRW units and prepared NRW reduction plans in response to recent directions by Water Services Regulatory Board (WASREB). For example, NRW reduction activities of Mavoko WSP have dramatically increased in last year. However, the Team learned that most of the WSPs the Team visited still need external support to strengthen their NRW reduction activities to make their efforts more effective and efficient.

(2) Roles NRW Unit of MWI

The Team confirmed that recently established NRW Unit of MWI has following roles:

- a) Formulation of national policies and strategies for NRW reduction;
- b) Coordination of NRW reduction activities of related organizations; and
- c) Promotion of NRW reduction activities including sensitization of Counties.

(3) Utilization of the NRW Standards at WSPs

The Team found that the NRW standards that were developed have been disseminated to most of the urban WSPs. The case studies included in the standards are especially well received. The NRW reduction guideline, a part of the standards, has been utilized by many WSPs who prepared NRW reduction plans recently. However, the Team evaluated that the contents of the standards can be improved by incorporating practical examples of NRW reduction activities of WSPs.

(4) NRW Training Courses by Kenya Water Institute (KEWI)

The Team found that KEWI's current NRW training courses are largely theoretical based. In order to make the courses more applicable to WSPs' NRW reduction activities, the course contents need to be revised with creativity. The Team confirmed that KEWI is keen to provide more practice-oriented training courses.

(5) Related Activities of other development partners

The Team learned the activities of many development partners, international/national governmental /non-governmental organizations in the water sector of Kenya. The Team

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initially selected some Water Service Providers (WSPs) as potentials for pilot WSPs of the Project. Meanwhile, the Team confirmed that other development partners have formulated plans or implemented NRW-related projects. Therefore, the selection of Pilot WSPs should be considered carefully. The project activities should also be carefully studied to prevent the overlapping of activities by the other development partners.

ll. Formulation of the Project Framework

Regarding the Project framework, both sides agreed the following points:

(1) Aim of the Project

Both sides agreed that the Project is aiming to strengthen NRW reduction support mechanisms by MWI, WASREB, and KEWI so that WSPs can carry out their NRW reduction activities sustainably which will contribute to the reduction of NRW in Kenya.

(2) Summary of cooperation by Japanese side

Both sides agreed that the Japanese side will provide the following assistance to the Kenyan side to strengthen the above mentioned NRW reduction support mechanism.

- a) Providing technical advice to NRW Unit of MWI in coordination and promotion of NRW activities, and review on policy/strategy, if necessary.
- b) Revision of NRW reduction standards, and promotion, and compilation of NRW reduction case studies/lessons learnt by WASREB.
- c) Strengthening KEWI's practical training capacity of NRW short courses by KEWI.
- d) Improve the capacity of WSPs for planning and implementation of NRW reduction activities.
- e) Knowledge sharing of case study/lessons learnt of pilot WSPs to other WSPs. The Project concept is shown in Annex-1, and the detailed project activities discussed in this survey are indicated in section XI.

III. Draft of Record of Discussion

Both sides agreed about the contents of the draft Record of Discussions ("R/D") shown in Annex-2.

R/D will be signed among MWI, the National Treasury, and JICA Kenya Office after the approval of R/D by JICA Headquarters.



IV. Change of Project Title

Both sides agreed to change the Project title from "The Project for NRW Rate Reduction" to "The Project for Strengthening Capacity in Non-Revenue Water Reduction".

V. Project area

Both sides agreed that the Project area is the entire nation of Kenya.

VI. Roles of the Kenyan Organizations of the Project

Both sides confirmed the roles of the Kenyan organizations as summarized in Annex-3, which may be subject to the further changes of laws and regulations.

VII. Operational Structure of the Project

Based on the roles of organizations discussed in Annex-3, both sides agreed the following operational structure of the Project:

(1) Responsible Organization of the Project:

 Ministry of Water and Irrigation (MWI), State Department of National Water Services

(2) Implementation Organizations

- MWI, State Department of National Water Services
- Water Services Regulatory Board (WASREB)
- Kenya Water Institute (KEWI)

(3) Joint Coordination Committee (JCC)

JCC will be held in every six months. The tentative Kenyan members of JCC are MWI, WASREB, KEWI, Leading WSPs (Embu and Meru) and pilot WSPs. The tentative Japanese members of JCC are the Expert team, JICA Kenya office, and the Embassy of Japan.

VIII. Duration of the Project

Both sides agreed that the duration of the Project is 5 years (including the additional survey (within 3 months)).





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IX. Monitoring

Both side agreed that the monitoring of the Project will be conducted twice a year.

X. Terminology of WSPs in the Project

For the clarification purpose, both sides agreed with the following terminology of WSPs:

(1) Target WSPs:

All Urban WSPs

(2) Pilot WSPs:

Urban WSPs that the activities of Output 4 are conducted.

(Selection Criteria is described in XII)

(3) Leading WSPs:

Pilot WSPs which have experiences of implementing JICA projects, and capacity and willingness to support other WSPs, namely Embu and Meru WSPs.

XI. Project Framework

Both sides agreed the following tentative framework of the Project as below.

(1) Overall Goal

Under NRW reduction support mechanism, Urban WSPs enhance NRW reduction activities.

(2) Project Purpose

A NRW reduction support mechanism is established for Urban WSPs to implement NRW reduction activities.

(3) Outputs

Output 1:

Promotion and coordination of NRW reduction activities by MWI NRW Unit are strengthened.

Output 2:

Use of NRW reduction standards by Urban WSPs are promoted by WASREB.

Output 3:

NRW related training capacity of KEWI is strengthened.

Output 4:

NRW planning and/or implementation capacity of Pilot Urban WSPs is enhanced.

Output 5:

Experiences and knowledge of NRW reduction activities are shared among Urban WSPs.



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Both sides also agreed that the additional survey (within 3 months) will be conducted to review/decide following items after commencement of the Project:

- a) Activities of Output 1. As official roles of NRW Unit is yet to be approved;
- b) Pilot WSPs of Output 4. Other than leading WSPs (Embu and Meru), more detail capacity assessment of WSPs and coordination with other development partners are required;
- c) Necessary equipment for the Project;
- d) Training in Japan or the third country

XII. Selection Criteria of Pilot WSPs

In addition to the two leading WSPs, as indicated in section XI, the additional survey will be conducted at the inception stage of the Project to select seven candidate WSPs, i.e., one WSP each from seven WSBs excluding Tana WSB using the following criteria. For project implementation, four Pilot WSPs will be further prioritized as the first group of cooperation to be continued for three years. The remaining three Pilot WSPs are the second group subject to review at the third year for their suitability and progress of the first group. For the selection of Pilot WSPs, factors such as capacity, ownership and geographical distribution will be considered in addition to the criteria below:

Criteria

- Urban WSPs (of Very Large, Large, and Medium, as defined by WASREB's Impact report);
- WSPs locations clarified by JICA's security guideline²;
- WSPs that are not receiving other development partners' assistance with overlapping activities of the Project;
- WSPs that have established NRW units;
- O&M Cost Recovery is 80 % or more;
- Metering Ratio is 75% or more;
- Water Coverage Ratio is 30% or more; and
- Water Service Hours is 10 hour or more.



in.

The performance index applied are derived from WASREB Impact Report No.7 (2014). If the index are changed, the selection criteria may be modified.

Cooperation may be extended to Coast WSB as providing training opportunities in country and/or overseas.

XIII. Tentative Equipment list of the Project

The Tentative Equipment list of the Project is indicated below. Both sides agreed that JICA Headquarters will carefully consider the necessity, appropriateness, and quantity of these equipment by the time of signing R/D.

Table: Tentative List of Equipment

T	Table Tellurite Side of Edgaphion
<u>-</u>	Portable ultra-sonic flow meter(s)
<u>_</u>	Leak detector(s)
-	Water pressure gauge(s)
_	Customer meter(s)
-	Bulk meter(s)/Zonal meter(s)
_	Data logger(s)
_	Water pressure gauge(s)
_	Meter test bench(s)
	Noise leak correlator
	Leak detection demonstration platform
_	GPS (s)
-	Laptop computer
	Multi-function machine (Scanner, printer and copy functions. A-3 size)
_	Digital camera
_	Projector
-	Other necessary equipment for monitoring and supporting NRW reduction activities in Pilot WSPs

XIV. Major Inputs

Both sides confirmed that JICA's input will be basically human resources. Detailed contents of input (including some Major Undertakings) are indicated in Annex-4.

XV. Major Undertakings by the Kenyan side

(1) Concluding Memorandum of Understanding (MOU)

Upon the completion of selection of Pilot WSPs, MWI will take necessary measures for the signing of MOU between Water Services Board and Pilot WSPs (initially, Embu and Meru whose activities will commence from the first year of the Project) which will be witness by MWI and Counties responsible for Pilot WSPs for smooth implementation of the Project with the following reasons:

- a) to involve Counties for smooth implementation of the Project;
- b) to acquire budget for NRW reduction activities of Pilot WSPs; and





- c) to confirm and agree to the inputs and undertakings of Pilot WSPs.
- (2) Other Undertakings by Kenyan Side

Other relevant Undertakings are based on the Agreement on Technical Cooperation between The Government of Japan and The Government of the Republic of Kenya dated April 29, 2004 and as periodically reaffirmed subsequently.

XVI. Other Relevant Issues

(1) Flexible Change of the Project Design, Outputs and Activities Both sides agreed that the Project design, outputs and activities may be reviewed and changed if roles of each organization were revised by Water sector reform.

(2) NRW Activities in the Pilot WSP

The NRW reduction activities in the pilot WSPs cover both physical and/or commercial losses. The NRW activities of the Project in each WSP will be decided through the prioritization of necessary NRW activities after the assessment of current NRW reduction activities and its challenges. The list of candidate NRW activities is shown in the following table. The number of required materials and equipment which are to be procured by JICA will be decided at the time of planning stage of activities. JICA will not cover the other costs including installation and construction costs.

Preliminary Activities	1) mapping
Activities for Physical Loss	1) isolation through zoning (DMA), 2) installation of master meter chamber, 3) installation of flow meters, 4) measurement of water pressure, 5)water balance analysis, 6) repair of surface leakage, 7) detection and repair of underground leakage 8) water pressure control, etc.
Activities for Commercial Loss	 survey of customer meters, 2) updating of water meter register, replacement of customer meters, 4) improvement of meter reading, 5) measures against illegal connection, 6) billing, etc.

(3) Per-diem and Other Travel Expenses of Counterparts

MWI mentioned financial constraints in providing counterparts with per diems and other travel expenses, and requested JICA's assistance. JICA replied that JICA expects MWI to make an effort to secure the budget for project activities including per diem; however, some costs such as workshop venue expenses can be shared. JICA added that in view of sustainability of the Project, development of own funding capability was preferable.





(4) Number of Custom Water Meters

MWI requested 300 pieces of customer water meters to be installed in each WSP for the project purpose. The Team replied to convey MWI's message to the Headquarters.

Annex-1: The Project concept

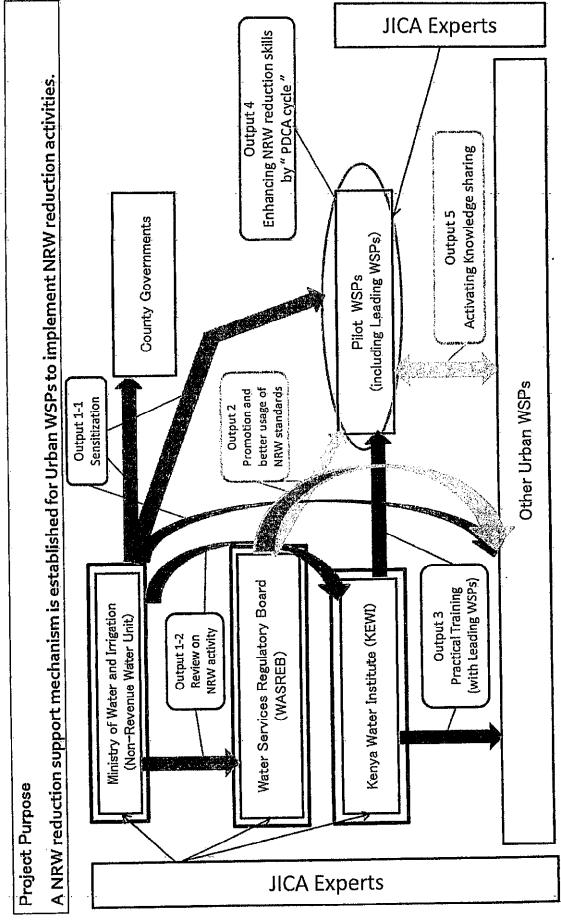
Annex-2: The draft R/D

Annex-3: Organizational Chart

Annex-4: Major Inputs and Undertakings



Project Design of "Project for Strengthening Capacity in Non-Revenue Water Reduction"

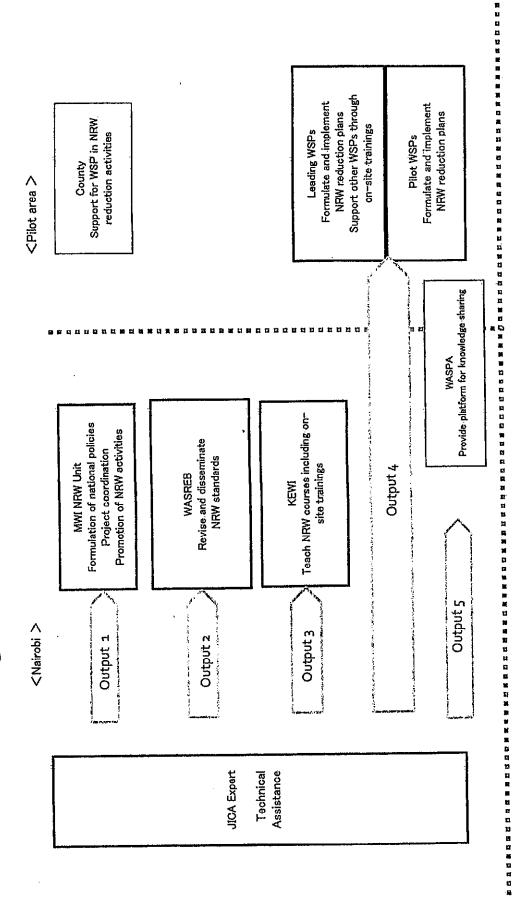


Black Arrow: Technical Advice from JICA Experts Red frame: Implementing Organization



in

Organizational Chart in the Project







REPUBLIC OF KENYA THE NATIONAL TREASURY AND PLANNING

Telegraphic Address: 22921

Finance – Nairobi FAX NO. 310833 Telephone: 2252299

When Replying Please Quote

Ref: TNT/RMD/79/78/02 Part II

THE NATIONAL TREASURY P O BOX 30007 - 00100 NAIROBI

27th May, 2019

Joseph W. Irungu, CBS

Principal Secretary Ministry of Water and Sanitation

NAIROBI

Dear

Bwana



Amendment of Record of Discussions for the Project Strengthening Capacity in Non-Revenue Water Reduction in Kenya

We make reference to your letter ref WD/3/3/1338 Vol II (149) dated 30th April, 2019 on the above subject.

The Principal Secretary/National Treasury has signed the Minutes of Meetings (MoMs) amending the Record of Discussions for the Project Strengthening Capacity in Non-Revenue Water Reduction in Kenya.

The purpose of this letter, therefore, is to forward the duly signed MoMs.

Yours

Jackson Kinyanjui, OGW

Director/ Resources Mobilization Department

For: PRINCIPAL SECRETARY/ NATIONAL TREASURY

Encl.



ISO 9001:2008 Certified.

MINUTES OF MEETINGS BETWEEN JAPAN INTERNATIONAL COOPERATION AGENCY

AND

MINISTRY OF WATER AND SANITATION FOR AMENDMENT OF THE RECORD OF DISCUSSIONS ON

THE PROJECT FOR STRENGTHNING CAPACITY IN NON-REVENUE WATER REDUCION IN THE REPUBLIC OF KENYA

The Japan International Cooperation Agency (hereinafter referred to as "JICA") and Ministry of Water and Sanitation (hereinafter referred to as "MWS") hereby agree that the Record of Discussions on THE PROJECT FOR STRENGTHENING CAPACITY IN NON-REVENUE WATER REDUCION signed on March 7, 2016 will be amended as follows;

1. Name of Implementing Agency

Before	Amended Version
Ministry of Water and Irrigation (MWI)	Ministry of Water and Sanitation (MWS)
Reason: Changing the name of the organize	ation because of re-structure.

2. Project Design Matrix

Before	Amended Version
Overall Goal	
Objectively Verifiable Indicators	
 X of Urban WSPs participate knowledge sharing activities established by the Project. X of pilot Urban WSPs continue achieving target(s) set by the annual NRW reduction plan. 	 6 of Urban WSPs participate knowledge sharing activities established by the Project. 6 of pilot Urban WSPs continue achieving target(s) set by the NRW reduction plan.
Project Purpose	
Objectively Verifiable Indicators	
X of pilot Urban WSPs continue achieving targets set by the annual NRW reduction plan for two years.	6 of pilot Urban WSPs continue achieving targets set by the NRW reduction plan for two years.
Output 2	
Objectively Verifiable Indicators 2-1NRW reduction standards are revised by year X	2-1NRW reduction standards are revised by year 2020



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Output 3

Objectively Verifiable Indicators

- 3-2 Evaluations by the NRW course participants is higher than before the revision of course materials.
- 3-3 X% of NRW course participants formulate the work plans.
- 3-2 The average score of the participants on the test conducted after the NRW reduction curse is higher than before the implementation.
- (3-3 deleted)

Output 4

Objectively Verifiable Indicators

- 4-1 More than X of pilot Urban WSPs continuously make the annual NRW reduction plan based on the review of previous year's implementation.
- 4-2 More than X of pilot Urban WSPs continuously implement the annual NRW reduction plan formulated in 4-1
- 4-3 More than X of pilot Urban WSPs are able to implement skills and activities that pilot Urban WSPs were not able to adopt prior to the Project.
- 4-4 More than X of pilot Urban WSPs are able to implement priority activities indicated in the NRW reduction plan.
- 4-5 More than X of pilot Urban WSPs train all of NRW personnel.

- 4-1 More than 8 Pilot WSPs formulate NRW reduction plan.
- 4-2 More than 6 Pilot WSPs self-review their achievement of previous year's NRW reduction plan and compile activity report.
- 4-3 Based on 4-2, more than 6 Pilot WSPs continuously formulate annual NRW reduction plan.
- 4-4 More than 6 Pilot WSPs continuously implement NRW reduction plan formulated in 4-1.
- 4-5 More than 6 Pilot WSPs are able to use skills and /or implement activities which they could not employ before the Project.
- 4-6 The amount of NRW in the selected distribution zones indicates decreasing tendency.

Output 5

Objectively Verifiable Indicators

- 5-1 Case study and lessons learnt of Output 4 and other NRW activities are compiled and disseminated.
- 5-2 Regular meeting(s) of NRW is/are organized three times a year.
- 5-1 Results and lessons from Output 4 and NRW activities are shared during WASPA meetings at least 3 times a year.
- 5-2 A NRW thematic workshop is organized every year.
- 5-3 3 brief notes are produced during the Project

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Activity for Output-1	
	(1.6 Added) 1.6 MWS NRW unit ensure the budget for the support mechanism bases on its NRW reduction Mid-term vision.
Activity for Output-4	
 4.3 Each pilot WSP identifies measures to solve challenges and formulates the NRW reduction plan. 4.4 Each pilot WSP formulates the annual NRW reduction plan including financial schedule based on the NRW reduction plan. 4.5 Each pilot WSP implements the annual NRW reduction plan. 	 4.3 Each pilot WSP identifies measures to solve challenges. 4.4 Each pilot WSP formulates the NRW reduction plan including financial plan. 4.5 Each pilot WSP implements the NRW reduction plan.
Activity for Output-5	
 5-1 MWI NRW Unit organizes NRW related regular meetings in cooperation with other relevant organizations. 5-2 WASREB compiles case studies/lessons leant about NRW reduction activities. 	 5-1 The Project presents results and lessons of Output 4 and other NRW activities during WASPA meeting. 5-2 The Project holds NRW thematic workshops in coordination with WASPA. 5-3 The Project team produces brief notes.

3. Other terms

JICA, and MWS agree that Project Design Matrix (PDM) is amended as Annex-1 due to modification stated above. This amendment will become effective as of 22 January 2019.

Annex 1: PDM version 2 Annex 2: PO version 2

Annex 3: Record of Discussions (signed on March 7, 2016)

Nairobi, 22 January, 2019

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Co

Ms. Keiko SANO Chief Representative JICA Kenya Office

Mr. Joseph Rungu
Principal Secretary
Ministry of Water and Sanitation
The Republic of Kenya

Dr. Kamau THUGGE Principal Secretary

The National Treasury The Republic of Kenya

Project Design Matrix

Version 2 Dated 31st July 2018

Project Title: Project for Strengthening Capacity in Non-Revenue Water Reduction

Implementing Agency: MWS,WASREB,KEWI

Pilot Site: Eldoret, Embu, Kisumu, Kilifi-Mariakani, Mavoko, Meru, Nakuru, Target Group:Urban WSPs Period of Project: Sept. 2016-Aug. 2021

Project Site: The entire country of Kenya		Nyahururu, Ruiru-Juja			
Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal					
Under NRW reduction support mechanism, Urban WSPs enhance NRW reduction activities.	Under NRW reduction support mechanism, 1. 6 of Urban WSPs participate knowledge sharing activities Urban WSPs enhance NRW reduction established by the Project. 2. 6 of pilot Urban WSPs continue achieving target(s) set by the NRW reduction plan.	MWS NRW Unit annual reports Pilot WSPs NRW reduction plans	NRW reduction remains as priority of MWS and WSPs.		
	 NRW annual report is continuously produced and disseminated. 				
Project Purpose					
A NRW reduction support mechanism is established for Urban WSPs to implement NRW reduction activities.	6 of pilot Urban WSPs continue achleving targets set by the NRW reduction plan for two years.	NRW reduction plans Platform (online) Impact reports Project reports JCC meeting minutes	NRW reduction remains as priority of MWS and WSPs.		į
Outputs					
Promotion and coordination of NRW reduction activities by MWS NRW Unit are strengthened.	 1-1 All County representatives participate NRW related seminar(s). 1-2 NRW reduction campaigns are conducted semi annually. 1-3 NRW reduction annual reports are produced. 	Materials for County seminar List of seminar participants Campaign materials NRW reduction annual reports Project reports JCC meeting minutes	NRW Unit staff positions are fulfilled.	1	
2. Use of NRW reduction standards by Urban WAPs are promoted by WASREB.	2-1 NRW reduction standards are revised by year 2020. 2-2 Revised NRW reduction standards are disseminated to all Urban WSPs through workshop (s).	Revised NRW reduction standards Workshop program and list of participants Project reports JCC meeting minutes NRW reduction annual reports	Current WASREB's role and authority remains.		
3. NRW related training capacity of KEWI is strengthened.	ARW related training capacity of KEWI is 3-1 KEWI conducts NRW reduction courses with contents incorporating on-site trainings and revised course materials. 3-2 The average score of the participants on the test conducted after the NRW reduction curse is higher than before the implementation.	Revised course materials Revised course syllabus Course participants' test scores Project reports JAC meeting minutes NRW reduction annual reports Trace studies	KEWI continues to offer NRW short courses.		



			Pre-Conditions	countermeasures>
		ts	The Kenya Side	Counterpart personnel Equipment/Tools/ Materials Facility/Office Space Budget for activities
Trained personnel do not leave WSPs Drastic climatic changes such as draught will not affect the water resources.	NRW reduction remains as priority of WSPs.	Inputs	The Japanese Side	1. Experts 2. Equipment/Tools/ Materials 3. Japan or third country training
NRW reduction plans IMPACT reports Project reports JCC meeting minutes	Compiled lessons learnt NRW reduction I NRW regular meeting minutes priority of WSPs, and list of participants Project reports JCC meeting minutes NRW reduction annual reports Brief notes		ion data. on.	
4-1 More than 8 Pilot WSPs formulate NRW reduction plan 4-2 More than 6 Pilot WSPs self-review their achievements of previous year's NRW reduction plans and compile activity report. 4-3 Based on 4-2, more than 6 Pilot WSPs continuously formulate annual NRW reduction plan. 4-4 More than 6 Pilot WSPs continuously implement NRW reduction plan formulated in 4-1. 4-5 More than 6 Pilot WSPs are able to use skills and/or implement activities which they could not employ before the project. 4-6 The amount of NRW in the selected distribution zones indicates decreasing tendency	5-1 Results and lessons from Output 4 and NRW activities are shared during WASPA meetings at least 3 times a year. 5-2 A NRW thematic workshop is organized every year. 5-3 3 brief notes are produced during the Project.	Activities	1.1 MWS NRW Unit, in cooperation with WASREB, produces NRW annual reports which include NRW reduction data. 1.2 MWS NRW Unit plans and implements NRW reduction sensitization activities for the Counties. 1.3 MWS NRW Unit plans and implements NRW reduction campaigns. 1.4 MWS NRW Unit conducts reviews of KEWI NRW courses. 1.5 MWS NRW Unit conducts reviews of WASREB's NRW reduction activities. 1.6 MWS NRW Unit ensures the budget for the support mechanism based on its NRW reduction Mid-term vision.	2.1 WASREB conducts a survey of the usages of current NRW reduction standards. 2.2 Based on the survey result as well as Outputs 4 and 5, WASREB revises the NRW reduction standards. 2.3 WASREB promotes revised NRW reduction standards through workshop(s). 2.4 WASREB promotes revised NRW reduction activities by MWS NRW Unit in their activities. 2.5 WASREB monitors and evaluates the usages of revised NRW standards. 2.5 WASREB monitors and evaluates the usages of revised NRW standards. 3.1 KEWI studies current status of NRW reduction courses and its challenges. 3.2 KEWI reviews NRW reduction training strategies and course contents. 3.3 KEWI in collaboration with ladding WSPs (Embu and Men., etc.), conducts on-site NRW trainings. 3.4 KEWI reflects on-site NRW trainings into NRW course contents and materials. 3.5 KEWI conducts tace sulfies of review by MWI NRW Unit into NRW course contents. 3.5 KEWI conducts tace studies of NRW reduction course participants. 4.1 The Project team conducts a survey of Urban WSPs and selects pilot Urban WPSs. 4.2 Each pilot WSP formulates the NRW reduction plan including financial plan. 4.5 Each pilot WSP produces the NRW reduction plan including financial plan. 4.6 Each pilot WSP produces the NRW reduction activity report annually. 4.7 Each pilot WSP produces the NRW reduction meetings aftended by relevant denartments of WSP 4.7 Each pilot WSP produces the NRW reduction activity report annually. 4.8 Each pilot WSP produces the NRW reduction meetings aftended by relevant denartments of WSP 5.1 The Project presents results and lessons of Output 4 and other NRW activities during WASPA meeting. 5.2 The Project holes NRW thematic workshops in coordination with WASPA.
A. NRW planning and/or implementation capacity of pilot Urban WSPs is enhanced.	5. Experiences and knowledge of NRW reduction activities are shared among Urban WSPs.		1.1 MWS NRW Unit, in cooperation with WASREB, produces NRW annual report MWS NRW Unit plans and implements NRW reduction sensitization activition 3 MWS NRW Unit plans and implements NRW reduction campaigns. 1.4 MWS NRW Unit conducts reviews of KEWI NRW courses. 1.5 MWS NRW Unit conducts reviews of WASREB's NRW reduction activities with MWS NRW Unit conducts reviews of WASREB's NRW reduction activities.	2.1 WASREB conducts a survey of the usages of current NkW reduction standards. 2.2 Based on the survey result as well as Outputs 4 and 5, WASREB revises the NRW 2.3 WASREB promotes revised NRW reduction standards through workshop(s). 2.4 WASREB promotes revised NRW reduction standards through workshop(s). 2.5 WASREB monitors and evaluates the usages of revised NRW standards. 3.1 KEWI studies current status of NRW reduction courses and its challenges. 3.2 KEWI reviews NRW reduction training strategies and course contents. 3.3 KEWI incorporates the results of review by MWI NRW Unit into NRW course contents 3.5 KEWI incorporates the results of review by MWI NRW Unit into NRW course contents. 3.6 KEWI incorporates the results of review by MWI NRW Unit into NRW course contents. 3.6 KEWI conducts trace studies of NRW reduction course gardicipants. 4.1 The Project team conducts a survey of Urban WSPs and selects pilot Urban WPSs. 4.2 Each pilot WSP formulates the NRW reduction plan including financial plan. 4.5 Each pilot WSP formulates the NRW reduction plan. 4.6 Each pilot WSP produces the NRW reduction activity report annually. 4.7 Each pilot WSP produces the NRW reduction activity report annually. 4.8 Each pilot WSP produces the NRW reduction activity report annually. 5.7 Each pilot WSP produces the NRW reduction activity report annually. 5.8 The Project lodes NRW thematic workshops in coordination with WASPA. 5.3 The Project learn nondress bilef notes.

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1001146	Year	t Year	d Year 3rd Ye	4th Year	h Year	Remarks	essne
puis		I II III III	I I II II II II	IV I II II II	I II II IV	200	
Expert	\ a						
Chief Advisor / NRW managemenet. (Mr. Masayuki Taguchi)	Actual						
NRW reduction specialist. (Mr. Noboru Saito)	Plan						
Water distribution network (Mapping & Network analysis) (Mr. Shozo Mori)	Plan						
Flow, Pressure and Leakage monitoring 1. (Mr. Junichi Takahashi)	Plan						
Flow, Pressure and Leakage monitoring 2. (Mr. Shinichi Sekimoto)	Plan						
Customer management / Billing collection 1. (Mr. Toshio Kano)	Plan					- 1)	
Customer management / Billing collection 2 (Mr. Naoki Harada)	Plan					10.	
Training management / Training strategy (Mr. Satoshi Shibazaki)	Plan						
Information / Public relation management (Ms. Hiroko Sugimoto)	Plan						
Other experts if necessary	Plan						
Equipment	Plan						
Training in Japan or third country	Plan						
In-country Training	Plan Plan						
Activities	Year	1st Year	2nd Year 3rd Year	4th Year	5th Year Re	Responsible Organization	
Sub-Activities		и ш п п	H I I M H I I	м п п м	AI II II	Japan GOK	Acnievements
Output 1: Promotion and coordination of NRW reduction activities by MWI NRW Unit are strengthered. 11 MWS MW Unit in cooperation with WASREB, produces NRW amual reports					A	Experts MoWI NRW Unit	
when meader they produced they are a second to the second	Plan					Experts NRW Unit	
1.3 MWS NRW Unit plans and implements NRW reduction campaigns.	Plan					Experts MoWI NRW Unit	
1.4 MWS NRW Unit conducts reviews of KEWI NRW courses.	Plan					Experts MoWil NRW Unit	
1.5 MWS NRW Unit conducts reviews of WASREB's NRW reduction activities.	Plan					Experts MoWI NRW Unit	
1.6 MWS NRW Unit ensures the budget for the support mechanism based on its NRW reduction Mid-term vision.						Experts MoWII NRW Unit	
Output 2: Use of NRW reduction standards by Urban WAPs are promoted by WASREB. 2.1 WASREB conducts a survey of the usages of current NRW reduction standards.						Experts WASREB	
2.2 Based on the survey result as well as Outputs 4 and 5, WASREB revises the NRW reduction standards.	Plan Actual					Experts WASREB	
 WASREB promotes revised NRW reduction standards through workshop(s). 	Plan					Experts WASREB	
2.4 WASREB incoporates the review results of NRW reduction activities by MWS NRW Unit in their activities.	Plan					Experts WASREB	
2.5 WASREB monitors and evaluates the usages of revised NRW standards.	Plan Actual					Experts WASREB	
Output 3: NRW related training capacity of KEWI is strengthened.	Pas					-	
1KEWI studys current status of NRW reduction courses and its challenges.	Actual	ı				Experts KEWI	
3.2KEWI reviews NRW reduction training strategies and course contents.	Plan					Experts KEWI	
3.3KEWI, in collaboration with leading WSPs (Embu and Meru, etc.), conducts or-site NRW trainings.	Plan	1				Experts KEWI	
3.4KEWI reflects on-site NRW trainings into NRW course contents and materials.	Plan					Experts KEWI	
3.5KEWI incorporates the results of review by MMI NRW Unit into NRW course contents.	Plan					Experts KEWI	
	Dian						

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Amended Plan of Operation (Version 2)

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4. The higher reality conducts a survey of others works and serects prior others			
WPSs.	Actual	Experts WPSs	4
4.2 Each pilot WSP conducts analyses of current NRW reduction activities and	Pina me	Experts Pilot Urban	
identifies its challenges.		+	
4.3 Each pilot WSP identifies measures to solve challenges.		Experts Pllot Urban	
4.4 February MCD formation that many of MOM mode office about the formation			
4.4 Each pilot Wor' Tothlurates the amuda INNV reduction plan modeling intervals	- Vennal	Experts VPPSs	
4.5 Each pilot WSP implements the NRW reduction plan.	Yethor	Experts WPSs	
1) GIS Preparation and Applications		Experts Pilot Urban	
The state of the s			
2) Zoning and NRW Monitoring		Experts Pilot Urban WPSs	
3)Leakage Management			
4) Customer Meter Management	Plan	Experts WPSs WPSs	
4.6 Each pilot WSP evaluates and analyzes implementation results and revise plans.	Plan	Experts Pilot Urban WPSs	
4.7 Each pilot WSP produces the NRW reduction activity report annually.	Plan	Experts WPSs WPSs	
4.8 Each pilot WSP holds regular NRW reduction meetings attended by relevant departments of WSP	Plan Metal	Experts Pilot Urban WPSs	
Output 5: Experiences and knowledge of NRW reduction activities are shared among Urban WSPs.			
5.1 The Project present results and lessons of Outbut 4 and NRW reduction activities		H	
during WASPA meetings.	Actual	Experts NRW Unit	
5.2 The Project holds NRW thematic workshops in coordination with WASPA.	Plan		
5.3 The Project team produces brief notes.	Plan Actual	Experts WASREB	
Duration / Phasing	Plan		
	Year 1st Year 2nd Year 8th Year 6th Year		
Monitoring Plan		7 Remarks Issue	Solution
Monitoring			
Joint Coordination Committee	Plan		
Submission of the Monitaring sheet	Actual Actual		
Joint Monitaring	Prince Control of the		
Reports/Documents			
Work Plan	Actual Actual		
Project Progress Report	Actual		
Project Completion Report	Phan		
Public Relations			

Note: . Main person in charge O: Person concerned

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RECORD OF DISCUSSIONS

ON

PROJECT FOR STRENGTHENING CAPACITY IN NON-REVENUE WATER REDUCTION

IN

THE REPUBLIC OF KENYA

AGREED UPON BETWEEN

THE GOVERNMENT OF THE REPUBLIC OF KENYA

AND

JAPAN INTERNATIONAL COOPERATION AGENCY

Nairobi, March 7th, 2016

Chief Representative

JICA Kenya Office

Prof. Fred H.K.SEGOR

Principal Secretary

State Department of National Water

Services

Ministry of Water and Irrigation

The Republic of Kenya

Dr. Kamau THUGGE Principal Secretary

The National Treasury

The Republic of Kenya

Based on the Minutes of Meetings on the Detailed Planning Survey on the Project for Strengthening Capacity in Non-Revenue Water (hereinafter referred to as "NRW") Reduction (hereinafter referred to as "the Project") signed on 4th December, 2015 between the Ministry of Water and Irrigation (hereinafter referred to as "MWI") and the Japan International Cooperation Agency (hereinafter referred to as "JICA"), JICA held a series of discussions with MWI and relevant organizations to develop a detailed plan of the Project.

Both parties agreed the details of the Project and the main points discussed as described in the Appendix 1 and the Appendix 2 respectively.

Both parties also agreed that MWI, Water Services Regulatory Board (hereinafter referred to as "WASREB"), and Kenya Water Institute (hereinafter referred to as "KEWI"), the counterparts of the Project, will be responsible for the implementation of the Project in cooperation with JICA, coordinate with other relevant organizations and ensure that the self-reliant operation of the Project is sustained during and after the implementation period in order to contribute toward social and economic development of the Republic of Kenya (hereinafter referred to as "Kenya").

The Project will be implemented within the framework of the Agreement on Technical Cooperation signed on 29th April, 2004 (hereinafter referred to as "the Agreement") and the Note Verbales exchanged on 10th and 16th July 2015 between the Government of Japan (hereinafter referred to as "GOJ") and the Government of Kenya (hereinafter referred to as "GOK").

Appendix 1: Project Description
Appendix 2: Main Points Discussed

Appendix 3: Minutes of Meetings on the Detailed Planning Survey of the Project



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PROJECT DESCRIPTION

Both parties confirmed that there is no change in the Project Description agreed on in the Minutes of Meetings on the Detailed Planning Survey on the Project signed on 4th December, 2015 (Appendix 3).

I. BACKGROUND

The National Water Master Plan 2030 recommends that water resources must be properly managed, conserved, developed and more efficiently utilized considering future impact of climate change and rapid increase of population, economic growth, etc. NRW ratio in Kenya is 42% as of 2015. This figure means that half of treated water produced in the entire country is lost which results in the loss of half of the revenue which could have been used for further improvement of water access. In Vision 2030, GOK aims to reduce NRW ratio to 25% by 2020 and 20% by 2030. GOK has therefore implemented "the Project for Non-Revenue Water Management" supported by JICA from 2010 to 2014. Under this Project, WASREB developed the Standards for NRW Reduction, which consists of the NRW Reduction Guideline for use by WSB, the NRW Reduction Manual for use by WSP and Handbooks for use by technical staffs. Furthermore, KEWI has established new training course on NRW reduction, so it is desired to actualize the reduction of NRW ratio by applying materials that have been developed and training courses.

For sustainable NRW reduction, GOK requested the GOJ technical cooperation to strengthen capacity of the responsible organization to enhance the basic knowledge and the technical capacity for tackling NRW issue.

II. OUTLINE OF THE PROJECT

Outline of the Project is described in the Logical Framework (Project Design Matrix: PDM) (Annex 1) and the tentative Plan of Operation (PO, Annex 2). The PDM and PO shall be finalized in the additional survey within 3 months after the Project commencement.

1. Input

(1) Input by JICA

JICA will take, at its own expense, the following measures according to the normal procedure under the Technical Cooperation.

(a) Dispatch of Experts

Chief adviser/NRW management

NRW reduction specialist(s)

Customer Management/Billing collection

Training management

Information/Public relation management

Other experts if necessary

(b) Training





Training in Japan (and/or in third country)

(c) Machinery and Equipment

The equipment to be provided to the Kenyan side in the Project are tentatively itemized shown in Annex-3

(2) Input by MWI, WASREB, KEWI and Pilot WSPs

MWI, WASREB, KEWI and Pilot Water Service Providers ("Pilot WSPs") will take necessary measures to provide at its own expense:

- (a) Assignments of counterpart personnel and support staff;
- (b) Payment of per-diem (daily allowance, transportation fee and accommodation fee) to the counterpart personnel;
- (c) Suitable office space with necessary equipment in MWI, KEWI, and Pilot WSPs;
- (d) Utilities charges such as electricity, water supply, if any;
- (e) Supply or replacement of machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than the equipment provided by JICA;
- (f) Costs of activities for sensitization and campaigns by MWI
- (g) Survey cost on the usage of current NRW reduction standards by WASREB
- (h) Expense for Training of Pilot WSPs at KEWI (short term course)
- (i) Expense for On-site training in Pilot WSPs by KEWI
- (j) Expense for On-site ToT in Pilot WSPs
- (k) Expense for NRW activities of Pilot WSPs
- (I) Information in obtaining medical service:
- (m) Available data (including maps and photographs) and information related to the Project;
- (n) Necessary facilities to the JICA experts for the remittance as well as utilization of the funds introduced into Kenya in connection with the implementation of the Project

2. Implementation Structure

Implementation Structure of the Project is given in the Annex 4. The roles and assignments of relevant organizations are as follows:

(1) MWi

(a) Project Director

Director of Department of Water Services, MWI will be responsible for overall administration and implementation of the Project.

(b) Project Manager

Deputy Director of Operation and Maintenance, State Department of National Water Services, MWI will responsible for daily operation of the Project, and administration and implementation of activities, related to output 1 and 5.

(2) WASREB

Chief Executive Officer, WASREB will be responsible for administration and implementation of activities, related to output 2.



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(3) KEWI

Director, KEWI will be responsible for administration and implementation of activities, related to output 3.

(4) Pilot WSPs

Managing Directors, Pilot WSPs will be responsible for administration and implementation of activities, related to output 4.

(5) JICA Experts

The JICA experts will give necessary technical guidance, advice and recommendations to MWI, WASREB, KEWI, and Pilot WSPs on any matters pertaining to the implementation of the Project.

(6) Joint Coordinating Committee (JCC)

Joint Coordinating Committee (hereinafter referred to as "JCC") will be established in order to facilitate inter-organizational coordination. JCC will be held at least twice a year and whenever deems it necessary. JCC will approve an annual work plan, review overall progress, conduct evaluation of the Project, and exchange opinions on major issues that arise during the implementation of the Project. A list of JCC members is shown in the Annex 5.

3. Project Site(s) and Beneficiaries

Project Area: Kenya

Beneficiaries: Staffs of MWI, WASREB, KEWI, Urban WSPs

Pilot WSPs would be selected during the additional survey for three (3) months from the commencement of the Project.

4. Duration

Five (5) years (including the additional survey within 3 months)

5. Reports

- (1) Monitoring Sheet on bi-annual basis until the project completion (every six (6) months).
- (2) Also, Project Completion Report shall be drawn up one (1) month before the termination of the Project.

6. Environmental and Social Considerations

MWI, WASREB, and KEWI agreed to abide by 'JICA Guidelines for Environmental and Social Considerations' in order to ensure that appropriate considerations will be made for the environmental and social impacts of the Project.

III. UNDERTAKINGS OF GOK

- 1. GOK will take necessary measures to:
 - (1) ensure that the technologies and knowledge acquired by the Kenya nationals as a result of Japanese technical cooperation contributes to the economic and social development of Kenya, and that the knowledge and



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experience acquired by the personnel of Kenya from technical training as well as the equipment provided by JICA will be utilized effectively in the implementation of the Project; and

- (2) grant privileges, exemptions and benefits to the JICA experts above and their families, which are no less favorable than those granted to experts and members of the missions and their families of third countries or international organizations performing similar missions in the Republic of Kenya.
- MWI will take necessary measures to conclude MOU with Pilot WSPs (in particular, Embu and Meru, which is supposed to start the NRW Reduction activities in the first year of the Project) and Counties responsible of Pilot WSPs for timely implementation of the Project for three purposes as below;
 - a) To involve Counties for smooth implementation of the Project;
 - b) To acquire budget for NRW Reduction activities of Pilot WSPs; and
 - c) To confirm and agree the inputs and undertakings of Pilot WSPs.

An example MOU is shown in Annex-6.

- 3. GOK will take necessary measures to:
 - (1) provide security-related information as well as measures to ensure the safety of the JICA experts;
 - (2) permit the JICA experts to enter, leave and sojourn in the Republic of Kenya for the duration of their assignments therein and exempt them from foreign registration requirements and consular fees.
 - (3) exempt the JICA experts from taxes and any other charges on the equipment, machinery and other material necessary for the implementation of the Project;
 - (4) exempt the JICA experts from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to them and/or remitted to them from abroad for their services in connection with the implementation of the Project; and
 - (5) meet taxes and any other charges on the equipment, machinery and other material, referred to in II-7 above, necessary for the implementation of the Project.
- 4.GOK will bear claims, if any arises, against the JICA experts resulting from, occurring in the course of, or otherwise connected with, the discharge of their duties in the implementation of the Project, except when such claims arise from gross negligence or willful misconduct on the part of the JICA experts.

IV. MONITORING AND EVALUATION

JICA and MWI, WASREB, KEWI will jointly and regularly monitor the progress of the Project through the Monitoring Sheets based on the PDM and PO. The Monitoring Sheets shall be reviewed every six (6) months.

Also, Project Completion Report shall be drawn up one (1) month before the



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termination of the Project.

V. PROMOTION OF PUBLIC SUPPORT

For the purpose of promoting for the Project, MWI, WASREB and KEWI will take appropriate measures to make the Project widely known to the people of Kenya.

VI. Misconduct

If JICA receives information related to suspected corrupt or fraudulent practices in the implementation of the Project, MWI, WASREB, KEWI and relevant organizations shall provide JICA with such information as JICA may reasonably request, including information related to any concerned official of the government and/or public organizations of Kenya.

MWI, WASREB, KEWI and relevant organizations shall not, unfairly or unfavorably treat the person and/or company which provided the information related to suspected corrupt or fraudulent practices in the implementation of the Project.

VII. MUTUAL CONSULTATION

JICA and MWI, WASREB, KEWI will consult each other whenever any major issues arise in the course of Project implementation.

VIII. AMENDMENTS

The Record of Discussions may be amended by the Minutes of Meetings between JICA, MWI and The National Treasury.

The Minutes of Meetings will be signed by authorized persons of each side who may be different from the signers of the Record of Discussions.

Annex -1 Tentative Logical Framework (Project Design Matrix: PDM)

Annex -2 Tentative Plan of Operation

Annex -3 List of equipment

Annex -4 Implementation Structure of the Project

Annex -5 A List of Proposed Members of Joint Coordinating Committee

Annex -6 An example of MOU

Annex -7 Monitoring Form



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MAIN POINTS DISCUSSED

I. Roles NRW Unit of MWI

NRW Unit of MWI has the following roles:

- a) Formulation of national policies and strategies for NRW reduction;
- b) Coordination of NRW reduction activities of related organizations; and
- c) Promotion of NRW reduction activities including sensitization of Counties.

II. Additional Survey

Both sides also agreed that the additional survey (within 3 months) will be conducted to review/decide on the following items upon commencement of the Project:

- a) Activities of Output 1. As official roles of NRW Unit is yet to be approved;
- Pilot WSPs of Output 4. Other than leading WSPs (Embu and Meru), more detail capacity assessment of WSPs and coordination with other development partners are required;
- c) Necessary equipment for the Project;
- d) Training in Japan or the third country

III. Terminology of WSPs in the Project

For the clarification purpose, both sides agreed with the following terminology of WSPs:

(1) Target WSPs:

All Urban WSPs

(2) Pilot WSPs:

Urban WSPs that the activities of Output 4 are conducted.

(Selection Criteria is described in XII)

(3) Leading WSPs:

Pilot WSPs which have experiences of implementing JICA projects, and capacity and willingness to support other WSPs, namely Embu and Meru WSPs.

IV. Selection Criteria of Pilot WSPs

In addition to the two leading WSPs, as indicated above, the additional survey will be conducted at the inception stage of the Project to select seven (7) candidate WSPs, i.e., one (1) WSP each from seven (7) WSBs excluding Tana WSB using the following criteria. For project implementation, four (4) Pilot WSPs will be further prioritized as the first group of cooperation to be continued for three years. The remaining three (3) Pilot WSPs are the second group subject to review at the third year for their suitability and progress of the first group. For the selection of Pilot WSPs, factors such as capacity, ownership



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and geographical distribution will be considered in addition to the criteria below:

Criteria

- Urban WSPs (of Very Large, Large, and Medium, as defined by WASREB's Impact report);
- WSPs locations clarified by JICA's security guideline;
- WSPs that are not receiving other development partners' assistance with similar activities of the Project;
- WSPs that have established NRW units:
- O&M Cost Recovery is 80 % or more;
- Metering Ratio is 75% or more;
- Water Coverage Ratio is 30% or more; and
- Water Service Hours is 10 hour or more.

V. Related Activities of other development partners

The activities of many development partners, international/national governmental /non-governmental organizations in the water sector of Kenya. Other development partners have formulation plans or implementing NRW-related projects. The selection of Pilot WSPs should be considered carefully. The project activities should also be carefully studied to prevent the overlapping of activities by the other development partners.

VI. Concluding Memorandum of Understanding (MOU)

Upon the completion of selection of Pilot WSPs, MWI will take necessary measures for the signing of MOU between Water Services Board and Pilot WSPs (initially, Embu and Meru whose activities will commence from the first year of the Project) which will be witness by MWI and Counties responsible for Pilot WSPs for smooth implementation of the Project with the following purposes:

- a) to involve Counties for smooth implementation of the Project;
- b) to acquire budget for NRW reduction activities of Pilot WSPs; and
- c) to confirm and agree the inputs and undertakings of Pilot WSPs.

VII. Flexible change of the Project design, output and activities

Both sides agreed that the Project design, output and activities may be reviewed and changed if roles of each organization were changed by Water sector reform result.



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PM Form 1 PDM

Version 0 Dated

Project Design Matrix

Project Title: Project for Strengthening Capacity in Non-Revenue Water Reduction

Implementing Agency: MWI,WASREB,KEWI

Target Group:Urban WSPs

Period of Project:5 years from the date when the first JICA Expert is dispatched

Project Site: The entire country of Kenya	<u>ī</u> Xa	Pilot Site: Embu, Meru, and others	d others		
Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Domorto
Overall Goal				Valletellelle	CALIDITAS
Under NRW reduction support mechanism, 1. X of Urban Urban WSPs enhance NRW reduction 2. X of pilot U. 2. X of pilot U. 3. Annah NRW annu Annah NRW annu Annah NRW annu Annah NRW annu Annah Ann	1. X of Urban WSPs participate knoweldge sharing activities MWI NRW Unit established by the Project. 2. X of pilot Urban WSPs continue achieving target(s) set by the reduction plans annual NRW reduction plan. 3. NRW annual report is continuously produced and	MWI NRW Unit annual reports NRW reduction remains as Pilot WSPs annual NRW priority of MWI and WSPs, reduction plans	NRW reduction remains as priority of MWI and WSPs.		
Project Purpose					
A NRW reduction support mechanism is established for Urban WSPs to implement NRW reduction activities.	X of pilot Urban WSPs continute achieving targets set by the annua NRW reduction plan for two years.	NRW reduction plans Platform (online) Impact reports Project reports CC meeting minutes	NRW reduction remains as priority of MWI and WSPs,		
Outputs					=
Promotion and coordination of NRW reduction activities by MWI NRW Unit are strengthened.	1-1 All County representatives participate NRW related seminar(s). 1-2 NRW reduction campaigns are conducted semi annually. 1-3 NRW reduction annual reports are produced.	Materials for County seminar Project List of seminar participants securer Campaign materials NRW reduction annual reports fulfilled. Project reports	Project budget of the CPs is secured. NRW Unit staff positions are fulfilled.		
2. Use of NRW reduction standards by Urban WAPs are promoted by WASREB.	uction standards are revised by year X. IRW reduction standards are disseminated to all through workshop (s).	t of	Current WASREB's role and authority remains.		
3. NRW related training capacity of KEWI is 3-1 KEWI con strengthened. Incorporating 3-2 Evaluation 3-3 O% of NF	ducts NRW reduction courses with contents on-site trainings and revised course materials. she the NRW course participants is higher than ision of course materials. SW course participants formulate the workplans.	Revised course materials Revised course sylabus Course participants evaluation sheets Project reports JCC meeting minutes NRW reduction annual reports Trace studies	KEWI continues to offer NRW short courses. Project budget of the CPs is secured.		



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Complied lessons learnt NRW reduction remains as and fist of participants and fist of participants Sincer reports Since meeting minutes and fist of participants and fist o	capacity of pilot Urban WSPs is enhanced.	annual NRW reduction plan based on the review of previous year's implementation. 4-2 More than X of pilot Urban WSPs continuously implement the annual NRW reduction plan formulated in 4-1. 4-3 More than X of pilot Urban WSPs are able to implement shall and activities that pilot Urban WSPs were not able to adopt pinor to the Project.	INRW reduction plans Project reports JCC meeting minutes NRW reduction annual reports Secured.	leave WSPs Drastic climatic chages such as draught will not affect the water resources. Project budget of the CPs is secured.		
Imes a MRW regular meeting minutes priority of WSPs. Imes a late of participants In Project reports INRW reduction annual reports INRW reduction annual reports INRW reduction data. A reduction data. The Japanese Side 1. Experts I Experts A date rishs 3. Japan or third country training realining The NRW reduction plan.		4-4 More than X of pilot Urban WSPs are able to implement priority activities indicated in the NRW reduction plan. 4-5 More than X of pilot Urban WSPs train all of NRW personnel.				
M reduction data. The Japanese Side orderds.	2	5-1 Case study and lessons learni of Output 4 and other NRW activities are compiled and disseminated. 5-2 Regular meeting(s) of NRW is/are organized three times a year.	minutes reports	NRW reduction remains as priority of WSPs.		
M reduction date. The Japanese Side 1. Experts 2. Equipment/Tools/ Materials 3. Japan or third country training training es.		- Activities		diani		
1. Experts 1. Experts 2. Equipment/Tools/ Materials 3. Japan or third country training es.	1.1 MWI NRW Unit, in cooperation with WAR 1.2 MWI NRW Unit plans and implements Nf 1.3 MWI NRW Unit plans and implements Nf 1.4 MWI NRW Unit conducts reviews of KEW 1.5 MWI NRW Unit conducts reviews of WAR 1.5 MWI NRW Unit conducts reviews of WAR	SREB, produces NRW annual reports which include NRW reduction RW reduction sensitization activities for the Counties. IRW reduction carpaigns. WI NRW courses. SREB's NRW reduction activities.	on data.	The Japanese Side		Pre-Conditions
5.1 MACH INCK UNIT O'GAILZES NICKY Felared Egular meetings In cooperation with other releveant organizations.	2.1 WASRED conducts a survey of the usage 2.2 Based on the survey rosult as well as Ou 2.3 WASREB promotes revised NRW reduct 2.4 WASREB promotes revised NRW reduct 2.5 WASREB morniors and evaluates the use 3.1 KEWI studys current status of NRW reduil 3.2 KEWI reviews NRW reduction training sirt of 3.5 KEWI reviews NRW reduction training sirt of 3.5 KEWI incorporates the results of review by 3.5 KEWI conducts trace studies of review by 3.5 KEWI conducts trace studies of curlew by 3.5 KEWI conducts trace studies of curlew by 3.5 KEWI conducts analyses of curley. 2.2 Each pilot WSP conducts analyses of curley 2.5 Each pilot WSP formulates the annual N 4.5 Each pilot WSP evaluates and analyzes in 4.7 Each pilot WSP evaluates and analyzes in 4.7 Each pilot WSP evaluates and analyzes in 5.1 MW INRW Unit organizes NRW reducts and INRW related results and Individual in NRW related results and Individual in INRW related results and Individual in INRW related results and Individual INRW related results and	1. WASREB conducts a survey of the usages of current NRW reduction standards. 1.2. Based on the survey result as well as Outputs 4 and 5. WASREB revises the NRW reduction standards. 1.3. WASREB promotes revised NRW reduction standards through workshop(s). 1.4. WASREB monitors and evaluates the usages of revised NRW standards. 1.5. WASREB monitors and evaluates the usages of revised NRW standards. 1.6. WASREB monitors and evaluates the usages of revised NRW standards. 1.6. WASREB monitors and evaluates the usages of revised NRW standards. 1.6. WASREB monitors and evaluates the usages of revised NRW standards. 1.6. WASREB monitors and evaluates the usages of revised NRW standards. 1.6. WASREB monitors and evaluates the usages of revised NRW reductions course contents. 1.6. WASREWI in collaboration with leading WSPs (Embu and Meru, etc.), conducts on-site NRW trainings into NRW course contents. 1.6. AKEWI reducts on-site NRW trainings into NRW course contents. 1.6. AKEWI conducts tages studies of revisew by MWN NRW Unit into NRW course contents. 1.6. Each pilot WSP conducts analyses of current NRW reduction activities and identifies its challenges. 1.7. Each pilot WSP formulates and analyses of current NRW reduction plan including financial schedule based on the NRW 4.5 Each pilot WSP produces the annual NRW reduction plan including financial schedule based on the NRW 4.5 Each pilot WSP produces the NRW reduction activity report annual NRW reduction activity report annual NRW unit organizes NRW related regular meetings in cooperation with other reteveant organizations.	reduction plan.	1. Experts Equipment/Tools/ Materials 3. Japan or third country training	Counterpart personnel Materials Facility/Office Space	countermesures>



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Annex-2		Tentati	ive Plan	Tentative Plan of Operation							7 -	Annex 2 Version 0	ı
Project Title: Strengthening Capacity of Non-Revenue Water Reduction	eduction										· L	l	Monitoring
Inputs			Year	1stYoar	2nd Year	3rd Year		4th Year	Iš⊦	Ļ	Remarks	Issue	Solution
Expert			7			;	4-	4	= -	2 _			
Chief AdviserINRW management		-	ug.										
Gloup A. MRW reduction specialist thrater distribution Newark (incl. Mapping &	:		Sel L				T T						
Group A: NRW reduction specialist 2 /Flow, Pressure and Leakage Monitoring			Plan						- 1				
Group At Customer Management/Billing collection			Plan										
Group B: NRW reduction management 1 Avaier distribution Network (incl. Mapping &			Plan							H			
Grane St NEW secturing management 2 filter Discerts and Landon Management			Flan										
Court to the second management of them. These are and leading motivored	-		Actual								•		
Group 6: Customer Management/filerry colection		[Actual							1			
Training management (nct training strategy)			Y CERT										
information/Public relation Management			Plan										
Other experts if necessary			Plan										
Equipment	-	_	7								+		
		_	Plan										
Training in Japan or third country		_	\										
		_	Actual					- -					
in-country Training			V			=							
		_	Actual										
Activities	_	_	Year	1st Year	Znd Year	3rd Year		4th Year	Sth Year	Atsponsk	Aesponsible Diganization		
Sub-Activities			-	n o w	и п п	1 1 1	 22	2 6 6	H I I	III Japan		Achievements	Countermeasures
Output 1: Promotion and coordination of NRW reduction activities by AWI NRW Unit are strengthened.	re strengthen	- lg	l Plan								1 1		
which include NRW reduction data.	•	_	Actual							Erpout	NRW Unit		
	-		Plan			I -				Eryen	 		
1.3 MWJ NRW Unit plans and implements NRW reduction campaigns.	•	0	Plan	I			ı		1		$^{+}$		
			a si				1				寸		į
		5	Actual							E.pert	NRIV UNI		
	-		1 3			5	I.			E.perit	New		
Output 2: Use of NRW reduction standards by Urban WAPs are promoted by WASRE													
2.1 WASREB conducts a survey of the usages of current NRW reduction standards.			Acites A	I				1		Erpents	WASRED	i	
	000	E	P.Fr								+		
2.3 WASREB promotes revised NRW reduction standards littough workshop(s).	0	-	P. Lan								╅		
Ţ)		Actual							Espens	WASRED		
NRW Untin their activities.			Actual							Expeds	WASRED		
2.5 WASREB monkers and evaluates the usages of revised NRW standards.			Fitsh							-	WASRES		
Output 3: NRW related training capacity of KEW1 is strangifiened.										-	┥		
3,1 KEWI studys current status of NRW reduction courses and its challenges.		•	Plan.							E Special	KEWI		
3.2 KEWI reviews MRW reduction flaining strategies and course contents.	0 0 0	•	Plan		I	l					MEN		
3.3 KEWI, in colaboration with leading WSPs (Embu and Meru, etc.), conducts on-site NRW trainings.		•	Plan			H				L. Park	+		
3.4 KEWI reflects on-site NRW trainings into NRW course contemts and materials.		•	Plan Jerus							Cipent C	KEW		
3.5 KEWI incorporates the results of review by MWI NRW Unit into NRW course		•	Li .							1	+		
Louisias.		-	Lin Actual								+		
		•	Action							<u> </u>	KEW		



Ordered A. MDW references and for a land accompanies for a latest states - MFC 1. and a contract of		
4.1 The Project fearm conducts a survey of lithan WSBs and selecte plot Lithan	E	446
	0000000	Actual Epoch Philips
	0000000	19461
W.	0 0 0	Plan Perchan
4.4 Each plot WSP formulates the annual NRW reduction plan including financial achedule based on the NRW reduction plan.	0 0 0 0	Plan Tripert Plan Plan Plan Plan Plan Plan Plan Plan
4.5 Each plot WSP implements the annual NRW reduction plan.	000	
4.5.1 Embu and Meruimplement the annual NRW reduction plan	0 0 0	Pun (Pun) (P
4.5.2.2 of 4 piot WSPs implement the annual NRW reduction plan	0 0 0	Plan (Parting)
4.5.3 The rest 2 pint WSPs implement the arrival NRW reduction plan	000000	Crosm
4.6 Each pilot WSP evaluates and analyzes Implementation results and revise plans.	0 0	Attain Espais Nethran
4.7 Each pilet WSP produces the NRW reduction activity report annually.	000	
4.8 Each pixt WSP holds regular NRW reduction meetings attended by relevant departments of WSP.	0 0	regnised surviva
Output S. Exportences and knowledge of NRW reduction activities are shared among Urban WSPs. 5.1 MWN IRWY Unit organizes NRW related regular meetings in cooperation with other •	Urban WSPs.	Actual Transition of the Copers Assessment
6.2 WASREB comples case studies/lessons leant about NRW reduction activities.	0	Plan Pl
Duration / Phasing		Please
Monitoring Plan		Year
Monitoring		
Joint Coordination Committee		
Sel-up the Montaring Plan		A LINCOLO AND A LINCOLD A LINCOLD AND A LINCOLD AND A LINCOLD A LINCOLD
Submission of the Mondaring sheet		With the second
Joint Montainn		Griny.
Reports/Documents		
Project Progress Report		
Project Completion Report		The state of the s
Public Relations		
		ACTUAL TO A STATE OF THE STATE

Note: O:Main person in charge O: Person concerned

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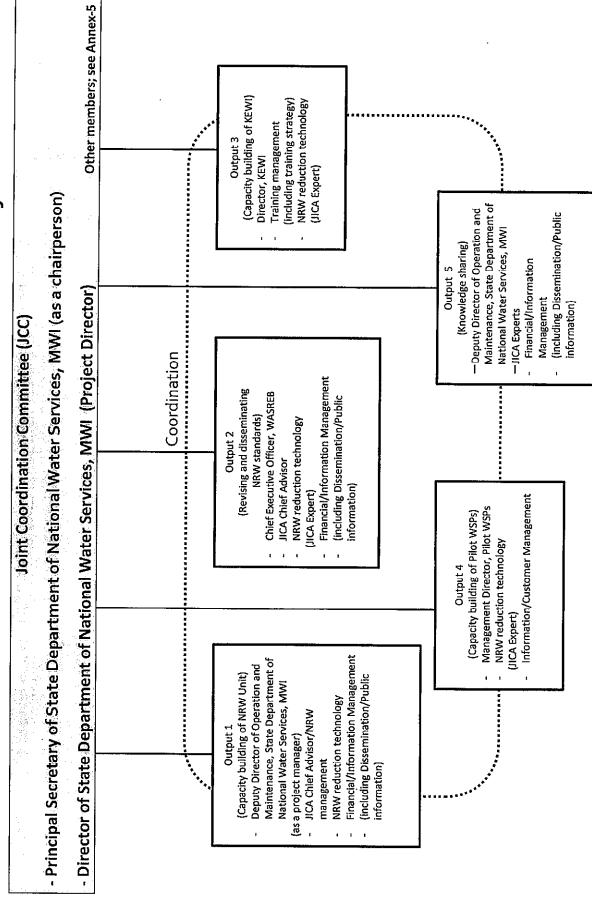
Table: Tentative List of Equipment

	Name of Equipment
	Portable ultra-sonic flow meter(s)
	Leak detector(s)
_	Water pressure gauge(s)
_	Bulk meter(s)
_	Data logger(s)
_	Water pressure gauge(s)
_	Meter test bench(s)
	Noise leak correlator
_	Leak detection demonstration platform
	GPS (s)
_	Laptop computer
-	Multi copy machine (Scanner, printer and copy functions. A-3 size)
	Digital camera
_	Projector
-	Other necessary equipment for monitoring and supporting NRW reduction activities in Pilot WSPs



V)

Implementation Structure of the Project







List of Members of Joint Coordinating Committee

Composition

1. Chairperson:

Principal Secretary, State Department of National Water Services, MWI

2. Project Director:

Director of Department of Water Services, MWI

3. Project Manager:

Deputy Director of Operation and Maintenance, State Department of National Water Services, MWI

- 4. Other Members
- (1) The Kenya side:
 - 1) Head of Donor Coordination, MWI
 - 2) Chief Executive Officer, WASREB
 - 3) Director, KEWI
 - 4) Management Directors, Pilot WSPs (including, Leading WSPs)
 - 5) Other personnel assigned by Kenyan side
- (2) The Japanese side:
 - 1) Chief Advisor
 - 2) Other experts
 - 3) Representatives of JICA Kenya Office
 - 4) Other personnel as mutually agreed upon

Note: Officials of the Embassy of Japan in the Republic of Kenya may attend the committee meeting.



5

(Example)

Memorandum of Understanding for "PROJECT FOR STRENGTHENING CAPACITY IN NON-REVENUE WATER REDUCTION"

This Memorandum of Understanding ("MoU") is made and entered by and among the following four parties:

[Name of WSB] as one party, represented by [Name, Position] ("[Abbreviated Name of WSB]");

and

[Name of Water Service Provider] as one party, represented by [Name, Position] ("[Abbreviated Name of WSP]");

witness by

Ministry of Water and Irrigation as one party, represented by [Name, Position] ("MWI");

and

[Name of County Government] as one party, represented by [Name, Position] ("the County");

1. Ground of the MoU

Based on the result of the survey conducted by JICA, [Abbreviated Name of WSP] has been selected as a Pilot Water Service Provider (WSP) of "Project for Strengthening Capacity in Non-Revenue Water Reduction" (the Project). This MoU is an agreement between the four parties specified above in regard to smooth implementation of the Project.



Cyp

- Dates of Validation and Completion of the MoU
 This MoU shall be valid from the date of MoU signing, [Date, Month, Year] and till the completion of the Project,
- 3. Amendments of the MoU Any necessary amendments and additions to the MoU may be negotiated among the four parties. Agreed amendments and additions shall be evidenced by a written document signed by all the parties.





Terms of Reference

- The County shall support [Abbreviated Name of WSP], as its lawful owner, for the implementation of Non-Revenue Water Reduction activities of the Project.
- 2. [Abbreviated Name of WSP] shall be responsible for the following particulars during the period of the Project. Some of the particulars are for experts from Japan International Cooperation Agency (JICA). The County shall support [Abbreviated Name of WSP]'s smooth implementation of NRW reduction activities in regard to the particulars.
 - (a) Assignments of counterpart personnel and support staff
 - (b) Payment of per-diem (daily allowance, transportation fee and accommodation fee) to the counterpart personnel
 - (c) Provision of suitable workspace with furniture and equipment for JICA experts (for at least 4 personnel)
 - (d) Utilities charges such as electricity, water supply, if any
 - (e) Supply or replacement of machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than the equipment provided by JICA
 - (f) Expense for NRW activities
 - (g) Provision of information on available medical services for JICA experts
 - (h) Provision of available data (including maps and photographs) and information necessary for project activities

[Name]	_
Chief Executive Office	ı
[Name of WSB]	

[Name] Managing Director [Name of WSP]

Witness by

[Name] [Position] [Department] Ministry of Water and Irrigation [Position] [Department] [Name of County Government]



5

TO CR of JICA Kenya OFFICE

PROJECT MONITORING SHEET

Project Title:	
Version of the Sheet: Ver. ● (Term: N	Month, Year - Month, Year)
	Name:
	Title: Chief Advisor
•	Submission Date:

I. Summary

1 Progress

- 1-1 Progress of Inputs
- 1-2 Progress of Activities
- 1-3 Achievement of Output
- 1-4 Achievement of the Project Purpose
- 1-5 Changes of Risks and Actions for Mitigation
- 1-6 Progress of Actions undertaken by JICA
- 1-7 Progress of Actions undertaken by Gov. of Republic of Kenya
- 1-8 Progress of Environmental and Social Considerations (if applicable)
- 1-9 Progress of Considerations on Gender/Peace Building/Poverty Reduction (if applicable)
- 1-10 Other remarkable/considerable issues related/affect to the project (such as other JICA's projects, activities of counterparts, other donors, private sectors, NGOs etc.)

2 Delay of Work Schedule and/or Problems (if any)

- 2-1 Detail
- 2-2 Cause
- 2-3 Action to be taken
- 2-4 Roles of Responsible Persons/Organization (JICA, Gov. of the Republic of Kenya)

3 Modification of the Project Implementation Plan

- 3-1 PO
- 3-2 Other modifications on detailed implementation plan

(Remarks: The amendment of R/D and PDM (title of the project, duration, project site(s), target group(s), implementation structure, overall goal, project purpose, outputs, activities, and input) should be authorized by JICA HDQs. If the project team deems it necessary to modify any part of R/D and PDM, the team may propose the draft.)

4 <u>Preparation of Gov. of the Republic of Kenya toward after completion of the Project</u>

II. PDM&PO as Project Monitoring Sheet I & II



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MINUTES OF MEETINGS BETWEEN

JAPAN INTERNATIONAL COOPERATION AGENCY AND

MINISTRY OF WATER & SANITATION AND IRRIGATION FOR AMENDMENT OF THE RECORD OF DISCUSSIONS ON

THE PROJECT FOR STRENGTHNING CAPACITY IN NON-REVENUE WATER REDUCION IN THE REPUBLIC OF KENYA

The Japan International Cooperation Agency (hereinafter referred to as "JICA") and Ministry of Water & Sanitation and Irrigation (hereinafter referred to as "MWSI") hereby agree that the Record of Discussions on THE PROJECT FOR STRENGTHENING CAPACITY IN NON-REVENUE WATER REDUCION signed on January 22, 2019 will be amended as follows:

1. Name of Implementing Agency

Before	Amended Version		
Ministry of Water and Sanitation (MWS)	Ministry of Water & Sanitation and Irrigation (MWSI)		
Reason: Changing the name of the organ	nization because of re-structure.		

2. Project Design Matrix

Amended Version		
add:		
5-4 Conduct the support activities in		
response to the COVID-19 emergency		

Based on the agreement in Minutes of Meetings, JICA, and MWSI agree that Project Design Matrix (PDM) is amended as Annex-1. This amendment will become effective from the date of signing.

The parties acknowledge and agree that this Minutes of Meetings may be executed by electronic signature, which is considered as an original signature for all purposes and has the same force and effect as an original signature. "Electronic signature" includes faxed versions of an original signature or electronically scanned and transmitted versions (e.g., via pdf) of an original signature.

Annex 1: PDM version 3

Annex 2: Record of Discussions (signed on January 22, 2019)

Nairobi, [20th July 2020]

Mr. KOMORI Katsutoshi

Chief Representative

JICA Kenya Office

Mr. Joseph RUNGU, CBS

Principal Secretary

Ministry of Water & Sanitation and

Irrigation

The Republic of Kenya

Project Design Matrix

Project Title: Project for Strengthening Capacity in Non-Revenue Water Reduction

Implementing Agency: MWS,WASREB,KEWI

Target Group:Urban WSPs

Period of Project: Sept. 2016-Aug. 2021

Project Site: The entire country of Kenya

Version 3.0

Dated 20th July 2020

Pilot Site: Eldoret, Embu, Kisumu, Kilifi-Mariakani, Mavoko, Meru, Nakuru,

Nyahururu, Ruiru-Juja

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal	THE REPORT OF THE PARTY OF THE	nerve e como como como como			to a series of the t
Under NRW reduction support mechanism, Urban WSPs enhance NRW reduction activities.	 6 of Urban WSPs participate knowledge sharing activities established by the Project. 6 of pilot Urban WSPs continue achieving target(s) set by the NRW reduction plan. NRW annual report is continuously produced and disseminated. 	MWS NRW Unit annual reports Pilot WSPs NRW reduction plans	NRW reduction remains as priority of MWS and WSPs.		
Project Purpose					
A NRW reduction support mechanism is established for Urban WSPs to implement NRW reduction activities.	6 of pilot Urban WSPs continue achieving targets set by the NRW reduction plan for two years.	NRW reduction plans Platform (online) Impact reports Project reports JCC meeting minutes	NRW reduction remains as priority of MWS and WSPs.		
Outputs					
Promotion and coordination of NRW reduction activities by MWS NRW Unit are strengthened.	1-1 All County representatives participate NRW related seminar(s).1-2 NRW reduction campaigns are conducted semi annually.1-3 NRW reduction annual reports are produced.	Materials for County seminar List of seminar participants Campaign materials NRW reduction annual reports Project reports JCC meeting minutes	NRW Unit staff positions are fulfilled.		
Use of NRW reduction standards by Urban WAPs are promoted by WASREB.	2-1 NRW reduction standards are revised by year 2020. 2-2 Revised NRW reduction standards are disseminated to all Urban WSPs through workshop (s).	Revised NRW reduction standards Workshop program and list of participants Project reports JCC meeting minutes NRW reduction annual reports	Current WASREB's role and authority remains.		
3. NRW related training capacity of KEWI is strengthened.	3-1 KEWI conducts NRW reduction courses with contents incorporating on-site trainings and revised course materials. 3-2 The average score of the participants on the test conducted after the NRW reduction curse is higher than before the implementation.	Revised course materials Revised course syllabus Course participants' test scores Project reports JCC meeting minutes NRW reduction annual reports Trace studies	KEWI continues to offer NRW short courses.		



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4 NDW of and					
4. NRW planning and/or implementation	4-1 More than 8 Pilot WSPs formulate NRW reduction plan	NRW reduction plans	Trained personnel de met		
capacity of pilot Urban WSPs is enhanced.	4-2 More than 6 Pilot WSPs self-review their achievements of	IMPACT reports	Trained personnel do not leave WSPs		
	previous year's NRW reduction plans and compile activity report	Project reports			
	4-3 Based on 4-2, more than 6 Pilot WSPs continuously	JCC meeting minutes	Drastic climatic changes		
	formulate annual NRW reduction plan.	The tring minutes	such as draught will not		
	4-4 More than 6 Pilot WSPs continuously implement NRW	1	affect the water resources.		
	reduction plan formulated in 4-1.				1
	4-5 More than 6 Pilot WSPs are able to use skills and/or			1	
	implement activities which they could not employ before the				1
	project				
	4-6 The amount of NRW in the selected distribution zones			1	
	indicates decreasing tendency				
5. Experiences and knowledge of NRW	5-1 Results and lessons from Output 4 and NRW activities are	0 1: 11			
reduction activities are shared among	shared during WASPA meetings at least 3 times a year.	Complied lessons learnt	NRW reduction remains as		1
Urban WSPs.	I CONTRACTOR OF THE CONTRACTOR	NRW regular meeting minutes	priority of WSPs.	Station and a	
		and list of participants	1		
		Project reports			
	5-4. Conduct the support activities in response to the COVID-19	JCC meeting minutes	1		
		NRW reduction annual reports			
		Brief notes			
	Activities				
1.1 MWS NRW Unit, in cooperation with WA	ASREB, produces NRW appual reports which include NDW reduction		Inpu	ts	
1.2 MWS NRW Unit plans and implements I	NRW reduction sensitization activities for the Counties.	on data.			
1.3 MWS NRW Unit plans and implements I	NRW reduction campaigns				
1.4 MWS NRW Unit conducts reviews of KE	FWI NRW courses		The Land		
1.5 MWS NRW Unit conducts reviews of WA	ASRER's NRW reduction activities		The Japanese Side	The Kenya Side	Pre-Conditions
1.6 MWS NRW Unit ensures the budget for					
2.1 WASRER conducts a survey of the uses	on.			,	
2.1 WASREB conducts a survey of the usag	1. Experts	1. Counterpart			
2.2 Based on the survey result as well as Ou	2. Equipment/Tools/	personnel			
2.3 WASREB promotes revised NRW reduct	tion standards through workshop(s).	Materials	2. Equipment/Tools/	<lssues and<="" td=""></lssues>	
2.5 WASRER manifers and avaluates the results	s of NRW reduction activities by MWS NRW Unit in their activities.	0 1	Materials	countermeasures>	
2.5 WASREB monitors and evaluates the us	sages of revised NRW standards.	training	3. Facility/Office Space		
3.1KEWI studies current status of NRW reduction training at	uction courses and its challenges.		3	4. Budget for activities	
3.2KEWI reviews NRW reduction training str	rategies and course contents.			1. Dauget for activities	
3 4KEW/I reflects on site NDW training WSPs	s (Embu and Meru, etc.), conducts on-site NRW trainings.				
13.41 LVVI Tellects on-site NRVV trainings into	NRW course contents and materials	I			
3 6KEWI conducts trace studies of NDW	by MWI NRW Unit into NRW course contents.				
3.6KEWI conducts trace studies of NRW red	duction course participants.				
4.1 The Project team conducts a survey of U	rront NPW reduction activity				
4.3 Each pilot WSP identifies measures to so	rrent NRW reduction activities and identifies its challenges.				
4.4 Each pilot WSP formulates the NRW red	urtion plan including financial at a				
4.5 Each pilot WSP implements the NRW red	duction plan				
4.6 Each pilot WSP evaluates and analyzes in	implementation regults and making the			4	
4.7 Each pilot WSP produces the NRW redu	ortion potivity report approximately plans.				
4.8 Each pilot WSP holds regular NDW rodu	ction activity report annually. ction meetings attended by relevant departments of WSP		i		
5.1 The Project presents results and lessons	of Output 4 and other NRW activities during WASPA meeting.	İ			
5.2 The Project holds NRW thematic workship	ops in coordination with WASPA				
5.3 The Project team produces brief notes	-F Socialitation with WASPA.				
5.4 The Project team conducts activities in re	esponse to the COVID-19 emergency				
2 2000 2000 1000					

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MINUTES OF MEETINGS BETWEEN

JAPAN INTERNATIONAL COOPERATION AGENCY AND MINISTRY OF WATER AND SANITATION AND IRRIGATION FOR AMENDMENT OF THE RECORD OF DISCUSSIONS

ON

THE PROJECT FOR STRENGTHNING CAPACITY IN NON-REVENUE WATER REDUCION IN THE REPUBLIC OF KENYA

The Japan International Cooperation Agency (hereinafter referred to as "JICA") and Ministry of Water and Sanitation and Irrigation (hereinafter referred to as "MWSI") hereby agree that the Record of Discussions on THE PROJECT FOR STRENGTHENING CAPACITY IN NON-REVENUE WATER REDUCION signed on 20th July, 2020 will be amended as follows;

1. Project Design Matrix

Before	Amended Version	
Project Purpose		
Objectively Verifiable Indicators		
6 of pilot Urban WSPs continue achieving targets set by the NRW reduction plan for two years.	6 of the pilot WSPs continue achieving above 60% for 2years in the completion ratio of annually planned activities (based on the annual activity review sheet of the Annual Planning and Review template prepared in this project)	

Before	Amended Version	
Period of Project		
Sept. 2016-May. 2022	Sep.2016-June. 2022	



There is an amendment for an Objectively Verifiable indicator for Project Purpose agreed on Minutes of Meetings of the 10th JCC as Annex-1. Based on Annex-2, Period of Project was extended by 8 months to May 2022 due to COVID-19. However, the ongoing spread of the COVID-19 has still delayed some activities, therefore, it was determined to extend Period of Project by an additional month.

JICA, and MWSI agree that Project Design Matrix (PDM) is amended as Annex-3 due to modification stated above. This amendment will become effective from the date of signing.

Annex 1: Minutes of Meetings on the 10th JCC

Annex 2: Letter on extension of the Project Period

Annex 3: PDM version 4

Annex 4: Record of Discussions (signed on 20th July, 2020)

8th April 2022 Nairobi,

Mr. IWAMA Hajime

Chief Representative

JICA Kenya Office

Eng. Joseph Njoroge

Principal Secretary

Ministry of Water and Sanitation and

Irrigation

The Republic of Kenya

Project Design Matrix

Project Title: Project for Strengthening Capacity in Non-Revenue Water Reduction

Implementing Agency: MWSI,WASREB,KEWI

Target Group:Urban WSPs

Period of Project: Sept. 2016-June. 2022

Version 4.0

Dated ** 2022

Pilot Site: Eldoret, Embu, Kisumu, Kilifi-Mariakani, Mavoko, Meru, Nakuru,

r criod of r roject. Ocpt. 2010-buile. 20	Fliot Site: Eldoret, Embu, Kisumu, Kilifi-Wariakani, Wavoko, Meru, Nakuru,				
Project Site: The entire country of Ke	<u>nya</u>	Nyahururu, Ruiru-Juja			
Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal Under NRW reduction support mechanism,	One of Urban WSPs participate knowledge sharing activities	MWS NRW Unit annual	NRW reduction remains as		
Urban WSPs enhance NRW reduction activities.	established by the Project. 2. 6 of pilot Urban WSPs continue achieving target(s) set by the NRW reduction plan. 3. NRW annual report is continuously produced and disseminated.	reports Pilot WSPs NRW reduction plans	priority of MWS and WSPs.		,
Project Purpose					
A NRW reduction support mechanism is established for Urban WSPs to implement NRW reduction activities.	6 of pilot Urban WSPs continue achieving above 60% for 2years in the completion ratio of annually planed activities (based on the annual activity review sheet of the Annual Planning and Review template prepared in this project)	NRW reduction plans Platform (online) Impact reports Project reports JCC meeting minutes	NRW reduction remains as priority of MWS and WSPs.		
Outputs					
strengthened.	1-1 All County representatives participate NRW related seminar(s). 1-2 NRW reduction campaigns are conducted semi annually. 1-3 NRW reduction annual reports are produced.	Materials for County seminar List of seminar participants Campaign materials NRW reduction annual reports Project reports JCC meeting minutes	NRW Unit staff positions are fulfilled.		
2. Use of NRW reduction standards by Urban WAPs are promoted by WASREB.	2-1 NRW reduction standards are revised by year 2020. 2-2 Revised NRW reduction standards are disseminated to all Urban WSPs through workshop (s).	Revised NRW reduction standards Workshop program and list of participants Project reports JCC meeting minutes NRW reduction annual reports	Current WASREB's role and authority remains.		
strengthened.	3-1 KEWI conducts NRW reduction courses with contents incorporating on-site trainings and revised course materials. 3-2 The average score of the participants on the test conducted after the NRW reduction curse is higher than before the implementation.	Revised course materials Revised course syllabus Course participants' test scores Project reports JCC meeting minutes NRW reduction annual reports Trace studies	KEWI continues to offer NRW short courses.		



4. NRW planning and/or implementation 4-1 More than 8 Pilot WSPs formulate NRW reduction plan NRW reduction plans	Trained personnel do not		
capacity of pilot Urban WSPs is enhanced. 4-2 More than 6 Pilot WSPs self-review their achievements of IMPACT reports	leave WSPs		
previous year's NRW reduction plans and compile activity report. Project reports	Drastic climatic changes	2	
4-3 Based on 4-2, more than 6 Pilot WSPs continuously JCC meeting minutes	such as draught will not		
formulate annual NRW reduction plan.	affect the water resources.		
4-4 More than 6 Pilot WSPs continuously implement NRW			
reduction plan formulated in 4-1.			· ·
4-5 More than 6 Pilot WSPs are able to use skills and/or			
implement activities which they could not employ before the			1
project			
4-6 The amount of NRW in the selected distribution zones			
indicates decreasing tendency			
5. Experiences and knowledge of NRW 5-1 Results and lessons from Output 4 and NRW activities are Complied lessons learnt	NRW reduction remains as		1
reduction activities are shared among shared during WASPA meetings at least 3 times a year. NRW regular meeting minutes	priority of WSPs.		
Urban WSPs. 5-2 A NRW thematic workshop is organized every year. and list of participants			
5-3 3 brief notes are produced during the Project. Project reports			
5-4. Conduct the support activities in response to the COVID-19 JCC meeting minutes	1	2	
emergency NRW reduction annual reports	S	~	,
Brief notes		1 1	
Activities		1	,
1.1 MWS NRW Unit, in cooperation with WASREB, produces NRW annual reports which include NRW reduction data.	Inpu	ts	
1.2 MWS NRW Unit plans and implements NRW reduction sensitization activities for the Counties.		5	
1.3 MWS NRW Unit plans and implements NRW reduction campaigns.			
1.4 MWS NRW Unit conducts reviews of KEWI NRW courses.	The Japanese Side	The Kenya Side	Pre-Conditions
1.5 MWS NRW Unit conducts reviews of WASREB's NRW reduction activities.	The supuness side	The Renya Side	Fie-Colluluolis
1.6 MWS NRW Unit ensures the budget for the support mechanism based on its NRW reduction Mid-term vision.			
2.1 WASREB conducts a survey of the usages of current NRW reduction standards.	1.5		
2.2 Based on the survey result as well as Outputs 4 and 5, WASREB revises the NRW reduction standards.	1. Experts	1. Counterpart	
2.3 WASREB promotes revised NRW reduction standards through workshop(s).	2. Equipment/Tools/	personnel	<issues and<="" td=""></issues>
2.4 WASREB incorporates the review results of NRW reduction activities by MWS NRW Unit in their activities.	Materials	2. Equipment/Tools/	countermeasures>
2.5.WACDED monitors and evaluates the wages of revised NDW -t	3. Japan or third country	Materials	Journal Control
3.1KEWI studies current status of NRW reduction courses and its challenges.	training	3. Facility/Office Space	
3.2KEWI reviews NRW reduction training strategies and course contents.		4. Budget for activities	
3.3KEWI, in collaboration with leading WSPs (Embu and Meru, etc.), conducts on-site NRW trainings.			
3.4KEWI reflects on-site NRW trainings into NRW course contents and materials.		1	
3.5KEWI incorporates the results of review by MWI NRW Unit into NRW course contents.			
3.6KEWI conducts trace studies of NRW reduction course participants.			
4.1 The Project team conducts a survey of Urban WSPs and selects pilot Urban WPSs.	1		
4.2 Each pilot WSP conducts analyses of current NRW reduction activities and identifies its challenges.		A V D	
4.3 Each pilot WSP identifies measures to solve challenges.		4	
4.4 Each pilot WSP formulates the NRW reduction plan including financial plan.		a a	
4.5 Each pilot WSP implements the NRW reduction plan.			
4.6 Each pilot WSP evaluates and analyzes implementation results and revise plans.			
4.7 Each pilot WSP produces the NRW reduction activity report annually.		3	
4.8 Fach pilot WSP holds regular NRW reduction meetings attended by relevant departments of WSP		e	
In 7. In a Urainet presents requite and leasons of Outret 4. and allow NDM - 11.11.			
5.1 The Project presents results and lessons of Output 4 and other NRW activities during WASPA meeting.			
5.2 The Project holds NRW thematic workshops in coordination with WASPA.			

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Attachment 4. Minutes of Joint Coordination Committee (including Monitoring Sheets and Annexes)

MINUTES OF MEETING

ON

FIRST JOINT COORDINATION COMMITTEE

ON

THE PROJECT FOR

STRENGTHENING CAPACITY IN NON-REVENUE WATER REDUCTION

AGREED UPON BETWEEN

JAPAN INTERNATIONAL COOPERATION AGENCY

AND

MINISTRY OF WATER AND IRRIGATION
THE REPUBLIC OF KENYA

Nairobi, October 19, 2016

Kazuhiro TAMBARA Senior Representative

JICA Kenya Office

Professor Fred H.K.SEGOR

Principal Secretary

State Department of Water Services

Ministry of Water and Irrigation

The Republic of Kenya

Masayuki IGAWA

Chief Advisor

ЛСА Expert Team

In accordance with the Record of Discussion (hereinafter referred to as R/D) signed on March 7, 2016, between the Ministry of Water and Irrigation (hereinafter referred to as "MWI") and Japan International Cooperation Agency (hereinafter referred to as "JICA") on the Project for Strengthening Capacity in Non-Revenue Water Reduction (hereinafter referred to as "the Project").

The Government of Japan has already dispatched JICA expert team (hereinafter referred to as "the Team") to Kenya. The Team submitted the Draft Work Plan to MWI and relevant organizations (hereinafter referred to as "Kenyan side"), and the Plan was discussed during the period from 11 to 19 October 2016.

The major points of discussion and agreement are summarized as follows:

1. Contents and Schedule of Draft Work Plan

The Kenyan side confirmed contents and schedule of the Project as indicated in the Draft Work Plan that was prepared and agreed on R/D and Minutes of Meetings (hereinafter referred to as M/M) signed on December 4, 2015. In addition, both sides agreed that the Draft Work Plan will be revised in detail after the completion of Baseline survey.

2. Duration of the Project

Duration of the Project is five (5) years from the date of dispatch of JICA Expert Team as indicated in R/D. The first group of experts have already been dispatched on October 10, 2016, therefore the duration of the Project is run from October 10, 2016 to October 9, 2021. The Project is divided into the following three phases.

Phase 1: From October, 2016 to September, 2017

Phase 2: From October, 2017 to September, 2019

Phase 3: From October, 2019 to September, 2021

3. Major Undertakings by Kenyan Side

Both sides agreed on the contents of the Major Undertaking by Kenyan side indicated in Draft Work Plan. JICA requests that the Kenyan side to timely execute the following input in accordance with R/D and M/M:

(1) Appointment of counterpart members

As indicated R/D, MWI, WASREB and KEWI have already assigned suitable counterpart members for effective implementation of the Project. The list of Kenyan counterpart members has been submitted to JICA Expert Team (Annex-2).

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Counterpart members of Pilot WSPs (including Embu and Meru) will be assigned after the completion of the selection process of Pilot WSPs.

(2) Provision of office space

MWI and KEWI have prepared office space for the JICA experts with office furniture, telephone line and internet connection. Pilot WSPs will also provide suitable office spaces after the completion of the selection of Pilot WSPs.

(3) Allocation of the budget

MWI, WASREB and KEWI have already secured the budgets such as allowance and traveling costs for the counterpart and administrative personnel, and other running expenses necessary for the implementation of the Project.

4. Selection Process for Pilot WSPs

Kenyan side and JICA confirmed that Embu and Meru have already been selected as the Leading WSPs as indicated in R/D.

In addition, both sides agreed that seven (7) additional Pilot WSPs¹ will be selected out of fifteen (15) candidate Pilot WSPs based on the selection criteria below.

(1) The criteria for selecting Pilot WSPs

- 1) Prerequisite Criteria
- a) WSPs meet the criteria described in the Minutes of Meetings signed on 4th December, 2015 (See Annex-3)
- b) Counties, WSBs and WSPs have willingness to sign Memorandum of Understandings (MOU) for implementation of the Project.

2) Selection Criteria

- a) NRW reduction activities based on NRW reduction plan
- b) WSPs' organization and structures essential for NRW reduction
- c) Technical capacity of WSPs on NRW reduction activities
- d) Financial status relevant with NRW reduction activities

(2) The Potential Pilot WSPs

- 1) Athi WSB: Ruiru-Juja, Kiambu and Limuru
- 2) LVN WSB: Eldoret and Nzoia

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¹ In sum, nine (9) Pilot WSPs (Embu, Meru and seven (7) other WSPs) will be selected for the Project.

3) LVS WSB: Kisumu

4) RV WSB: Nakuru and Eldama Ravine

5) Northern WSB: Nanyuki, Nyahururu and Isiolo

6) Tanathi WSB: Mavoko and Machakos

7) Coast WSB: Kilifi, Mariakani, and Kwale

5. Selection of the First/Second Stage Pilot WSPs

In order to implement the Project efficiently, JICA Expert Team will start the Project activities with the Leading WSPs in Phase 1. Remaining Pilot WSPs will be divided into two stages; 1. Four (4) Pilot WSPs will be further prioritized as the First stage Pilot WSPs in Phase 2; 2. The remaining three (3) Pilot WSPs will be the Second stage Pilot WSPs subject to the review of achievements of First stage Pilot WSPs at Phase 3.

The selection of First and Second stage Pilot WSPs will be taken into consideration of the accessibility and efficient utilization of human resources to secure enough time for the activities for the Second stage Pilot WSPs.

6. Change of the Original Implementation Structure

Both sides agreed that a part of the original Implementation structure has to be changed due to the new organizational structure of MWI as indicated below.

Position of Project Director:

Previous: Director of Water Services, MWI

Current: Water Secretary, MWI

Position of Project Manager:

Previous: Deputy Director Water Services, MWI

Current: Director of Water Sewerage and Sanitation Development, MWI

END

Annex-1: Draft Work Plan (Phase 1)

Annex-2: Counterparts list

Annex-3: Minutes of Meetings (signed on 4th December, 2015)

Annex-4: Record of Discussion (signed on 7th March, 2016)



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Annex-1 Draft Work Plan (Phase 1)

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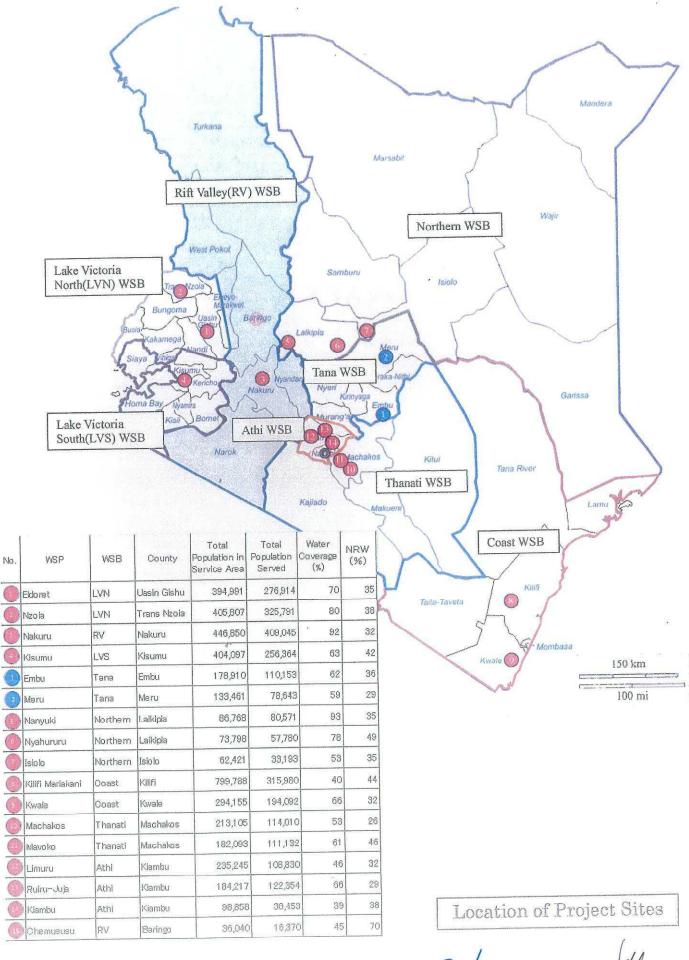
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1. Project Outline

1.1 Project Background

Approx. 80% of the land of Kenya is in arid and semi-arid areas. Its people are reportedly experiencing "water stress" because of the decrease of the available water resource per person caused by the population growth. The Government of Kenya (GoK) has recognized the reduction of non-revenue water (NRW) as a priority issue to be addressed for the effective use of water resources. Meanwhile, many water service providers (WSPs) have taken NRW reduction measures for financial reasons since they became financially independent organizations. Although these measures reduced the NRW ratio to approx. 42% by 2015, many challenges still remain to be solved to achieve the goal of reducing the NRW ratio to 25% by 2030. (Impact Report 8)

Against this background, the Government of Japan (GoJ) has implemented the "Project for Management of Non-Revenue Water in Kenya (2010-2014)" (hereinafter as "the Previous Project") together with three grant aid projects, the "Project for Augmentation of Water Supply System in Kapsabet Town (2007 – 2010)," "Project for Improvement of the Water Supply System in Embu and the Surrounding Area (2010 – 2013)" and "Project for Augmentation of Water Supply System in Narok Town (2013 – 2016)." As results of these projects, the facilities of Embu, Narok and Kapsabet WSPs have been improved and their capacity to reduce NRW has been improved in the pilot areas of the Previous Project. In addition, a short-term course on NRW reduction was established at the Kenya Water Institute (KEWI). Although an organizational structure required for WSPs to prepare a plan for NRW reduction was established by achieving the outputs in the Previous Project, only a few WSPs are implementing NRW reduction activities in accordance with plans. This may be because the plans have been prepared without consideration of capacities for implementing actual work, financial or human resources of WSPs were not fully taken into account. Therefore, it is necessary to develop a support system for WSPs to reduce NRW in accordance with realistic plans for fully utilizing the outputs of Previous Project.

The results of this situation analysis has led to establish a support system for WSPs to continuously reduce NRW by strengthening WSPs and the organizations associated with them. Thus, the "Project for Strengthening Capacity in Non-Revenue Water Reduction" (hereinafter "the Project") has been requested by the GoK in 2014.

1.2 Objective of the Project

The Project aims at achieving the project purpose described in the PDM which is included in R/D signed in March 2016 between JICA and MWI. The Outputs in the PDM are shown in the Table below. It is worth mentioning that this Project is a technical cooperation project and the role of the JICA experts is not to lead the implementation of NRW reduction activities but to provide assistance to the Kenyan counterpart (CP) organizations to implement activities. It is crucial for the experts to fully

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acknowledge that the ownership of the Project belong to CPs involved in NRW reduction from the MWI, County governments and Water Service Providers (WSPs).

Table 1.1 Outline of the Project

Item	Description				
1)Overall Goal	Under NRW reduction support mechanism, Urban WSPs enhance NRW reduction activities.				
2) Project Purpose	A NRW reduction support mechanism is established for Urban WSPs to implement NRW reduction activities.				
	 [Output 1] Promotion and coordination of NRW reduction activities by MWI NRW Unit are strengthened. [Output 2] Use of NRW reduction standards by Urban WSPs are promoted by WASREB. 				
3) Output expected	[Output 3] NRW related training capacity of KEWI is strengthened.				
	[Output 4] NRW planning and/or implementation capacity of pilot Urban WSPs is enhanced.				
	[Output 5] Experiences and knowledge of NRW reduction activities are shared among				
	Urban WSPs.				

1.3 Project Areas

The target area of the Project is the entire country of Kenya. More precisely, it is Nairobi where the major project CP organizations are presided, Meru and Embu Counties where the two Leading WSPs are located and the Counties where the seven (7) Pilot WSPs (selected from the 14 candidate WSPs after the Baseline survey) are located.

1.4 Project Concept

(1) Aim of the Project

The Project aims at contributing for the improvement of the financial situation of WSPs through the reduction of NRW. Achievements of Previous Project indicate that Embu and Meru WSPs had successfully implemented the NRW reduction activities. Two WSPs will be positioned as Leading WSPs, the Project aims at further strengthening their technical and operational capacities. Leading WSPs will assist other Pilot WSPs in improving their NRW reduction activities. Seven (7) Pilot WSPs will be selected from the 15 candidates WSPs. They will engage into NRW reduction activities as well. All 9 Pilot WSPs will be divided into two groups, the First stage WSPs and the Second stage WSPs, as the Project activities will be implemented in stages: the First stage WSPs in Phases 1 and 2, and the Second stage in Phase 3. The knowledge and lessons gained in Phase 1 will be reflected upon NRW reduction Standards which will be reviewed and revised by WASREB. The KEWI will provide trainings on NRW reduction. The regular meetings of WSPs will be held

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in cooperation with WASPA, The Project aims at establishing support system for WPSs in Kenya to strengthening their capacity of NRW reduction upon completion of Project by utilizing improved organizational and technical capacity that will be strengthened through Project activities in the next five year.

Table 1.2 Project Phases and Key Activities

Phase	Term	Key Activities		
Phase 1	October 2016 to September 2017 (1 year)	To review the situation of NRW activities and identify challenges and issues through Baseline survey. To select of Pilot WSPs. To assist Leading WSPs to enhance their capacity on NRW reduction activities. To prepare implementation structures of C/P for Phase 2. To carry out monitoring, hold meetings and workshop, and report.		
Phase 2	October 2017 to September 2019 (2 years)	To complete strengthening the capacity of NRW Unit of MWI, KEWI and other relevant institutions by utilizing experiences of 4 Pilot WSPs. To continue activities for the Leading WSPs and to start activities for the First stage Pilot. To carry out monitoring, hold meetings and workshop, and report.		
Phase 3	October 2019 to September 2021 (2 years)	To implement activities for Second stage Pilot WSPs lead by C/Ps by using NRW reduction technology obtained in previous Phases. To carry out monitoring, hold meetings and workshop, and report.		

To encourage NRW reduction activities for urban WSPs in the county, the Project will establish NRW reduction support systems and support improving technical standards. For this purposes, the Project will implement activities of five Outputs shown below.

Output 1:

MWI NRW Unit (hereafter NRW Unit) in coordination with WASREB and KEWI will develop a system that facilitates NRW reduction activities of the Pilot WSPs. The activities include awareness creation for the County governments about the Project. In order to develop such a system, NRW Unit will review the activities of WASREB and KEWI and conduct awareness raising activities about NRW reduction in cooperation with other organizations concerned about NRW.

Output 2:

WASREB will revise the NRW reduction Standards (guidelines, manuals, etc.) when case studies and lessons are obtained from the activities of Output 4 and other activities. It shall support NRW reduction activities at the national level by disseminating the revised Standards to Urban WSPs and facilitating the use of the revised Standards.

Output 3:

KEWI needs to review its NRW reduction trainings to improve its contents in order to increase the



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effectiveness of the Project. KEWI shall provide training courses linked with the activities of Leading WSPs (Meru and Embu WSPs) who have the experiences in conducting NRW reduction measures. This Project intend to make trainings offered by KEWI more closely linked with the real work situation of WSPs. The activities will not only improve the NRW reduction course contents, such as materials and teaching methodologies, it will equip KEWI lecturers with the skills and knowledge applicable to day to day NRW reduction activities of WSPs. The activities in this Output are expected to complete by the end of Phase 2. The achievements of Output 3 will contribute for NRW activities of Pilot WSPs in Phase 3.

Output 4:

Under the guidance of KEWI and Leading WSPs, the Pilot WSPs will implement NRW reduction activities. Since capacity to plan and implement NRW reduction activities differ in each WSP, appropriate NRW reduction approaches/activities fit to each WSP will be chosen so that the WSP can strengthen their capacity based on the needs. Through the implementation of activities, Pilot WSPs will learn how to plan, implement, review and modify NRW reduction plan following the PDCA cycle.

Output 5:

NRW Unit will disseminate the knowledge and information obtained from the Output 4 to Urban WSPs all over the county by organizing seminars and meetings on regular basis in cooperation with the Water Supply Providers Association (WASPA). The NRW Unit will prepare NRW reduction Standard that can be utilized by Urban WSPs.

(2) Project Design Matrix (PDM)

The Project activities will be implemented in accordance with the project design matrix (PDM) and the plan of operation (PO) of R/D signed in March 2016. The content of PDM is shown below.

Table 1.3 Project PDM

Narrative Summary	Objective Verifiable Indicators	Means of Verification	
[Overall Goal] Under NRW reduction support mechanism, Urban WSPs enhance NRW reduction activities.	 X of Urban WSPs participate knowledge sharing activities established by the Project X of pilot Urban WSPs continue achieving target(s) set by the annual NRW reduction plan. NRW annual report is continuously produced and disseminated. 	 MWI NRW Unit annual reports Pilot WSPs annual NRW reduction plans 	
[Project Purpose] A NRW reduction support mechanism is established for Urban WSPs to implement NRW	X of pilot Urban WSPs continue achieving target set by the annual NRW reduction plan for two years.	•NRW reduction Plans •Platform (outline) •Impact reports •Project reports •JCC meeting minutes	

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Narrative Summary	Objective Verifiable Indicators	Means of Verification
reduction activities. [Output expected] [Output 1] Promotion and coordination of NRW reduction activities by MWI NRW Unit are strengthened.	 1-1 All County representative participate NRW related seminar(s). 1-2 NRW reduction campaigns are conducted semi annually. 1-3 NRW reduction annual reports are produced. 	 Materials for County seminar List of seminar participants Campaign materials NRW reduction annual reports Project reports JCC meeting minutes
[Output 2] Use of NRW reduction standards by Urban WSPs are promoted by WASREB.	2-1 NRW reduction standards are revised by year X.2-2 Revised NRW reduction standards are disseminated to all Urban WSPs through workshop(s).	 Revised NRW reduction standards Workshop program and list of participants Project reports JCC meeting minutes NRW reduction annual reports
[Output 3] NRW related training capacity of KEWI is strengthened.	 3-1 KEWI conducts NRW reduction courses with contents incorporating on-site trainings and revised course materials. 3-2 Evaluations by the NRW course participants is higher than before the revision of course materials. 3-3 X % of NRW course participants formulate the work plans. 	 Revised course materials Revised course syllabus Course participants' evaluation sheets Project reports JCC meeting minutes NRW reduction annual reports Trace studies
[Output 4] NRW planning and/or implementation capacity of pilot Urban WSPs is enhanced.	 4-1 More than X of pilot Urban WSPs continuously make the annual NRW reduction plan based on the review of previous years implementation. 4-2 More than X of pilot Urban WSPs continuously implement the annual NRW reduction plan formulated in 4-1. 4-3 More than X of pilot Urban WSPs are able to implement skills and activities that pilot Urban WSPs were not able to adopt prior to the Project. 4-4 More than X of pilot Urban WSPs are able to implement priority activities indicated in the NRW reduction plan. 4-5 More than X of pilot Urban WSPs train all personnel of NRW reduction section. 	•NRW reduction annual reports •NRW reduction plans ••Impact reports •Project reports •JCC meeting minutes •NRW reduction annual reports
[Output 5] Experiences and knowledge of NRW reduction activities are shared among Urban WSPs.	 5-1 Case study and lessons learnt of Output 4 and other NRW activities are compiled and disseminated. 5-2 Regular meeting(s) of NRW is/are organized three times a year. 	Compiled lessons learnt NRW regular meeting minutes and list of participants Project reports JCC meeting minutes NRW reduction annual reports







Note: "Xs" in the table are the indicators that will be decided after the commencement of the Project.

(3) Project Purpose and Output

Fig. 1.1 below summarizes the Project Outputs, Project Purpose, the implementing organizations and its relation with the Outputs described in PDM (draft). The Project aims at the establishing support structure for Urban WSP in NRW reduction by MWI. The improvement of the management capacity of the Pilot WSPs including Leading WSPs and dissemination of nationwide NRW reduction activities are expected. Through these activities, the Project will increase the ownership of the NRW reduction measures of each implementing organization for the achievement of Overall Goal.

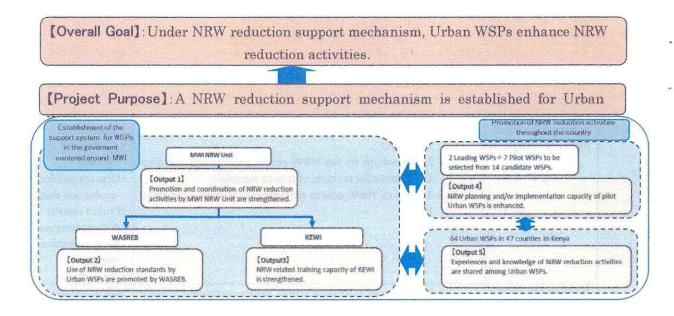


Fig.1.1 Project Purpose and Output

Table 1.4 and Fig. 1.2 describe the Project activities of each Output. The activities will be implemented in Phases 1, 2 and 3, intended to improving the capacity of the counterpart organizations phase by phase.

Table 1.4 Outline of activities of the Project

[Activities for Output 1]

- 1-1 MWI NRW Unit, in cooperation with WASREB, produces NRW annual reports which include NRW reduction data.
- 1-2 MWI NRW Unit plans and implements NRW reduction sensitization activities for the Counties.
- 1-3 MWI NRW Unit plans and implements NRW reduction campaigns.
- 1-4 MWI NRW Unit conducts reviews of KEWI NRW courses.
- 1-5 MWI NRW Unit conducts reviews of WASREB's NRW reduction activities.



[Activities for Output 2]

- 2-1 WASREB conducts survey of the usage of current NRW reduction standards.
- 2-2 Based on the survey result as well as Output 4 and 5, WASREB revises the NRW reduction standards.
- 2-3 WASREB promotes revised NRW standards through workshop(s).
- 2-4 WASREB incorporates the review results of NRW reduction activities by MWI NRW Unit in their activities.
- 2-5 WASREB monitors and evaluates the usage of revised NRW standards.

[Activities for Output 3]

- 3-1 KEWI studies current status of NRW reduction courses and its challenges.
- 3-2 KEWI reviews NRW reduction training strategies and course contents.
- 3-3 KEWI, in collaboration with leading WSPs (Embu and Meru, etc.), conducts on-site NRW trainings.
- 3-4 KEWI reflects on-site NRW trainings into NRW course contents and materials.
- 3-5 KEWI incorporates the results of review by MWI NRW Unit into NRW course contents.
- 3-6 KEWI conducts trace studies of NRW reduction course participants.

[Activities for Output 4]

- 4-1 The Project team conducts a survey of Urban WSPs and selects pilot Urban WSPs.
- 4-2 Each Pilot WSP conducts analyses of current NRW reduction activities and identifies its challenges.
- 4-3 Each Pilot WSP identifies measures to solve challenges and formulates the NRW reduction plan.
- 4-4 Each Pilot WSP formulates the annual NRW reduction plan including financial schedule based on the NRWE reduction plan.
- 4-5 Each Pilot WSP implements the annual NRW reduction plan.
- 4-6 Each Pilot WSP evaluates and analyzes implementation results and revises the plans.
- 4-7 Each Pilot WSP produces the NRW reduction activity report annually.
- 4-8 Each Pilot WSP holds regular NRW reduction meetings attended by relevant departments of WSP.

[Activities for Output 5]

- 5-1 MWI NRW Unit organizes NRW related regular meetings in cooperation with other relevant organizations.
- 5-2 WASREB compiles case studies/lessons learnt about NRW reduction activities.

(4) Process for Achieving Project Outputs

Fig. 1.2 shows the overall flow and the process of achieving each Output. The Objectively Verifiable Indicators (OVIs) of the Outputs will be achieved by implementing the Project activities. The results of the activities will be reviewed and if necessary, approaches and methodologies used for the implementation will be modified for the achievement of Outputs.

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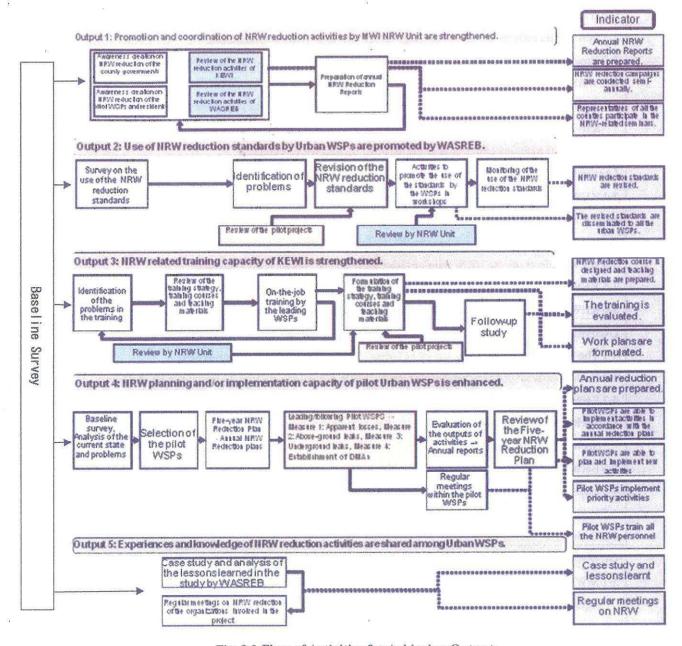


Fig. 2.3 Flow of Activities for Achieving Outputs

1.5 Issues to be concerned

(1) Verification of the Implementation Structure and Signing of MOU

The County governments are responsible for the supervision of the Urban WSPs. The ownership of WSP and its assets were transferred from the Water Service Boards (WSBs) in the administrative reform. Therefore, it is crucial that the Counties understand the Project and provide cooperation for its implementation. An effective project implementation system has to be developed with the Counties as

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the owner of WSPs. Main implementing organizations of Projects are MWI, WASREB, KEWI, Leading and Pilot WSPs. The selection of Pilot WSPs will be notified to the County governments so that the Project can obtain necessary cooperation from the Counties as well as WSBs. In order to obtain approval and cooperation from relevant organizations, MWI will need to sign Memoranda of Understanding (MoU) with them so that the Project can secure the smooth implementation and achievement of Output 4. The JICA experts will assist MWI in facilitating the signing of MoUs. As the water sector in Kenya is in a transitional phase upon approval of new Water Act, JICA experts must understand the roles and duties of relevant organizations, and adjust implementation structure to fit to the changes, and help CPs for signing of MoUs as soon as possible.

(2) Issues to be determined at Project's inception stage

The minutes of meeting (MM) signed on December 4, 2015 stipulates that the decision on the following four (4) items shall to be decided within three (3) months from the commencement of the Project. The duration of inception has been extended to four (4) months because the survey activities will be suspended for a month of December 2016.

- i) Final confirmation of assigned personnel of NRW Unit
- ii) Selection of the Pilot WSPs
- iii) Equipment and materials provided by Japan
- iv) Trainings in third country/ in Japan

(i) The assigned personnel to NRW Unit has been confirmed at the commencement of the Project. (ii) The final decision on selections of the Pilot WSPs by NRW Unit will be made within initial four months. (iii) For the provision of equipment for KEWI and for the Pilot WSPs (Outputs 3 and 4), the final decisions will be made at the same time as the selection of the Pilot WSPs. Therefore, it is necessary to discuss and obtain approval from CPs on the equipment shortly after the commencement of the Project. Meanwhile, the JICA experts are expected to assess its effectiveness and relevance of equipment's request from KEWI, *i.e.* leak noise correlator, leak detection workshop and water meter testing equipment, and water meters, whether they are relevant to assist Pilot WSPs. (iv) Regarding the trainings, the JICA experts are required to discuss with CPs using a draft training plan in Japan. Since all four items require the approval of JICA Headquarters, timely cooperation and assistance from CPs is crucial.

(3) Room for Flexibility in the Project Schedule

The Project will be implemented in accordance with PDM and PO to achieve OVIs of Outputs. However, when changes of activities are considered as necessary to adjust capacity of CPs or the changes caused by external factors/environment, there will be an occasion that flexible response to the situation is called for.



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If the Project encounter such a situation, the progress of implementation and achievement of Outputs must first to be assessed. Then changes of plan should be discussed and agreed among the JICA experts and Kenyan CPs as well as with JICA. The process may lead to modifying the remaining activities. Flexible response is required in this kind of situation.

Particularly for the activities focusing on Pilot WSPs in Phase 3, the activities might have to be modified by taken into account of the achievement of Outputs in Phase 2.

- i) When the First stage Pilot WSPs have failed to achieve the NRW targets described in the annual action plans, implementation of activities to Second stage Pilot WSPs may be delayed or the activities may be revised.
- ii) Priority shall be given to the follow-up activities to the First stage Pilot WSPs over the implementation of Second stage Pilot WSPs.

(4) Roles of the Leading WSPs and the Process of Selecting Pilot WSPs

1) Role of the Leading WSPs

Meru and Embu WSPs, the Leading WSPs, are regarded as the successful models of Japan's assistance in NRW reduction. The management and staff of both WSPs are highly motivated for reducing NRW with sufficient knowledge and practical experience of NRW reduction. However, they can improve their knowledge and skills by making more realistic NRW reduction plans.

JICA has enough information and data of two Leading WSPs because of past assistance from JICA. Compared with the Leading WSPs, for the remaining Pilot WSPs, the amount of information and data is limited. Therefore, the Project activities will initially focus on two Leading WSPs and will extend to remaining WSPs in Phase 2 and after. By doing so, the Project will be able to use experiences and lessons learnt of Phase 1 in the following phases. In addition, experiences and lessons learnt from the Phase 1 can be shared among other WSPs during regular meetings of NRW in Output 5. The Project will propose a system that will encourage and engage other WSPs into NRW activities through knowledge sharing. For that purpose, two Leading WSPs and other Pilot WSPs are positioned separately.

2) Process of Selecting Pilot WSPs

The JICA experts will collect information on the NRW reduction activities of the candidate WSPs by conducting the Baseline survey upon the commencement of the Project. The JICA experts will prepare a questionnaire for the Baseline survey and send it to the candidate WSPs ahead of their site visits. The JICA experts will confirm the responses to the questionnaire when visiting WSPs.

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(Additionally, local consultant will be employed to conduct the similar visits to fill the gap of experts' to visit all 14 WSPs.)

Based on the results of the Baseline survey of 14 WSPs, the Project will select seven (7) Pilot WSPs that have the most potential for achieving project Outputs. Nine (9) WSPs, including two Leading WSPs, will be the Pilot WSPs. The Project launch NRW reduction activities for Leading WSPs in Phase 1. This is because the Team has enough information and data of these two WSPs. From the remaining seven (7) Pilot WSPs, the Project will divide its activities into four (4) WSPs in Phase 2 (First stage Pilot WSPs) and three (3) WSPs in Phase 3 (Second stage Pilot WSPs) along with the project implementation timelines.

Fig. 1.1 shows the selection process of Pilot WSP. Approval of NWI is required for the finalization of selection of the Pilot WSPs except two Leading WSPs.

Assistance to the NRW reduction activities to the Leading WSPs (implemented with their own funds) shall be prioritized in Phase 1. The Outcomes of the activities will be shared among the other WSPs at the regular meetings of WASPA in order to encourage NRW reduction activities in entire country as sharing its knowledge can motivate the other Pilot WSPs to reduce NRW.

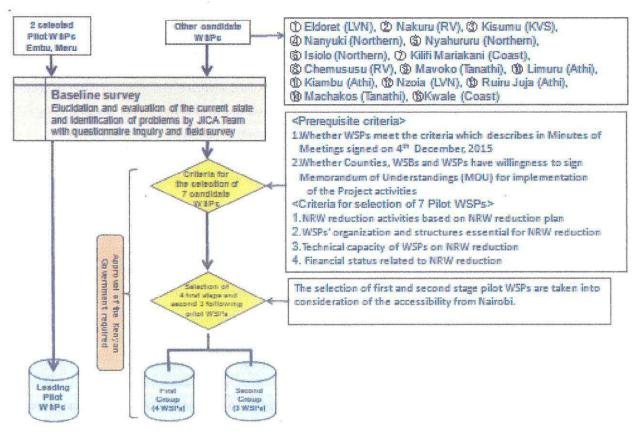


Fig. 1.3 Flow of Selection of 7 Pilot WSPs

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Project Implementation Policy

2.1 Understanding current status and monitoring

The framework of Project has been decided during the Detailed Planning Survey, but it was decided that the Baseline survey will be conducted during initial three month of Project implementation. It is because the number of organizations involved with the Project are many and it is necessary for the JICA experts to design detailed project implementation structure and activities. In Phase 1, it is necessary for the JICA experts to fully understand the current situation of the water sector in Kenya so that the experts can prepare an overall plan of the implementation and revise PDM and PO to adjust the project activities fit to the the real situation.

This work plan will be presented as draft plan for the first Joint Coordination Committee (JCC). The experts and CPs will review and revise work plan to reflect the results of Baseline survey and the revised work plan will be agreed in subsequent JCC.

2.2 Establishment of Urban WSP Assistance System

(1) Concept of Urban WSP Assistance Structure

Previous Project

"Project for Non-Revenue Water Management Project for Kenya" (hereafter Previous Project) implemented NRW reduction activities in thee (3) WSPs at DMA. The results were compiled into Non Revenue Water Reduction Standard issued by WASREB. For the aggregated reduction of NRW of Urban WSPs in Kenya, it is necessary to establish support system composed of multiple organizations. In the process, the achievements of Outputs and Project Purpose of Previous Projects must be utilized. To establish support system, following roles and responsibilities are expected from the participating organizations. When roles and responsibilities are met by each organization, the support systems for NRW reduction in Kenya is considered as established.

1) MWI NRW Unit

The key role of MWI NRW Unit (hereafter NRW Unit) is to promote implementation of NRW reduction activities of WSPs through coordinating with the Counties, the owners of WSPs, WASREB, and KEWI. NRW Unit will carry out the following activities:

*Plan and Implement promotional activities to enhance understanding about NRW to County governments and assist them in managing of activities and obtaining necessary budgets.

* Conduct reviews for NRW related activities of WASREB and KEWI, and provide them necessary advisory services to improve NRW related activities.

*Through conducting NRW reduction campaigns in coordination with County governments, assist Pilot WSPs to conduct NRW reduction activities etc.

2) WASREB:

WASREB will conduct user survey on NRW standards. Based on the survey results and activities of Pilot WSPs, WASREB will consider the revision of NRW Standards. Once standards is revised, it will distribute to WSPs by WASREB as well.

3) KEWI:

KEWI is the only training institutions providing NRW related trainings and their role is to plan and conduct trainings for each WSP to transfer the skills and knowledges about NRW reduction activities. To improve effectiveness of trainings, KEWI will offer hands-on trainings in coordination with the Leading WSPs.

4) Pilot WSPs (including Leading WSPs)

Through the project activities, the Pilot WSPs are expected to gain knowledge and skills on how to plan the NRW reduction activities, implement, review and evaluation the results. Based on evaluation, WSPs themselves will adjust or revise NRW reduction plans to fit to their on the ground situation. This leaning process is called PDCA cycle and it will enable WSPs to standardize the process and to repeat every year.

The Leading WSPs have basic infrastructures for water services provisions and their willingness to tackle for NRW reduction is already known by JICA. Also, JICA had already identified issues and challenges of NRWs of these two WSPs. Additionally, they are familiar with JICA's assistance schemes. Therefore, the Project will launch its NRW reduction activities first focusing on the Leading WSPs so that the experiences and lessons leant from them can be shared and replicated to other Pilot WSPs. Leading WSPs will coordinate with KEWI to support skills-based NRW trainings for other WSPs.

5) WASPA

WASPA, in coordination with MWI, will provide a platform for sharing experiences and results of Output 4 to other WSPs.

(2) Review of Project Structures and Activities.

Diagram 2.1 indicates the current implementation structure of the Project. The Project aims at completing to assist strengthening two main organizations of Urban WSP support system (NRW Unit and KEWI) by the end of Phase 2. In Phase 3, while getting supports from above organization, the Project will focus its support on Pilot WSPs.

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In case of drastic changes occurred in water supply sector in Kenya, or above organizations are not be able to play key roles after Phase 2, the Project may consider reviewing its support systems to those organizations. For this purpose, the Project will monitor the implementation system in water sector and capacity of implementing organizations while conducting activities in Phase 1. If necessary, implementation systems will be reviewed to adjust the situation.

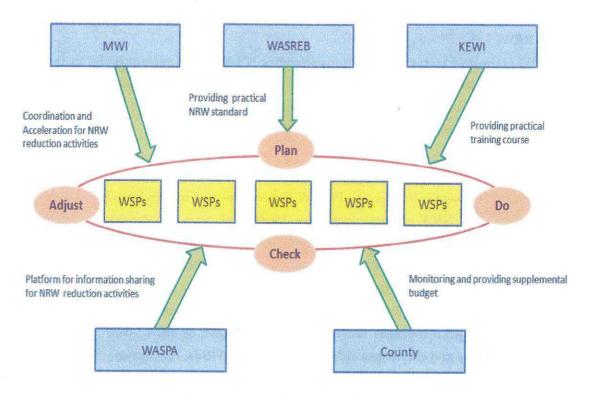


Fig. 2.1 Assistant System for Urban WSPs in the Project

2.3 Active Involvement of the County Governments

The County governments is the owner WSPs and provide WSPs necessary budgets. Previously WSBs owned assets of WSPs and were responsible to supervise them. This transition is the major change since the Previous Project and active involvement by the Counties to the Project will influence the success of Project. MWI will conduct awareness raising activities about NRW reduction to senior managements of County administrations at the meetings of the Council of Governors (COG). Monitoring of implementation of Pilot WSPs in Output 4 by County staff will be another involvement. The details of participations of County government will be determined based on the results of Baseline survey.

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2.4 Strategy for Strengthening KEWI

(1) Strategy for the Strengthening (draft)

The role of KEWI is a provider for NRW related skills trainings and become the hub of group trainings of Eastern African regions. The Project will use the existing contents of test piping course and partially revised lectures to strengthen the training programs in which the trainees practice leak detection technologies and the other methods for NRW reduction. In addition, the improvement of the IT technology and management of customers and business operation related to the NRW reduction activities will be included, making the trainings as comprehensive for NRW reduction measures.

(2) Innovation of the Lecture Contents (draft)

The JICA experts will assist to revise the existing training contents and to prepare training courses on new subjects such as;

i.) Improvement of audio and visual teaching materials and utilizing multimedia.

Video materials depicting NRW reduction skills and technologies including the overview of the NRW reduction measures such as the test piping course will be created. These materials should be available outside of KEWI, for example WSPs in remote areas with difficulty of participating in the training courses that they can self-train to improve their technical capacity.

ii) Synergic effects with the improvement of PC operating skills

The improvement of the PC operating skills can facilitate the use of various data. Examples are: the preparation of water balance tables; water distribution management sheet by distribution system; pipe network asset registers (including pipeline registers, valve registers and facility registers); and O&M reports; and the use of the GIS technology. Training courses for trainees with different levels of PC skills such as introductory, intermediate and advanced courses will be designed to improve the data management to bring the impact of the NRW reduction plans.

iii) Stock management/public financial management/cost-benefit analysis

Strengthening the facility management is important for the operation of water supply services. This includes the prioritization of inspection and repair works of facilities. Financial analysis tools such as public financial management and cost-benefit analysis will be used for the analysis of the cost-effectiveness of the NRW reduction measures and planning the extension of longevity and renewal of waterworks. By using these tools, WSPs can improve the business operation of NRW reductions of the commercial losses.

2.5 Counter Measures for NRW reduction

(1) Counter Measures to be applied

Table 2.1 indicates key activities of NRW strategies in Output 4. (The aim of this Project is

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technological transfer, and not the installation of equipment and facilities.) Activities shown below will be applied to WSPs based on their situation and capacity of NRW reduction.

Table 2.1 Basic counter measures for NRW reduction

	(ASSANCE TO THE PARTY OF THE WAY ARE AN AREA	NRW reduction	Work		
Ту	pe of NRW	Works to be attended		Counter measures	
			Mapping	Drawing of pipeline and pipe net	
Re		Pipeline	Zoning	Plan on DMA, Leal Monitoring Block and construction	
		(distribution	Minimum Night Flow	Searching leaks and identifying their locations.	
Real loss	Leakage	and service	Leakage detecting	Using of detectors	
SS		pipes and	Repairing	Optimum repair manners	
		fittings)	Pipe net developing	Pipeline maintenance plan in zone, Replacement of pipes and fittings.	
		Searching water	er theft	Searching illegal connection	
	W O	Water theft Notice, Persuade Correction of thief		Contact and discussion with water thief	
	water their			Cutting of illegal connection or meter installation.	
Ap		Fine and penal	ty	Charging fines and imposing punishment.	
pare	Metering inaccuracy		Scarching	Extracting defective meters	
Apparent loss		Customer	Installation/replacement	Replacement of defective meters and relocation of their position	
	Reading error	Meter replacement		Changing to easy readable meter, improving of condition of positions.	
	Date processing error			Reviewing data processing, reform programming errors	
	Collection ar		reading	Extraction of errors of data collected and recorded	
	Data	Data analysis		Pipe flow analysis, improving countermeasures, re-setting of NRW rate.	
Basic	collection	Consolidated n	nanaging system	GIS, Customer information, SCADA, Financial data management	
Basic work performance		Pipeline impro	ving plan	Identification of pipelines for replacement, Planning of pipe replacement.	
rfor		Planning Organization improving plan Setting of suitable NRW rate		SCADA, water pressure and volume.	
mar	Planning			Staffing, responsibilities, function, action, equipment	
ce				Estimation of B/C pre/post counter measures	
		Legislation refe	orm	Raising of sanction for intentional water theft, introducing of awarding system to staff.	
	Training	Enlightening of users awareness		Public campaign, hearing, teaching	

Based on the results of the Baseline survey, Pilot WSPs will select measures to improve and prioritize the implementation activities through preparation of capacity development plan. Examples of the measures at each stage of the development of NRW reduction activities (Fig. 2.2) are shown in Table 2.2.

GoK has set a national goal of reducing the national average NRW ratio from approx. 42% (in 2015) to 25% by 2030. It is crucial that appropriate reduction activities at each stage of NRW reduction will be used to achieve this goal.

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This aim of this Project is technical transfer thus installation of equipment and facilities by JICA are not included. If Pilot WSP will required necessary equipment and facilities for NRW reduction activities, the Project will technically support WSPs to obtain installation plan and financial plans through the implementation of NRW reduction plan.

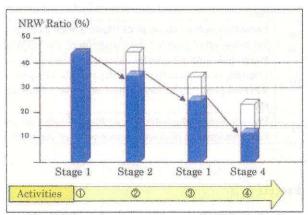


Fig 2.2 Developmental Stages of NRW Reduction

Table 2.2 Applicable Counter Measures for Development Stages of NRW Reduction

NRW rate		Counter measures	
Stage 1	More than 40%	Repair of surface leakages, Identification of illegal connections, thoroughgoing installation of service meters, replacement of defective meters, saving and maintenance of pipeline data, measuring water flow volume and pressure of distribution pipes and analyzing for improving water services, saving and maintenance of customer data, review of water tariff and O&M cost.	
Stage 2	30-40%	Repair of ground leakages, replacement of pipelines with leakages, repair of valves with leakages and pipelines which imply the occurrence of leaks by the ground subsidence, planning of introducing DMA management.	
Stage 3	15-30%	Implementing full scale ground leakage detection in DMAs and repairing them, replacement of deteriorating pipelines, Regularizing meter accuracy, dissolving illegal connections.	
Stage 4	Less than 15%	Thoroughgoing implementing of leakage protecting work in all areas.	

Each Pilot WSP will prepare own NRW reduction plan for the next five years based on the capacity development plan. Based on the five-year plan, the WSP will prepare annual plan to secure the budget including the cost for implementation of project activities.

2.6 Dissemination and Sharing of the Project Outputs

(1) Workshops

Workshops/seminars will be organized to disseminate the results of the activities to the organizations involved in the water supply of Kenya.

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Table 2.3 Planned Workshops

Phase	Planned date	Subjects/Contents		
Phase 1	Sep. 2017	Explanation of activities for Output 1 to 5. Presentation of challenges of the Pilot WSPs that may face in the next five years and proposed solutions. Presentation of outcomes of the capacity development of the Leading WSPs.		
	Sep. 2018	Presentation of interim achievements of each output on the activities in Phase 2. Challenges in the activities of the Pilot WSPs and solutions. Revised plan for the second half of Phase 2 (including projection of the NRW ratio)		
	Sep. 2019	Presentation the outcomes of Phase 2 such as case studies, etc. Presentation of plan for the extension of the NRW reduction activities.		
Phase 3	Sep. 2020	Presentation of the interim outcomes of the activities in Phase 3. Challenges in the activities of the Pilot WSPs and solutions. Revised plan for the second half of Phase 3 (including the projection of NRW ratio)		
Phase 2	Sep. 2021	Presentation of the outcomes of Phase 3 such as cases studies, etc. Explanation of a plan for the extension of the NRW reduction activities		

(2) Outcomes of the Project

Table 2.4 presents tangible outcomes expected from the implementation of activities.

Table 2.4 (1) Report and documents to be produced in 1st Phase

Title	Time of submission
Work plan 1	Within four months after commencement of Phase 1
Monitoring Sheet Ver. 1	Within four months after commencement of Phase 1
Monitoring Sheet Ver. 2	Within three months after the submission of Monitoring, sheet Ver.1.
Monitoring Sheet Ver. 3	Within three months after the submission of Monitoring, sheet Ver. 2.
Progress Report 1	Upon the completion of 1st Phase.

Table 2.4 (2) Report and documents to be produced in Phase 2

Title	Time of submission
Work plan 2	Within 4 month after commencement of 2nd Phase
Monitoring Sheet Ver. 4	Within 6 months after the submission of Monitoring sheet Ver. 3.
Monitoring Sheet Ver. 5	Within 6 months after the submission of Monitoring sheet Ver. 4.
Monitoring Sheet Ver. 6	Within 6 months after the submission of Monitoring sheet Ver. 5.
Monitoring Sheet Ver. 7	Within 6 months after the submission of Monitoring sheet Ver. 6.
Progress Report 2	Upon the completion of 2nd Phase

Table 2.4 (3) Report and documents to be produced in Phase 3

Title	Time of submission
Work plan 3	Within 4 month after commencement of 2nd Phase
Monitoring Sheet Ver. 8	Within 6 months after the submission of Monitoring sheet Ver. 7.
Monitoring Sheet Ver. 9	Within 6 months after the submission of Monitoring sheet Ver. 8.
Monitoring Sheet Ver. 10	Within 6 months after the submission of Monitoring sheet Ver. 9.
Monitoring Sheet Ver. 11	Within 6 months after the submission of Monitoring sheet Ver. 10.
Completion Report	Upon the completion of 3rd Phase

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(3) Publicity awareness activities

1) Informing Mass Media

The Project will publicize its activities to media at the times of commencement and ending as well as when key activities were implemented by issuing press releases, holding press conference and workshops for the reporters with the aim to inform the population of Kenya about the plan and the outcomes of the Project.

2) Informing relevant Kenyan organizations, donors and NGOs

The Project information will be shared with relevant organizations, other donors and NGOs to gain their interests and encourage their participations to the Project. The appropriate communication tools and approaches will be selected. The Project will promote manuals and other technical documents created by the Project to other areas or other donors so they can be used widely.

(4) Trainings in Japan

The training programs in Japan will be organized in every phase. The training program in Phase 1 is focused on the management team and is scheduled around June 2017. The following trainings in phases (2 and 3), will focus technical personnel and are scheduled around June 2018 and 2020 respectively. Table 2.5 and Table 2.6 indicates the draft training schedules. The selection of participants and training contents will be determined after the consultation with CPs.



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Table 2.5 Training Curriculum for Management Team (Draft)

Items of technical training	Training destination /Place to visit	Topics (lecture / training / discussion / site visit)	Venue	Days
Water Management and Administration	Tokyo waterworks Bureau / Its related facilities	Waterworks of Japan (law, standards, vision, etc.) Water supply management (performance indicators) Pipeline net planning Measures to reduce NRW Water leakage detections Exercise of water leakage prevention technology	Tokyo waterworks Bureau/Its related facilities	3
Visits to water supply facilities	Tokyo waterworks Bureau / Its related facilities	History of water supply Customer service/complaint management Pipe laying work of distributing pipes and feeding pipes Water production facilities.	Tokyo waterworks Bureau/Its related facilities	4
Visit to a water pipe manufacturer	Manufacturer	Introduction of the pipes and fittings& its quality control (lecture) Visiting production processDemonstration of piping installation	Manufacturer	1
Visit to a valve Manufacturer	Manufacturer	•Introduction of branch saddles & valves (lecture) •Visiting production process	Manufacturer	1
Visit to a water meter manufacturer	Manufacturer	•Introduction of water meters •Visiting production process	Manufacturer	1
Holiday/ travel days				4
			Total	14

Table 2.6 Training Curriculum for Action Team (Draft)

Items of	Training	Topics	Venue for	Days
technical	destination	(lecture / training / discussion / site visit)	training	
training	/Place to visit		7	
Water management training	Tokyo waterworks Bureau / Its related facilities	 Waterworks of Japan Water supply management Measures to reduce NRW Water leakage detection technology Introduction of the water supply equipment Exercise of water leakage prevention technology 	Tokyo waterworks Bureau/Its related facilities	2
Visit to water supply facilities	Tokyo waterworks Bureau / Its related facilities	 History of water supply Customer service/ complaint management Pipe laying work of distributing pipes and feeding pipes Water production facilities 	Tokyo waterworks Bureau/Its related facilities	3
Visit to water supply installation sites	Tokyo waterworks Bureau / Its related facilities	·inspection, testing, network map management ·Installation of the water supply equipment ·Mapping system	Related to construction office	2
Visit of a water pipe manufacturer	Manufacturer	 Introduction of the pipes and fittings & its quality control (lecture) Visiting production process 	Manufacturer	1







		•Demonstration of piping installation		No.
Visit of a valve Manufacturer	Manufacturer	•Introduction of branch saddles & valves (lecture) •Visiting production process	Manufacturer	1
Visit of a water meter manufacturer	Manufacturer	Introduction of water metersVisiting production process	Manufacturer	1
Holiday / travel day	S			4
Total		14		

(2) Training in third countries

Training in third countries may take place upon receiving requests from CP organizations and if the necessity of such trainings are been . Conducting third country trainings requires JICA's approval.

3. Project Implementation Structure

Efficient implementation of the NRW reduction measures will require inter-organizational cooperation among the relevant organizations in the central government such as MWI who supervises the water supply services, County governments, and WSPs. It is important that relevant sections of each organization will improve its management capacity.

3.1 Project Group

The Counterpart organizations and WSPs in Fig. 3.1 will implement the project activities under the supervision and guidance of JCC.



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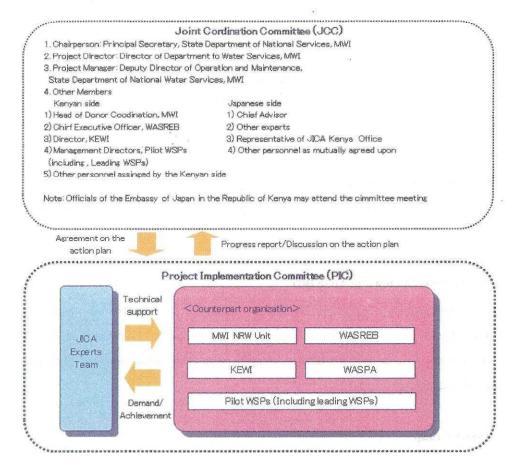


Fig. 3.1 Project Implementation Structure

Implementation structures of each project Output are shown in Table 3.1.

Table 3.1 Implementation structures for Outputs

	C/P organization	JICA Expert ^{*1}
Output 1	NRW Unit/MWI	Chief Adviser/NRW Management 1
Output 1		NRW Reduction Specialist 2
Output 2	WASREB	Chief Adviser/NRW Management1
Output 2		NRW Reduction Specialist 2
Output 3	KEWI	NRW Reduction Specialist 2
Output 5		Training Management/Training Strategy
Output 4	NRW Unit/MWI	Chief Adviser/NRW Management 1, NRW Reduction Specialist 2,
Output 4	WASREB, KEWI, Counties,	Water distribution Network (Mapping & Network analysis),
	Leading and Pilot WSPs	Flow/Pressure and Leakage Monitoring, and
	2-1-2-1-2-1-2-1-2-1-2-1-2-1-2-1-2-1-2-1	Customer management/Billing collection
Output 5	NRW Unit/MWI	Chief Adviser/NRW Management 1, NRW Reduction Specialist 2,
Carpars	WASREB, Counties, WASPA	Information/Public Relation Management

Note) Member list of JICA expert is shown in Table 6.1

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3.2 Project Implementation Team

The Kenyan side of team is headed by the Water Secretary of MWI as the Project Director followed by the Director of Operation and Maintenance of MWI as the Project Manager. The Project Manager is responsible for the day to day implementation of Project activities. The members of the Project Implementation Team will be finalized at the first JCC which will be held at the commencement of Project.

Table 3.2 Project Members of Kenyan side

Project Group	Role and duty	Member
Project Director	Person in charge of the supervision of the Project: establishment of the organizational structure of the Kenyan side, negotiation with other organizations and the Counties.	Water Secretary, MWI
Project Manager	Assistant to the Project Director: implementation management, verification of the achievement and outcomes of activities, solving issues regarding implementation, etc.	Director of Operation and Maintenance, MWI
Management Team	•Activities related to Output 4, the preparation of a five-year plan for NRW reduction •Training activities related to Outputs 2, 3 and 4 including NRW management •Activities and planning/monitoring concerning the entire project •Overall management of the project	Senior staff members of the following organizations: NRW Unit (MWI) WASREB KEWI Leading/Pilot WSPs
Action Team	•Activities at the leading WSPs (Output 4) •Activities related to Output 4 at the Pilot WSPs	Staff members in charge of NRW reduction activities of the Leading and Pilot WSPs

3.3 Cooperation with Other Donors and Related Projects

Cooperation with other donors and relevant Kenyan organizations may bring efficiency and effectiveness to the Project. It is necessary to fully understand the assistance provided by other donors and organizations and avoid overlap of activities in Output 4 especially. Therefore, hearings to MWI or candidate WSPs will be conducted to obtain information about activities by other donors and organizations during the Baseline survey. Also hearings from other donors and organizations will be conducted, if necessary. Table 3.3 shows the current assistance of other donors that may be relevant to the Project.

Table 3.3 Other Donors involved with Water Service and NRW

Output	Counterparts	Donors' name	Possibility for areas of collaboration
Output 1	MWI/NRW Unit	GIZ, VEI, WASPA, KEWASNET	To build up a supporting system of Counterparts.To carry out public campaign using their tool kits.
Output 2	WASREB	GIZ	 To monitor the utilization of current NRW reduction Standards.



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Output	Counterparts	Donors' name	Possibility for areas of collaboration
			•To review and improve the current NRW standards
Output 3	KEWI	WASPA .	•To advertise KEWI's activities
Output 4	Pilot WSPs	KfW, USAID, WB, VEI, AFD, SNV, GIZ, AfDB	•To be determined after the Baseline survey.
Output 5	MWI/NRW Unit WASREB	GIZ, SNV, VEI, WASPA	 To collect useful viewpoints for implementation of public awareness activities. To select media or tools for disseminating information

Note; GIZ: German Society for International Cooperation, SNV: Netherlands Development Organization, VEI: Vitens Evides International, KEWASNET: Kenya Water and Sanitation CSOs Network, WB: World Bank, KfW: Kreditanstalt für Wiederaufbau, USAID: United States Agency for International Development, AFD: Agence Française de Développement; AfDB: African Development Bank

If selected Pilot WSPs are receiving assistance from other donors, details of its assistance must be studied by the Project to identify its synergistic effect through the collaboration.

4. Project Implementation Method

4.1 Phases of Project Implementation

The Project will be implemented in three phases:

- Phase 1: October 2016 September 2017 (12 months)
- Phase 2: October 2017 September 2019 (24 months)
- Phase 3: October 2019 September 2021 (24 months)

4.2 Project Activities

Fig. 4.1 shows the timeline of the major activities of the Project. Inside of red square indicates activities of Phase 1. The detail of activities in this phase are described below.



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4.3 Project Activities in Phase 1

<u>Phase 1 is a planning period of the Project.</u> Since about a year has passed from the Detailed Design Survey, there is a need to reassess the implementation structure and the capacity of CP organizations to reflect the current situation to PDM and PO.

The key actions of this period that will be based on the result of Baseline survey are: the selection of the Pilot WSPs; finalizing detailed work plan (activities and timelines); and a framework of an assistance for NRW reduction; and revision of PDM and PO. The activities of Phase 1 will be articulated as overall image of Project and lead to the implementation of activities of the NRW reduction in Phase 2 and 3.

JICA experts and C/Ps will implement the activities below.

(1) Baseline Survey (completed within four month from the commencement)

JICA experts will analyze the current activities of the CP organizations including MWI, WASREB and KEWI, and candidate Pilot WSPs and identify the challenges and interventions.

Based on the results of the Baseline survey, Pilot WSPs will be selected. Selection criteria and the results of selection will be examined and approved by CPs. Among the 15 candidates WSPs, the survey of the WSPs in restricted areas by JICA will be conducted by local consultant because of the limitation of time and the security concerns. JICA experts will compile, analyze, and evaluate the survey data.

It is essential to complete the Baseline survey within four months from the commencement of the Project for the timely project implementation. The key contents of the Baseline survey are described in Table 4.1.

Table 4.1 Baseline Survey Contents and Methodology

Content	Methodology
NRW Unit/MWI	
 State of the services provided by NRW Unit and its administrative capacity State of the activities of the Council of Governors (including the frequency of the meetings, attendance to the meetings and cost-sharing) Awareness creation activities for the County governments provided by MWI (including those not in the water supply sector) Awareness creation activities for the public by MWI (including the themes and frequency of the activities and budget for each campaign) 	✓ Interview with managers and persons in charge of NRW reduction and data collection. (the mandate of NRW Unit, HR plan, duties and job description, the Units action plan, management of budget, water supply service strategy, implemented campaigns, etc.) ✓ SWOT analysis to articulate the current state of the organization
WASREB	
 Level of the recognition of the NRW reduction standards State of the use of the NRW reduction standards (frequency and cases of the use) Evaluation of the NRW reduction standards by WSPs 	✓ Interview with managers and persons in charge of NRW reduction and data collection (the mandate, roles, HR plan,





Content State of activities at the monthly meetings of WASPA and the NRW and GIS Subcommittees (numbers of the participants, details of activities, meeting frequency, published documents, number of technical papers on NRW reduction, etc.) The number of the members of WASPA (only urban WSPs)	Methodology duties, outline of field inspection and the inspection team, latest impact report, financial statement, NRW reduction standards, etc.) SWOT analysis to identify the current state of the organization
 KEWI Contents of the medium-term strategic plan (2016 – 2020) and the role of the training courses related to NRW (long-term, short-term NRW and GIS course) Contents of available reference materials of NRW reduction courses (syllabuses, textbooks, etc.) Available data of the NRW reduction courses (numbers of the trainees, courses per year, regular or irregular courses, etc.) Equipment owned by the KEWI HQ and the state of its use and storage Teaching methods used by the lecturers of KEWI Availability of follow-up studies Confirmation of the financial state, budget for the training on NRW Degree of satisfaction to and request for the improvement of the training contents 	✓ Interview with managers and persons in charge of NRW reduction and information gathering (mandate and roles, strategic planning, future planning, organizational structure and personnel assignment plan, state of the implementation of training, budgetary process, equipment owned, facilities, collection of financial statements, etc.) ✓ SWOT analysis to identify the current state of the organization ✓ Self evaluation of lectures by the lecturers in charge of the training
Pilot WSPs Organizational structures and personnel assignments (management supports, internal information sharing, qualification of trainees, etc.) Availability of a medium- to long-term or annual NRW reduction plan Customer management and management of drawings State of the water meters (types, level of deterioration, etc.)	✓ Interview and questionnaire with the executives, staff and engineers in charge of NRW reduction and data gathering (the serving population, number of customers, revenue, amount of water produced and sold,

- State of the water meters (types, level of deterioration, etc.) installed and needs for the replacement of the meters
- NRW reduction activities (availability of pre-set indicators of the plan, monitoring of the implementation of the plan, DMA management, water pressure control, awareness creation activities)
- State of the equipment for NRW reduction (equipment owned, storage and usage)
- Capacity in the practical work of the staff in charge of NRW reduction
- Survey on the satisfaction of the water users about the water services (requests from the users)
- of water produced and sold, NRW ratio, number, duties and work experience of staff, internal information sharing, the level of awareness of the executives of NRW reduction, the use of the NRW reduction standards, etc.) collection of the maintenance record and leaks, customers data and map of the water supply systems, and field survey of the waterworks (site visits to water production plants, intake, transmission and distribution facilities, water kiosks, large-scale customers and sites of pipeline repair, etc.)
- ✓ Survey of the satisfaction of the people, etc.

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(2) Revision of Work Plan (within a month of the completion of the Baseline survey)

Based on the results of the Baseline survey, the Project Team (JICA experts and CPs) will have detailed pictures of current state of the relevant organizations and the Pilot WSPs. The Team will revise the framework, approaches and work schedule of the Project (Work Plan) which will be approved by JCC. The revision of the Work Plan for Phase 1 will take approx. four months after the commencement of the Project.

(3) JCC

JCC will be established for ensuring its smooth implementation. JCC will meet three times in Phase 1: at the commencement of the Project (October 2016); at the time of finalizing Work Plan which include the selection of the Pilot WSP and the beneficiaries of the Project (January 2017); and at the end of Phase 1 (September 2017). JCC will meet semi-yearly in Phases 2 and 3 in principle, for the confirmation of the Work Plan for the next phase and the confirming of the project's implementation and achievement of past six months, budget allocation, and the discussing important matters concerning the implementation of the Project.

Table 2.3 Timing and themes of JCCs in Phase 1

	Time	Theme
1st JCC	October 2016 (Submission of draft W/P Phase 1)	 Submission and sharing of Draft W/P for Phase 1. Confirmation of framework of Project Confirmation of Project Period Confirmation of the Undertakings of the Kenyan side (Appointment of C/Ps. Securing of budget by C/Ps organizations. Confirmation of candidates Pilot WSPs, Signing of MoU)
2nd JCC	January 2017 (Submission of and after 1st Joint monitoring finished.	 Reporting on the result of selection of the Pilot WSPs. Reporting and discussion on the result of 1st Joint Monitoring. Approval of finalized W/P Phase 1. Confirmation of budget by C/Ps organization.
3rd JCC	September 2017 (completion of 2nd Joint monitoring)	 Reporting and discussion on the result of Joint Monitoring. Reporting and discussion on progress of the Project Confirmation of implementation of the Undertaking of the Kenyan side.

(4) Joint Monitoring

JICA experts and CPs will jointly monitor the progress of the Project implementation and prepare a monitoring report in every six month. The results of the monitoring will be confirmed by JCC and revision of plan and approach will be reflected in the Work Plan. In Phase 1, the first monitoring report will be prepared in January 2017, the second and third reports will be prepared in every three month thereafter. Figure 4.2 shows the contents of monitoring sheet.



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TO CR of JICA Kenya OFFICE PROJECT MONITORING SHEET Project Title: Version of the Sheet: Ver. • (Term: Month, Year - Month, Year) Name Title: Chief Advisor Submission Date: I. Summary 1 Progress 1-1 Progress of Inputs 1-2 Progress of Activities 1-3 Achievement of Output 1-4 Achievement of the Project Purpose 1-5 Changes of Risks and Actions for Mitigation 1-6 Progress of Actions undertaken by JICA 1-7 Progress of Actions undertaken by Gov. of Republic of Kenya 1-8 Progress of Environmental and Social Considerations (if applicable) 1-9 Progress of Considerations on Gender/Peace Building/Poverty Reduction (if applicable) 1-10 Other remarkable/considerable issues related/affect to the project (such as other JICA's projects, activities of counterparts, other donors, private sectors, NGOs etc.) 2 Delay of Work Schedule and/or Problems (if any) 2-1 Detail 2-2 Cause 2-3 Action to be taken 2-4 Roles of Responsible Persons/Organization (JICA, Gov. of the Republic of Kenya) 3 Modification of the Project Implementation Plan 3-2 Other modifications on detailed implementation plan (Remarks: The amendment of R/D and PDM (title of the project, duration, project site(s), target group(s), implementation structure, overall goal, project purpose, outputs, activities, and input) should be authorized by JICA HDQs. If the project team deems it necessary to modify any part of R/D and PDM, the team may propose the draft.) 4 Preparation of Gov. of the Republic of Kenya toward after completion of the Project II. PDM&PO as Project Monitoring Sheet i & II

Fig. 4.2 Monitoring sheet

(5) Project Implementation Committee (PIC)

It is recommended that the "Project Implementation Committee (PIC)" to be established, the members include the JICA experts and CPs. PIC will meet twice a month to monitor and manage the timely implementation of Project.

Outcomes and implementation schedule by the Management and Action Teams and the implementation regarding issues will be discussed during the PIC meeting. The process of PIC is expected to lead by CPs.

The fundamental role of JICA experts is to assist activities carried out by the CPs. The JICA experts need to prepare plan and project activities in a way that CP staff and organizations can implement them with minimum interference to their ordinary duties.

(6) Project Activities

Project activities will be implemented in Phase 1 through Phase 3. The aim of the Project is to improve

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the activities gradually. The activities for each Output in Phase 1 are described below. (Reference: Fig. 4.1 Flowchart of Project Implementation).

1) Activities of Output 1

NRW Unit/MWI will: 1. prepare the contents for the annual NRW Reduction Report; 2. commence the awareness creation activities about the NRW reduction activities to the County governments shortly after the commencement of the Project. It is important that the promotion of NRW reduction become NRW Unit's routine activities of Phase 1. The goals of Phase 1 are indicated below and the activities for achieving these goals.

a) Goals in Phase 1

- NRW Unit/MWI has established the project implementation structure.
- NRW Unit has formulated and implemented the awareness creation on NRW reduction plan for the County governments and for the public.
- NRW Unit has prepared an NRW reduction annual report that include the outcomes of the challenges of the NRW reduction activities.

b) Activities and Timeline

- Verification of the implementation structure of NRW Unit (in October 2016)
 The JICA experts had confirmed whether the required number of staff (five) have been assigned to NRW Unit. The experts will identify duties of each staff of the Unit and the roles each play in the implemented of the Project.
- Formulation of a Plan for the Awareness Creation Activities for the County Governments and the Pilot WSPs (by December 2016)
 NRW Unit and the JICA experts will jointly formulate a implementation plan for the awareness creation activities for the County governments and the Leading WSPs. The plan will describe the purpose, contents, schedule and budget of activities. The formulation of the plan will be completed by December 2016 so that the budget request can be included for the next fiscal year of MWI.
- Implementation Plan for the Awareness Creation Activities for the County Governments and the Pilot WSPs (Till September 2017)

NRW Unit and the JICA experts will implement the awareness creation activities to enhance the County governments understandings about NRW. This process shall be taken in earlier stage of Project implementation of Phase 1 to increase and encourage the involvement of the County governments.

In addition, the JICA experts will conduct a study to find possibility of conducting an awareness creation campaign for the reduction in water theft targeting the population of service areas of the

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Pilot WSPs. The possibility of such a campaign in Phase 2 will be taken into consideration of the progress of the awareness creation for the County governments and other project activities.

• Review of the NRW reduction activities of KEWI and WASREB (till September 2017)
NRW Unit and the JICA experts will review the NRW reduction activities of KEWI and WASREB, and identify the issues to be addressed for further NRW reduction and propose recommended actions for KEWI and WASREB. NRW Unit and the JICA experts will formulate a strategy for the NRW annual reports by March 2017. They will collect required information by June 2017 and compile the results of the review by September 2017.

2) Activities for Output 2

WASREB is scheduled to revise the NRW Reduction Standards in Phase 3. For that purpose, it is important to obtain the baseline information about the usage of the Standards and formulate a strategy for the revision in Phase 1. Draft revisions of Standards may be used for the activities of the Pilot WSPs if possible.

a) Goals in Phase 1

WASREB will understand the usage of NRW Reduction Standards and identify the issues regarding the usage and formulate a strategy for the revision of Standards incorporating the results of issues about usage.

- b) Activities and Schedule
- Survey about the usage of NRW Reduction Standards (from January to June 2017)

WASREB will study the usage situation of the current Standards from all of urban WSPs in order to identify a directions for the revision. The information about usage can be collected through: i) the campaigns organized by NRW Unit, ii) the regular meetings organized by NRW Unit and WASREB, iii) when WASREB collects data for the Impact Report, iv) the direct inquiries by phone and e-mail or etc.

Formulation of a strategy for the revision of the NRW Reduction Standards (from June to August 2017)

WASREB will formulate a strategy for the revision of the Standards based on the result of the survey on usages of the Standards. The results of the review will be shared among the Project team by August 2017 so that the revised activities can be reflected for the revision of PDM and PO in the JCC meeting scheduled for September 2017.

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3) Activities for Output 3

KEWI will begin the improvement of its training by using the PDCA cycle. It will become an organization capable of providing practical trainings by the end of Phase 2. Therefore, KEWI needs to identify the challenges and issues of trainings and develop training strategy for improving training methods used currently. The goals of Phase 1 are indicated below and the activities for achieving these goals.

a) Goals in Phase 1

- KEWI will identify the challenge and issues of current trainings on NRW reduction and formulate a development plan (draft) for the training course (including textbooks).
- KEWI will formulate a plan (draft) for the revision of the training course and prepare to establish a system for the trainings in Phase 2.

b) Practical Activities and Schedule

- Analysis of the NRW Reduction courses of KEWI (from October to December 2016)
 KEWI will analyze the contents and situation of NRW Reduction courses by using the results of the Baseline survey and identify the problems about course contents and the teaching methods.
- Review of the course contents and the teaching methods (from November 2016 to January 2017) KEWI will review the contents of the training courses, teaching materials and methods by using the outputs of the activities mentioned in 1) and 2) and develop improvement strategy.
- Assessment of equipment to be provided from Japan (March 2017)
 Based on the request from KEWI, the JICA experts will conduct a technical assessment on the necessity of providing the materials and equipment for the exercise of leakage detection (leak noise correlator), the construction of workshop to practice of leak detection and its materials and equipment required for the practice of the maintenance of water meters (water meter testing equipment, etc.) The results will be reported to JICA.
- Establishment of a training implementation system (from March to September 2017) KEWI will establish a training implementation system (and MoU with the Leading WSPs) taking into consideration on how the trainings provided by Leading WSPs to other WSPs (the frequency, contents and cost-sharing) from the results of the Baseline survey. Procedures required for the implementation of the joint training cooperation with the Leading WSPs. The joint training will be for three weeks each course. KEWI will make necessary arrangement i.e. schedule and budget, for lecturers to be able to participate in OJT at the Leading WSPs.



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4) Activities for Output 4

The two most important outcome of Output 4 in Phase 1 are: the selection of the Pilot WSPs; and the commencement of the NRW reduction activities for the Leading WSPs. This is because the Leading WSPs are expected to act as trainers for other Pilot WSPs in Phases 2 and 3, and are expected to achieve significant NRW reduction in Phase 2. The strengthening of their technical capacity in Phase 1 is significantly important. In addition, Leading WPSs have the possibility of facility development financed by private financial institutions. From this point, the formulating NRW reduction plans by maximizing the outputs of the technical cooperation project in Phase 1 has its significance. Based on this, the below are the goals and the activities in Phase 1.

- a) Goals in Phase 1
- The Pilot WSPs will be selected.
- The First stage Pilot WSPs including the Leading WSPs will formulate the NRW reduction plans.
- The Leading WSPs improve the capacity to reduce NRW including the improvement of technical skills required for providing the other Pilot WSPs guidance for the NRW reduction activities and the capacity to apply them in real life situations.
- Preparation for the implementation of the pilot projects in Phase 2 is completed.
- b) Practical Activities and Schedule
- Selection of Pilot WSPs (from October 2016 to January 2017)
 JICA experts will select the First stage and Second stage Pilot WSPs based on the results of the Baseline survey and applying selection criteria agreed with CPs as indicated above (page 5).
- Preparation of NRW reduction plans (from January to March 2017)

 The First stage Pilot WSPs will analyze the current states of their water services and identify the challenges and issues and propose approaches and methodologies to solve challenges and issues. They will prepared five-year NRW reduction plans and out of the plan, they will prepare an annual NRW reduction plans. Particularly, the Leading WSPs, Embu and Meru WSPs, will include the realistic strategy and timelines for facility upgrade in five-year NRW reduction plans in consideration with the possibility of facility upgrade as the NRW reduction activities progress.
- Implementation of NRW reduction plan (from March to September 2017)

 Base on developed annual NRW reduction plans, WSPs will implement the activities; the Leading WSPs in Phase 1, the First stage Pilot WSPs in Phase 2 and the Second stage Pilot WSPs in Phase 3.
- i) Monitoring and management of the NRW reduction in each distribution area or DMA

Pilot WSP will divide water distribution system into multiple distribution zones and monitor the water distribution amount in each area in order to strategically reduce the NRW ratio in the service areas.

- Improving sustainability and promotion of NRW reduction activities by using GIS If the Pilot WSP is already using ArcGIS (GIS application by ESRI), the application to NRW reduction activities are examined so that the examples can be applied to other WSPs. The introduction of the free GIS software (QGIS) will be considered for the WSPs that require the introduction of GIS software.
- iii) Hydraulic analysis for the management of the water pressure in distribution pipelines that fit to the technical capacities of the Pilot WSPs

Technical assistance will be provided to conduct hydraulic analysis that are fit to the situation and capacity of Pilot WSPs through coordination with GIS and IT engineers.

iv) Installation of customer meters and accuracy control

Case study about linking installations of customer meters with increase of revenue will be made for WSPs and the County governments and propose increasing ratio of customer meters by using WSPs own funds or County's budget. For improving/maintaining accuracy of customer meters, regular replacement of meters and procurement of high-quality meters is promoted. In addition, the introduction of electronic smart meters for commercial/organizational clients, and examination methods of measuring accuracy of deteriorated meters is presented. For approaches of water theft (illegal connections), inspections will be focused on the clients whose water service was terminated, clients without payment, and client with abnormal water usage and the type of thefts, examination of water usage and water source, testing opening-clothing of bulbs will be examined.

v.) Measures against underground leakages

Two approaches are used to locate leakages. One to install sensors along water distribution route and detect by leak noise correlator. Another approach is by detecting abnormal noise caused by the leak while walking along the water distribution route.

v) Efforts to maintain the skills for underground leakage detection Scenes of the use of the equipment including leak noise correlator, portable flow meter and water

pressure logger will be filmed with a smartphone and shared among staff or used for trainings. To increase the capacity to identify the noise generated by leakages, the auditory materials such

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as recorded noise of leakages will be used in the training.

5) Activities for Output 5

General cooperation from WASPA to the Project has been informally agreed during the Detailed Design Survey but MoU has not been signed yet. Discussions on strategic cooperation with the Project and WASPA will be taken place in Phase 1 so that achievements and lessons learned from Phase 1 may be able to share at forums organized by WASPA in Phases 2 and 3.

- a) Goals in Phase 1
- NRW Unit/MWI will lead cooperation agreement with WASPA.
- The first meeting will be held at WASPA
- b) Activities and Schedule
- Finalize cooperation agreement between MWI and WASPA (from October 2016 to March 2017)
 After the selection of the Pilot WSPs, MWI and WASPA will hold discussion to establish visions for the cooperation and the roles and responsibilities and sign MoU by assisted by the JICA experts.
- Dissemination of knowledge and expertise through WASPA's meetings (till September 2017)

 NRW Unit will organize the first meeting in cooperation with WASPA. Thereafter, the Unit will organize the meeting every six months. The intention of meetings are not limited to share the expertise and knowledge on NRW reduction but to present achievements of the Pilot WSPs so the other WSPs may be motivated to implement NRW reductions. The intention of first meeting is to present about framework and purpose of Project and the activities of the Leading WSPs. Sharing practical skills, knowledge and experience at the meetings is planned in Phases 2 and 3. The JICA experts will provide assistance to the Unit for their preparation of meetings including the presentations by them.

(6) Preparation of the Progress Report (Part 1)

The JICA experts will compile the progress of the Project activities in the entire project period into the Progress Report (Part 1).

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Project Design Matrix

Project Title: Project for Strandthaning Capacity in Non-Revenue Water Reduction

implementing Agency: MWI WASREB, KEWI

Target Group: Urban WSPs

Period of Project's years from the date when the first JICA Expert is dispatched

Project Site: The entire country of Kenya	e/	Pilot Site: Embu, Meru, and others	others		
Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal					
Under NRW reduction supporr mechanism, Urban WSPs enhance NRW reduction activities.	im. 1 X of Urban WSPs participate knoweldge sharing activities MWI NRW Unit established by the Project. 2. X of pilot Urban WSPs continue achieving larget(s) set by the reduction plans annual NRW reduction plan. 3. MRW annual report is continuously produced and describing the describing the reduction plans.	amnual reports	NRW reduction remains as priority of MWI and WSPs.		*
Project Purpose					
A NRW reduction support mechanism is established for Ukhan WSPs to implement NRW reduction activities.	X of pilot Urban WSPs confinds achieving targets set by the annus NRW reduction plan for two years.	NRW reduction plans Platform (online) Impact reports Project reports JCC meeling minutes	NRW reduction remains as priority of MWI and WSPs.		
Outputs					
Promotion and coordination of NRW reduction addivities by MWI NRW Unit are strengthered,	1-1 All County representatives participate NEW related seminar(s). 1-2 NRW reduction campaigns are conducted semi annually. 1-3 NRW reduction annual reports are produced.	Materials for County sensinar Project List of sensinar participants secure Cempelog materials NRW reduction annual reports fulfilled Project reports JCC meeting minutes	Project budge; of the CPs is secured. NRW Unit staff positions are fulfilled.		
2. Use of NRW reduction standards by Urban WAPs are promoted by WASREB.	2-1 NRW reduction standards are revised by year X. 2-2 Revised NRW reduction standards are disseminated to all Libran WSPs through workshop (s).	Revised NRW reduction standardss Workshop program and list of periocents Project reports Project reports	Current WASREE's role and authority remains.		
3. NRW related training capacity of KEM is strengthened,	3. NRW related training capacity of KEWI is [3-1 KEWI conducts NRW related on courses with contents incorporating on-site trainings and revised course materials. 3-2 Evaluations by the NRW course participants is higher than before the revision of course materials. 3-3 O% of NRW course participants formulate the workprians.	Revised course materials Revised course sylfabus Course participants evaluation sheets Project reports JCC meeting minutes NRW reduction anneal reports	KEWI confinues to offer NRW short courses. Project budgel of the CPs is secured.		

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			Pre-Conditions	ssues and<br countermesures>
	*		The Kenya Side	1. Counterpart personnel 2. EquipmentTools/ Materials 3. Facility/Office Space
Trained personnel do not leave WSPs WSPs Trained climatic chages such as draught with not affect the water resources. Project budget of the CPs is secured.	NRIV reduction remains as priority of WSPs.	Inputs	The Japanese Side	1. Experts 2. Equipment/Tools/ Materials 3. Japan or third country training
MRW reduction annual plans Trained personnel do not MRW reduction plans the MRW reduction annual reports as draught with not affect the MRW reduction annual reports secured.	Compiled lessons learnt NRW reduction in NRW requirements and fix of participants and fix of participants Project reports.		n dala.	Y reduction plan.
4-1 More than X of pilot Urban WSPs continuously make the annual NRW reduction plan based on the review of previous year's implementation. 4-2 More than X of pilot Urban WSPs continuously implement the annual NRW reduction plan formulated in 4-1. 4-3 More than X of pilot Urban WSPs are able to implement skits and activities that pilot Urban WSPs are able to implement skits and activities that pilot Urban WSPs are able to implement phor to the Project. 4-4 More than X of pilot Urban WSPs are able to implement priority activities indicated in the NRW reduction plan.	5-1 Case study and lessons learnt of Dubut 4 and other NRW activities are compiled and disseminated. 5-2 Regular meeting(s) of NRW is/are organized three times a year.	Activities	1.1 MWI NRW Unit, In cooperation with WASREB, produces NRW annual reports which include NRW reduction data 1.2 MWI NRW Unit plans and implements NRW reduction sensitization activities for the Counties. 3.4 MWI NRW Unit plans and implements NRW reduction campaigns. 1.4 MWI NRW Unit conducts reviews of KEWI NRW courses. 3.5 MWI NRW Unit conducts reviews of WASREB's NRW reduction activities.	2.1 WASREB conducts a survey of the usages of current NRW reduction standards. 2.2 WASREB promotes revised NRW reduction standards and S. WASREB revises the NRW reduction standards. 2.3 WASREB promotes revised NRW reduction standards through workshope). 2.4 WASREB promotes are revised NRW reduction standards through workshope). 2.5 WASREB monitors and evaluates the usages of revised NRW standards. 2.5 WASREB monitors and evaluates the usages of revised NRW standards. 3.4 KEW studys current status of NRW reduction courses and its challenges. 3.4 KEW it incorporates the review to the name of the name of the course contents and malerials. 3.4 KEW incorputes and evaluates the season of the name of the
4. NRW planning and/or Implementation capacity of pilot Urban WSRs is anhanced.	5. Experiences and knowledge of NRW reduction activities are shared among Unban WSPs.	The state of the s	1.1 MWI NRW Unit, In cooperation with WASREB, produces NRW annual rep- 1.2 MWI NRW Unit plans and implements NRW reduction aenalitization activiti 1.3 MWI NRW Unit plans and implements NRW reduction campaigns. 1.4 MWI NRW Unit conducts reviews of KEWI NRW courses. 1.5 MWI NRW Unit conducts reviews of WASREB's NRW reduction activities.	2.1 WASREB conducts a survey of the usages of current NRW reduction standards. 2.2 Based on the survey result as well as Outgots 4 and 5. WASREB revises the NRC 2.3 WASREB Incorporates the review readuction standards through workshople). 2.4 WASREB incorporates the review readuction standards through workshople). 2.5 WASREB monitors and evaluates the usages of revised NRW standards, 3. KEWI reviews NRW reduction courses and its challenges. 3. SEKWI reviews NRW reduction courses and its challenges. 3. SEKWI incorporates the results of revised NRW course contents. 3. SEKWI incorporates the results of revised by MWI NRW Unit into NRW course contents. 3. SEKWI incorporates the results of revised by WWI NRW Unit into NRW course contents. 4. The Project team conducts a survey of Urban WSPs and selects pitol Urban WPR 4.2 Each pitol WSP formulates the annual NRW reduction goals formulates the NRW 4.4 Each pitol WSP formulates the annual NRW reduction plan. 4.5 Each pitol WSP formulates the annual NRW reduction plan including flamptal sci. Each pitol WSP produces the NRW reduction plan. 4.7 Each pitol WSP produces the NRW reduction plan. 4.8 Each pitol WSP produces the NRW reduction plan. 4.7 Each pitol WSP produces the NRW reduction plan. 4.8 Each pitol WSP produces the NRW reduction plan including flamptal sci. 1. WM NRW Unit organizes and revise plans. 5.1 WASREB complete case studies/leasons leant allous NRW reduction plans. 5.1 WASREB complete case studies/leasons leant allous NRW reduction adultities. 5.1 WASREB complete the ware the decided after the project commencement.

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4 6 Each pilot WSP evaluates and amaigues implementation resurts and revine plans. O e O	0	Plan.			1					ı	1	1		
4.7 Each pilot WEP produces the NRW reduction activity is port avrisely.	0	ž.			8			18		R				
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6. Composition of the Japanese Team

A team of Japanese experts is consists of a joint venture of Kyowa Engineering Consultants Co., Ltd., TSS Tokyo Water Co., Ltd. and Tokyo Waterworks International Co., Ltd. Mangat I. B. Patel and Partners is expected to be the subcontractor for the Baseline survey.

A plan of dispatching of experts is shown in Table 4.1. (Red square indicates Phase 1).

Table 6.1 Plan of Dispatch of JICA Experts

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	NRW reshuction specialist 2 (2)	Masayuki TAGUCHI	30	30	30 86	30	30	3	named	30		39	1	30	30			30	20	П	30	30		П	30	30		30	10		25 30	30	30		30		
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7. Detailed Plan of Operation

Table 7.1 describes the activities of each expert in Phase 1. The detailed activities and schedule will be finalized at the finalization of Work Plan.

	Table 7.1 Activities by Expert
Person in charge	Activity
Supervision/ NRW management 1	 Supervision of the Project Preparation of the Work Plans and presentation of Plans Presentation and consultation during JCC meetings Coordination with other donors and other water supply projects Review of implemented NRW reduction measures Selection of Pilot WSPs Assistance in the cost-benefit analysis of the NRW reduction measures Analysis of the impact of NRW reduction on the future operation of the WSPs Provision and exchange of information and collaboration among JICA Experts Assistance for training planning in Japan/third country Verification of the level of achievement of Project Purpose Management of the overall progress of the Project Presiding the Project Implementation Committee Planning for workshops and seminars Compilation of the Progress Reports
NRW management 2	 Management of the procurement of the equipment (in Japan and in Kenya) Survey of the management of the water distribution networks/identification and analysis of problems in the management Assistance in the zoning of the water distribution networks Theoretical training on NRW reduction Survey and selection of the model districts in which OJT on the NRW management technology is to be conducted Assistance in the preparation of piping diagrams of the leading WSPs Formulation of detailed designs of the hydraulic separation of the networks of the Leading WSPs Selection of the materials and equipment required for the hydraulic separation of the water distribution networks of the Leading WSPs and recommendation for the budget Guidance in OJT for the leading WSPs (on NRW reduction) Estimation of leakage/analysis of the amount of NRW Evaluation of the measures implemented against leaks/verification of their effect Assistance in the preparation of OJT reports/Manual for Water Pressure Management Technology
Distribution pipe network (mapping, network analysis)	 Implementation of a survey for the selection of the Pilot WSPs Survey of the management of the water distribution networks/identification and analysis of the problems in the management Formulation of the NRW reduction plans Formulation of the annual NRW reduction plans Study on the plan for the procurement of equipment for the pilot WSPs Assistance in the preparation of the monitoring sheet Assistance in the preparation of the Progress Reports Assistance in the zoning of the distribution networks Assistance in the preparation of piping diagrams Guidance on the practice of quality control of pipeline installation







	The state of the s
Person in charge	Activity
	Guidance on the preparation and use of the pipeline installation management
	standards
	Training on the distribution network management technology
	Theoretical training on water pressure management
	· Survey and selection of the Pilot WSPs for OJT on the water pressure
	management technologies will be provided
	Theoretical training on water pressure management
8	• Study on the options for the optimization of water pressure and formulation of
	the best measure
	• Selection of the materials and equipment required for the implementation of the
	measures for the optimization of water pressure and recommendation on the
	budgetary allocation to the measures
	• Evaluation of the measures for the optimization of water pressure/verification
	of the effect of the measures
	516-55-V-020-0116-V-020-0-55-V-020-1-020-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0
	• Estimation of leakage/analysis of the amount of NRW
Flow rate/water	• Evaluation of the measures implemented against leaks/verification of the effect of the measures
pressure/leak	West Large to the Partie State (Market State Sta
management	Management of the procured equipment in Japan and in Kenya
	• Technical training on leak detection/training for the transfer of basic
	technologies
	• Survey and selection of the Pilot WSPs for OJT on the NRW reduction
	technologies will be provided
	• Formulation of the plans for OJT of the Pilot WSPs
	Selection of the materials and equipment required for the hydraulic separation
	of the networks of the Pilot WSPs
	 Guidance in OJT of the Pilot WSPs (on management of water pressure/NRW)
	• Installation of measuring facilities/measurement of water pressure and flow
	rate/collection of the data on leakage
	• Evaluation of the measures implemented against leaks/verification of the effect
1	of the measures
	• Assistance in the establishment of a framework of an information system for
	business operation
	Assistance in the formulation of annual budget plans
Customer	• Activities to promote payment of water user fees by users / installation of water
management/ fee	meters
charging	• Monitoring of the water usage and fee collection with the balance of the
J. S. S. S. S. S. S. S. S. S. S. S. S. S.	revenue and expenditure taken into account
	Creation of the database of customer information
	Assistance in the inspection of water meters
	Review of the training materials and methods and study on the measures to
	improve them
Planning/	Study on the materials and equipment required for the practice of leak detection
management of	and the practice of the maintenance
the training	
the training	• Preparation of the program and schedule of the training in Japan/assistance to
	the training participants in Japan
	Preparation of the program and schedule of the training in third country
	Information dissemination to the media
Information	• Information dissemination to relevant organizations in Kenya, other donor
management/	organizations and NGOs
publicity	Publicity activities in Japan
paonorey	Creation and distribution of JICA Project Brief Notes
	Taking photos and videos for publicity purpose

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8. Equipment Provision

8.1 List of Equipment

The equipment listed is shown in Table 8.1. The list consists of 1) the training equipment for KEWI for Output 3, and 2) the survey equipment for the Pilot WSPs for Output 4. The specifications and quantities of the equipment provided will be determined through the discussion between CPs and the JICA experts within four months of the commencement, based on the analysis of the results of Baseline survey.

Two 4WD vehicles will be procured for the Project implementation.

The list in Table 8.2 which was requested CPs organizations will be determined in the consultation between the JICA experts and JICA on the justification based upon the results of the Baseline survey. When requested equipment were to be provided, they will be procured before the commencement of the Pilot activities.

Table 8.1 Equipment to be provided by Japan

Equipment	Description of items	Quantity	Country origin	Time of decision		
	Note PC	1				
1) Equipment for	Multi purpose photocopy machine	1	Vanya			
KEWI	Digital Camera	1	Kenya			
	Overhead projector	1				
	Portable ultrasonic flow meters	5		Within 4 months		
	Pressure gauge with data loggers	10		after commencement of the Project		
2) (GPS	5				
Survey equipment for Pilot WSPs	Potable checker of water meters		Japan	the Project		
for Pilot WSPS	Residual chlorine meters with 1,000	9				
	of reagents					
	Potable electric resistivity meters	9				

Table 8.2 Equipment to be considered for the procurement

Equipment	Description of item	Quantity	Expected Country produced	Time of delivering		
IND.	Digital leak noise correlator	X				
A) Requested by KEWI for	Equipment for improving a training yard for leakage detecting	x	Japan/third country	Upon		
trainings	Testing equipment of water meter	X		justification of		
B) Requested by KEWI for Pilot	Measuring Instrument including digital leak noise correlator for field work	x	Japan/third	appropriateness and before starting Pilot		
WSPs	Detector of ground leakage for field work	х	country	activities		
	Valves and meters for establishing	X	Kenya			

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3. Activities and Goals of Phase 1

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	Project Phase Year		2016	T	Phase	THE PERSON NAMED IN	2017	-		T		21	Ph 1018	ase 2			2019		ULSELEZ/L		11000	2020	-	ase 3			2021	
	Project year in order	+	2020		1st Ye		2011	_			2nd Ye		.010	T		3rd Year	2019	Т		A	th Year	2020	Т			5th Year	2021	
	Month	Oct	Nov De	Jan F			un Jul Au	g Sep O	ct Nov D	ec Jan F	eb Mar A	TT	n Jul Aug S	ep Oct Nov	Dec Jan		May Jun Ju	Aug Sep O	ct Nov Dec			Jun Inl	Aug Sen	Oct Nov De	ec Jan Fe		Aay Jun 1	Jul Aug Sep Oc
Promotion and	coordination of NRW reduction activities by MWI NRW Unit are		255		++	H	+	H		+		++					1	1	-				1	-				Jep oc
1.1 MWI NRV	N Unit, in cooperation with WASREB, produces NRW annual reports whic				11	T											\top			\Box	11						\top	111
1.2 AAVAU NIDVA	IRW reduction data. N Unit plans and implements NRW reduction sensitization activities for			-		+	+					++-	+++	+			-		-							+++	+	+
the Count 1.3 MWI NRV																												
1.3 MWI NRV	W Unit plans and implements NRW reduction campaigns.																											
1.4 MWI NRV	N Unit conducts reviews of KEWI NRW courses.					+		100	+	+	++	++			H	+++	+		++	++	++	\vdash		++	++	+++	+	+++
										\perp	11	44							11		11							
1.5 MWI NRV	W Unit conducts reviews of WASREB's NRW reduction activities.																											
	duction standards by Urban WSPs are promoted by WASREB.		5			II		П													11				-			
	conducts survey of the usage of current NRW reduction standards. ion of a strategy for the revision of the NRW reduction standards.		8			1																						
22 Baradan	the survey result as well as Output 4 and 5, WASREB revises the NRW		S	+					++	\forall	++	++	+++	++	H	+++	+	111	++	\Box	++	\vdash			++	+++	+	+++
40	standards.	4	9	44	++	44		\bot	44	-	44	44-	+	4			44		11		11							
N Z.S WASKED	promotes revised NRW standards through workshop(s).		١ ۽																									
	incorporates the review results of NRW reduction activities by MWI NRW		Sell			П										TH	T								TT			
	reir activities. monitors and evaluates the usage of revised NRW standards.		8	++	++	++	++	H	++	++	++	++	+++	-		+	+		++-					+	++			
	17						11																					
	raining capacity of KEWI is strengthened. dies current status of NRW reduction courses and its challenges.			-		++	++		1	-	+-	+-		-		111	+	+		H	$+\Gamma$			+	+-	111	-	411
			1005538																									
0.00	lews NRW reduction training strategies and course contents.								100																			
3.3 KEWI, in o	collaboration with leading WSPs (Embu and Meru, etc.), conducts on-site			+	100		+			++					H			+++	++-	++	++	+		+	++	+++	++	
NRW train	nings.					11	11	П								-												
3.4 KEWI refle	lects on-site NRW trainings into NRW course contents and materials.				6533																							
	orporates the results of review by MWI NRW Unit into NRW course			11	11	11	11		11	1		11					\top								+		+	+++
3.6 KEWI con	ducts trace studies of NRW reduction course participants.		H	++	++	+	++	+	+	++	-	+-		-					++-			-		+	++	+	+	+++
													10000															
	and/or implementation capacity of pilot Urban WSPs is enhanced. ect team conducts a survey of Urban WSPs and selects pilot Urban WSPs.	l least	1000		+-	+-	$+\Gamma$	+		+	44	+	+	$\perp \Gamma$		$-\Pi$	H		H		11							
		2000	10000																									
	t WSP conducts analyses of current NRW reduction activities and					IT																						
	its challenges. It WSP Identifies measures to solve challenges and formulates the NRW	H	H		+	+	++	+	++	++	++	+	+++	++-			++		++-	H	++		H	++	++	+++	++	+++
reduction	n plan.					11	11	\sqcup	44	11		1																
	t WSP formulates the annual NRW reduction plan including financial based on the NRWE reduction plan.																											
A B Each Pilot	t WSP implements the annual NRW reduction plan.			11													W 20 8							55 ES 5				
Output 4.5.1 Pilot Proj	ject for Leading WSPs (Meru & Embu WSPs)	-		++		N make	ancine e	mari	of Nati	M rush	tion v	helblas fo	or Meru er	of Earths	4894									\perp	1		11	
4						5111		TT	Tare V		l l	1	or weru er	- Inibu					-									
4.5.2 (First-sta	age Pilot Project for 4 Pilot WSPs								11	1			e of Pilot				T											
4.5.3 [Second-	-stage Pilot Project for 3 Pilot WSPs	H		+	++	+		\forall	++	++		++		++-	H		++				Second-si	tage of	Pilot Pro	ject for 4	Pilot V	VSPs		
				1	1	44		1					111								11				11		11	
plans.	t WSP evaluates and analyzes implementation results and revises the							1 100																P				
4.7 Each Pilot	t WSP produces the NRW reduction activity report annually.			T		11		T	T			T			16												$\top \top$	111
4.8 Each Pilot	st WSP holds regular NRW reduction meetings attended by relevant	-		+		++	++	+	+	+			+++				++					++-	H		-		+	+++
departme	ents of WSP.							Ш																				
	nd knowledge of NRW reduction activities are shared among Urban WSPs. W Unit organizes NRW related regular meetings in cooperation with other	-		+	-	+			+1	+			++-		\vdash		++					H						
relevant o	organizations.																											
5.2 WASREB	compiles case studies/lessons learnt about NRW reduction activities.																											
Monitoring/Meeting	ing/Training/Document Patricipant		TT	+	$\dagger \dagger$	$\dagger\dagger$	11	+	$\dagger \dagger$	+	++	++	+++	++	H	+++	++	+++	++		+	+		++	++	+	+	+++
A Joint Mon		H	1		•	+		+	+			++					++		++			++		++	+		++	
	dination Committee (JCC) MWI,WASREB,KEWI,JICA,コンサ)			0		++		0	$\dagger \dagger$	++	•	+	-	•			+		++	-	•	++		++	++	•	++	
C Training I		H	11	-	agement T	eam	•	+	11	11	-	on Team				111			+	1-1-	Action Team			++	+		++	
D Workshop		\vdash	T	T	TT	T		0	11	11	T	TŤ	+++	•	H	111		0	+			1		1	+		++	
	nts Work Plan	H	H	A	Phase 1	11			▲ [Pha	se 2]		11						1	▲ [Phase	3]	1				++		++	+++
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	Progress Report/Completion Report					T	[Phase 1] 🛕	ITT							111	[Pha	se 2】 🛦	1	H					11	TH	[Ph	nase 3] 🛦
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Service metes for house connection	X		encial processing in a
Pipe materials and repairing tools and equipment	x	B	

Note) "X" will be finalized after the Baseline survey

9. Undertakings and Inputs by the Kenyan Side

Undertakings and inputs by GOK agreed on the Record of Discussion (RD) on March 7, 2016 between MWI and JICA are shown below. During the commencement of the Project, it should be confirmed by both sides.

9.1 Undertakings of GOK

- 9.1.1 GOK will take necessary measures to:
- (1) ensure that the technologies and knowledge acquired by the Kenya nationals as a result of Japanese technical cooperation contributes to the economic and social development of Kenya, and that the knowledge and experience acquired by the personnel of Kenya from technical training as well as the equipment provided by JICA will be utilized efficiently in the implementation of the Project; and;
- (2) grant privileges, exemptions and benefits to the JICA experts and their families, which are no less favorable than those granted to experts and members of the missions and their families of third countries or international organizations performing similar mission in the Republic of Kenya.
- 9.1.2 MWI will take necessary measures to conclude MoU with Pilot WSPs (in particular, Embu and Meru, which will start the NRW Reduction activities in Phase 1) and Counties responsible of Pilot WSPs for timely implementation of the Project with following three items;
 - a) To involve Counties for smooth implementation of the Project;
 - b) To acquire budget for NRW Reduction activities of Pilot WSPs; and
 - c) To confirm and agree the inputs and undertakings of Pilot WSPs.
- 9.1.3 GOK will take necessary measures to:
- (1) provide security-related information as well as measures to ensure the safety of the JICA experts;
- (2) permit the JICA experts to enter, leave and sojourn in the Republic of Kenya for the duration of their assignments therein and exempt them from foreign registration requirements and consular fees.
- (3) exempt the JICA experts from taxes and any other charges on the equipment, machinery and other material necessary for the implementation of the Project;

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- (4) exempt the JICA experts from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to them and /or remitted to them from abroad for their services in connection with the implementation of the Project; and
- (5) meet taxes and any other charges on the equipment, machinery and other material, referred to in II-7 in R/D, necessary for the implementation of the Project.
- 9.1.4 GOK will bear claims, if any arises, against the JICA experts resulting from, occurring in the course of, or otherwise connected with, the discharge of their duties in the implementation of the Project, except when such claims arise from gross negligence or willful misconduct on the part of the JICA experts.

9.2 Input by MWI, WASREB, KEWI and Pilot WSPs

MWI, WASREB, KEWI and Pilot WSPs will take necessary measures to provide at its own expense:

- (a) Assignments of counterpart personnel and support staff;
- (b) Payment of per-diem (daily allowance, transportation fee and accommodation fee) to the counterpart personnel;
- (c) Suitable office space with necessary equipment in MWI, KEWI and Pilot WSPs;
- (d) Utilities charges such as electricity, water supply, if any;
- (e) Supply or replacement of machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than the equipment provided by JICA;
- (f) Costs of activities for sensitization and campaigns by MWI;
- (g) Survey cost on the usage of current NRW reduction standards by WASREB;
- (h) Expense for training of Pilot WSPs at KEWI (short term course);
- (i) Expense for On-site training in Pilot WSPs by KEWI;
- (j) Expense for On-site ToT in Pilot WSPs;
- (k) Expense for NRW activities of Pilot WSPs;
- (1) Information in obtaining medical service;
- (m) Available data (including maps and photographs) and information related to the Project;
- (n) Necessary facilities to the JICA experts for the remittance as well as utilization of the funds introduced into Kenya in connection with the implementation of the Project.

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Main undertakings and inputs by the Kenyan side are summarized in the Table 9.1.

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Table 9.1 Undertakings and Inputs by the Kenyan Side

		JICA	MWI	WASREB	KEWL	Plot WSPs	Remeka ala ala ala ala ala ala ala ala ala a
ï	Assignments of counterpart personnel and support staff	Transfer State of Sta	*	*	*	*	Including salary of counterpart personnel
	Assemments of Project's Staff	*					
3	Payment of per-cliem (deily allowance, transportation fee and accommodation fee) of the constrapert personnel		*	*	★	*	Overseas travel expenses will be borne by JICA.
4	Switchife office space with necessary equipment		*		*	*	Office space with one telephone line—each (including internet connection and office forming took as dealeds, chairs.) Necessary among of deales and chairs in each organization are shown as below. A) MWE at least four(4) personnel to KEWE at least four(5) personnel (c) Pilot WSPs: workspace for at least four(4) personnel.
5	PC, Printer used by IICA experts in office spaces	*					
6	Utilities charges such as electricity, water supply, if any	2.523.555	*	*	*	*	
7	Supply or replacement of machinery, equipment, instruments, whicles, tools, spare parts and any other materials necessary for the suplementation of the Project other than the equipment provided by JICA		*	*	*	*	
8	Costs of activities for sensitization and causpaigns by MWI	*	*				Cost slaring with MWU/IICA
9	Survey cost on the usage of current NRW reduction standards			*		A CONTRACTOR OF THE PARTY OF TH	
0	Printing cost of the revised NRW standard	*					
1	Expense for Training of Pilot WSPs at KEWI (short term course)					*	
2	Expense for On-site ToT in Pitot WSPs				★		Expense of per-dem (chily allowance, transportation fee and accommodation fee) for KEWI Lecturers
	4			1		1	· · · · · · · · · · · · · · · · · · ·
3	Expense for On-site training in Pilot WSPs by KEWI					*	

	J. JECA	MWI	WASKER	KEWI	Pilot WSPe	Records
Concluding Memorandum of Understanding (MOU)		*	100	0.735280	*	MOU will be sighted by MWI, Counties , and Pilot WSPs
5 Information for obtaining medical services		*				
Provision of security-related information to JICA experts and mestas for their safety		*				
Tax exceptation for JICA experts from toxes and any other charges on the equipment, machinery and other material accessary for the implementation of the Project		*				
Exemption for JICA Experts from intuition on their salaries and allowances	Samo assertan	*				
Essuarance of the residence permits to ECA Experts and their examption from paying consulage		女				
Responses to the inconveniences encountered by PICA expents in the Project activities		*				
Data and efformation Garderling maps and photographs) for the implementation of the Project		*				
Assistance required for ITCA Experts to receive maney transferred from Japan in Kenya		*			, , , , , , , , , , , , , , , , , , ,	
Utilization of the Projet outputs		*				
Probision of services to JICA Experts		水				

[Annex]

Minute of Meeting (M/M)

PDM (version 0) and PO (version 0).

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Annex-2
Couterparts List

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NRW PROJECT'S JOINT COORDINATING COMMITTEE (JCC) MEETING

TENTATIVE LIST OF COUNTERPARTS/PARTICIPANTS THAT MIGHT ATTEND/TOTAL 433

Minist	MIVE LIST OF COUNTERPART Try of Water and Irrigation (MWI	S/PARTICIPANTS THAT MIGHT ATTEND(TOTAL 43)
1.	Prof. Fred H.K. Segor	Principal Secretary
2.	Eng. Lawrence N. Simitu	Water Secretary
3.	Eng. SAO Alima	Ag. Director Water, Sewerage and Sanitation Development
4.	Mr. David N. Mabonga	Senior Superintendent, Water Engineering
5.	Ms. Mary W. Mwangi	Superintendent, Water Engineering Superintendent, Water
6.	Mr. Onesmus N. Mwangi	Senior Inspector
7.	Ms. Jacinta Neooro	Secretary
WASR	The state of the s	Secretary
1.	Eng. Robert Gakubia, Chief	Executive Officer
2.	Eng. Peter Njaggah	Head, Regulatory Services
3.	Eng. Daniel Ngugi	Engineer
KEWI		Linghice
1.	Dr. Leunita Sumba	Acting Director
2.	Mr. TuliengeWekesaWalela	Instructor
3.	Mr. Walter Moseti	Instructor
4.	Mr. William Oduor	Lecturer
5.	Mr. Geoffrey Magondu	Lecturer
6.	Mr. Eric Wamiti	Lecturer
WASPA	A(1)	
1.	Ms. EddahWambui	Chief Executive Officer
TanaW	SB	
1.	Eng. Moses Naivasha	Chief Executive Officer
2.	Eng. John Mbogori	Technical Services Manager/Head of NRW Unit
MeruW	/SP(5)	The state of the s
1.	Mr. Mathew Nteere	Acting General Manager
2.	Eng. Albert NjeruGatuta	Technical Services Manager
3.	Eng. Christoper KaumeMuriithi	Planning and Engineering Officer
4.	Mr. Silas KirimiNdatho	Technical Assistant - NRW
5.	Ms. Lucy NkathaMung'ori	Senior Business Development Assistant
EmbuV	VSP(7)	
1.	Eng. Hamilton Karugendo	General Manager
2.	Gitonga	Operations Engineer
3.	Victor	Distribution Superintendent
4.	Alphaxad	GIS Officer
5.	Maina	Technical Officer
6.	Emily	Accountant i/c Billing, Meter Reading and Debt Collection
7.	Kimani	Accountant

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Annex-3 Minutes of Meetings (signed on 4th December, 2015)

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MINUTES OF MEETING BETWEEN JAPAN INTERNATIONAL COOPERATION AGENCY AND MINISTRY OF WATER AND IRRIGATION THE REPUBLIC OF KENYA

ON

THE PROJECT FOR STRENGTHENING CAPACITY IN NON-REVENUE WATER REDUCTION

The Detailed Planning Survey Team (the Team) organized by the Japan International Cooperation Agency (JICA), headed by Mr. Yoshiki OMURA visited Kenya from November 14th to December 4th, 2015 for the purpose of conducting Detailed Planning Survey of the Project for "Strengthening Capacity in Non-Revenue Water Reduction" (the Project).

During its stay in Kenya, the Team exchanged views and had a series of discussions about the project outline with the Ministry of Water and Irrigation (MWI) and organizations concerned.

As a result of the discussions, both sides understood the matters referred to in the document attached hereto.

Nairobi, 4th December, 2015

Mr. Yoshiki OMURA

Leader

Detailed Planning Survey Team

Japan International Cooperation Agency

Professor Fred H. K. SEGOR

Principal Secretary

State Department of National Water Services

Ministry of Water and Irrigation

The Republic of Kenya

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THE ATTACHED DOCUMENT

Major findings

(1) Current situation in Non-Revenue Water (NRW) reduction activities of Water Service Providers (WSPs)

The Team confirmed strong momentum towards NRW reduction among WSPs. Many WSPs have already established their NRW units and prepared NRW reduction plans in response to recent directions by Water Services Regulatory Board (WASREB). For example, NRW reduction activities of Mavoko WSP have dramatically increased in last year. However, the Team learned that most of the WSPs the Team visited still need external support to strengthen their NRW reduction activities to make their efforts more effective and efficient.

(2) Roles NRW Unit of MWI

The Team confirmed that recently established NRW Unit of MWI has following roles:

- a) Formulation of national policies and strategies for NRW reduction;
- b) Coordination of NRW reduction activities of related organizations; and
- c) Promotion of NRW reduction activities including sensitization of Counties.

(3) Utilization of the NRW Standards at WSPs

The Team found that the NRW standards that were developed have been disseminated to most of the urban WSPs. The case studies included in the standards are especially well received. The NRW reduction guideline, a part of the standards, has been utilized by many WSPs who prepared NRW reduction plans recently. However, the Team evaluated that the contents of the standards can be improved by incorporating practical examples of NRW reduction activities of WSPs.

(4) NRW Training Courses by Kenya Water Institute (KEWI)

The Team found that KEWI's current NRW training courses are largely theoretical based. In order to make the courses more applicable to WSPs' NRW reduction activities, the course contents need to be revised with creativity. The Team confirmed that KEWI is keen to provide more practice-oriented training courses.

(5) Related Activities of other development partners

The Team learned the activities of many development partners, international/national governmental /non-governmental organizations in the water sector of Kenya. The Team

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initially selected some Water Service Providers (WSPs) as potentials for pilot WSPs of the Project. Meanwhile, the Team confirmed that other development partners have formulated plans or implemented NRW-related projects. Therefore, the selection of Pilot WSPs should be considered carefully. The project activities should also be carefully studied to prevent the overlapping of activities by the other development partners.

II. Formulation of the Project Framework

Regarding the Project framework, both sides agreed the following points:

(1) Aim of the Project

Both sides agreed that the Project is aiming to strengthen NRW reduction support mechanisms by MWI, WASREB, and KEWI so that WSPs can carry out their NRW reduction activities sustainably which will contribute to the reduction of NRW in Kenya.

(2) Summary of cooperation by Japanese side

Both sides agreed that the Japanese side will provide the following assistance to the Kenyan side to strengthen the above mentioned NRW reduction support mechanism.

- a) Providing technical advice to NRW Unit of MWI in coordination and promotion of NRW activities, and review on policy/strategy, if necessary.
- b) Revision of NRW reduction standards, and promotion, and compilation of NRW reduction case studies/lessons learnt by WASREB.
- c) Strengthening KEWI's practical training capacity of NRW short courses by KEWI.
- d) Improve the capacity of WSPs for planning and implementation of NRW reduction activities.
- e) Knowledge sharing of case study/lessons learnt of pilot WSPs to other WSPs.

 The Project concept is shown in Annex-1, and the detailed project activities discussed in this survey are indicated in section XI.

III. Draft of Record of Discussion

Both sides agreed about the contents of the draft Record of Discussions ("R/D") shown in Annex-2.

R/D will be signed among MWI, the National Treasury, and JICA Kenya Office after the approval of R/D by JICA Headquarters.

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IV. Change of Project Title

Both sides agreed to change the Project title from "The Project for NRW Rate Reduction" to "The Project for Strengthening Capacity in Non-Revenue Water Reduction".

V. Project area

Both sides agreed that the Project area is the entire nation of Kenya.

VI. Roles of the Kenyan Organizations of the Project

Both sides confirmed the roles of the Kenyan organizations as summarized in Annex-3, which may be subject to the further changes of laws and regulations.

VII. Operational Structure of the Project

Based on the roles of organizations discussed in Annex-3, both sides agreed the following operational structure of the Project:

(1) Responsible Organization of the Project:

 Ministry of Water and Irrigation (MWI), State Department of National Water Services

(2) Implementation Organizations

- · MWI, State Department of National Water Services
- Water Services Regulatory Board (WASREB)
- Kenya Water Institute (KEWI)

(3) Joint Coordination Committee (JCC)

JCC will be held in every six months. The tentative Kenyan members of JCC are MWI, WASREB, KEWI, Leading WSPs (Embu and Meru) and pilot WSPs. The tentative Japanese members of JCC are the Expert team, JICA Kenya office, and the Embassy of Japan.

VIII. Duration of the Project

Both sides agreed that the duration of the Project is 5 years (including the additional survey (within 3 months)).

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IX. Monitoring

Both side agreed that the monitoring of the Project will be conducted twice a year.

X. Terminology of WSPs in the Project

For the clarification purpose, both sides agreed with the following terminology of WSPs:

(1) Target WSPs:

All Urban WSPs

(2) Pilot WSPs:

Urban WSPs that the activities of Output 4 are conducted.

(Selection Criteria is described in XII)

(3) Leading WSPs:

Pilot WSPs which have experiences of implementing JICA projects, and capacity and willingness to support other WSPs, namely Embu and Meru WSPs.

XI. Project Framework

Both sides agreed the following tentative framework of the Project as below.

(1) Overall Goal

Under NRW reduction support mechanism, Urban WSPs enhance NRW reduction activities.

(2) Project Purpose

A NRW reduction support mechanism is established for Urban WSPs to implement NRW reduction activities.

(3) Outputs

Output 1:

Promotion and coordination of NRW reduction activities by MWI NRW Unit are strengthened.

Output 2:

Use of NRW reduction standards by Urban WSPs are promoted by WASREB.

Output 3:

NRW related training capacity of KEWI is strengthened.

Output 4:

NRW planning and/or implementation capacity of Pilot Urban WSPs is enhanced.

Output 5:

Experiences and knowledge of NRW reduction activities are shared among Urban WSPs.

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Both sides also agreed that the additional survey (within 3 months) will be conducted to review/decide following items after commencement of the Project:

- a) Activities of Output 1. As official roles of NRW Unit is yet to be approved;
- Pilot WSPs of Output 4. Other than leading WSPs (Embu and Meru), more detail capacity assessment of WSPs and coordination with other development partners are required;
- c) Necessary equipment for the Project;
- d) Training in Japan or the third country

XII. Selection Criteria of Pilot WSPs

In addition to the two leading WSPs, as indicated in section XI, the additional survey will be conducted at the inception stage of the Project to select seven candidate WSPs, i.e., one WSP each from seven WSBs excluding Tana WSB using the following criterial. For project implementation, four Pilot WSPs will be further prioritized as the first group of cooperation to be continued for three years. The remaining three Pilot WSPs are the second group subject to review at the third year for their suitability and progress of the first group. For the selection of Pilot WSPs, factors such as capacity, ownership and geographical distribution will be considered in addition to the criteria below:

Criteria

- Urban WSPs (of Very Large, Large, and Medium, as defined by WASREB's Impact report);
- WSPs locations clarified by JICA's security guideline²;
- WSPs that are not receiving other development partners' assistance with overlapping activities of the Project;
- WSPs that have established NRW units;
- O&M Cost Recovery is 80 % or more;
- Metering Ratio is 75% or more;
- Water Coverage Ratio is 30% or more; and
- Water Service Hours is 10 hour or more.

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The performance index applied are derived from WASREB Impact Report No.7 (2014). If the index are changed, the selection criteria may be modified.

² Cooperation may be extended to Coast WSB as providing training opportunities in country and/or overseas.

XIII. Tentative Equipment list of the Project

The Tentative Equipment list of the Project is indicated below. Both sides agreed that JICA Headquarters will carefully consider the necessity, appropriateness, and quantity of these equipment by the time of signing R/D.

Table: Tentative List of Equipment

***	Portable ultra-sonic flow meter(s)
ou.	Leak detector(s)
508	Water pressure gauge(s)
	Customer meter(s)
	Bulk meter(s)/Zonal meter(s)
+	Data logger(s)
	Water pressure gauge(s)
_	Meter test bench(s)
66	Noise leak correlator
Sel .	Leak detection demonstration platform
	GPS (s)
ib.	Laptop computer
-	Multi-function machine (Scanner, printer and copy functions. A-3 size)
94°	Digital camera
-	Projector
50	Other necessary equipment for monitoring and supporting NRW reduction activities in Pilot WSPs

XIV. Major Inputs

Both sides confirmed that JICA's input will be basically human resources. Detailed contents of input (including some Major Undertakings) are indicated in Annex-4.

XV. Major Undertakings by the Kenyan side

(1) Concluding Memorandum of Understanding (MOU)

Upon the completion of selection of Pilot WSPs, MWI will take necessary measures for the signing of MOU between Water Services Board and Pilot WSPs (initially, Embu and Meru whose activities will commence from the first year of the Project) which will be witness by MWI and Counties responsible for Pilot WSPs for smooth implementation of the Project with the following reasons:

- a) to involve Counties for smooth implementation of the Project;
- b) to acquire budget for NRW reduction activities of Pilot WSPs; and

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- c) to confirm and agree to the inputs and undertakings of Pilot WSPs.
- (2) Other Undertakings by Kenyan Side

Other relevant Undertakings are based on the Agreement on Technical Cooperation between The Government of Japan and The Government of the Republic of Kenya dated April 29, 2004 and as periodically reaffirmed subsequently.

XVI. Other Relevant Issues

(1) Flexible Change of the Project Design, Outputs and Activities Both sides agreed that the Project design, outputs and activities may be reviewed and changed if roles of each organization were revised by Water sector reform.

(2) NRW Activities in the Pilot WSP

The NRW reduction activities in the pilot WSPs cover both physical and/or commercial losses. The NRW activities of the Project in each WSP will be decided through the prioritization of necessary NRW activities after the assessment of current NRW reduction activities and its challenges. The list of candidate NRW activities is shown in the following table. The number of required materials and equipment which are to be procured by JICA will be decided at the time of planning stage of activities. JICA will not cover the other costs including installation and construction costs.

Preliminary Activities	1) mapping
Activities for Physical Loss	1) isolation through zoning (DMA), 2) installation of master meter chamber, 3) installation of flow meters, 4) measurement of water pressure, 5)water balance analysis, 6) repair of surface leakage, 7) detection and repair of underground leakage 8) water pressure control, etc.
Activities for Commercial Loss	1) survey of customer meters, 2) updating of water meter register, 3) replacement of customer meters, 4) improvement of meter reading, 5) measures against illegal connection, 6) billing, etc.

(3) Per-diem and Other Travel Expenses of Counterparts

MWI mentioned financial constraints in providing counterparts with per diems and other travel expenses, and requested JICA's assistance. JICA replied that JICA expects MWI to make an effort to secure the budget for project activities including per diem; however, some costs such as workshop venue expenses can be shared. JICA added that in view of sustainability of the Project, development of own funding capability was preferable.

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(4) Number of Custom Water Meters

MWI requested 300 pieces of customer water meters to be installed in each WSP for the project purpose. The Team replied to convey MWI's message to the Headquarters .

Annex-1: The Project concept

Annex-2: The draft R/D

Annex-3: Organizational Chart

Annex-4: Major Inputs and Undertakings

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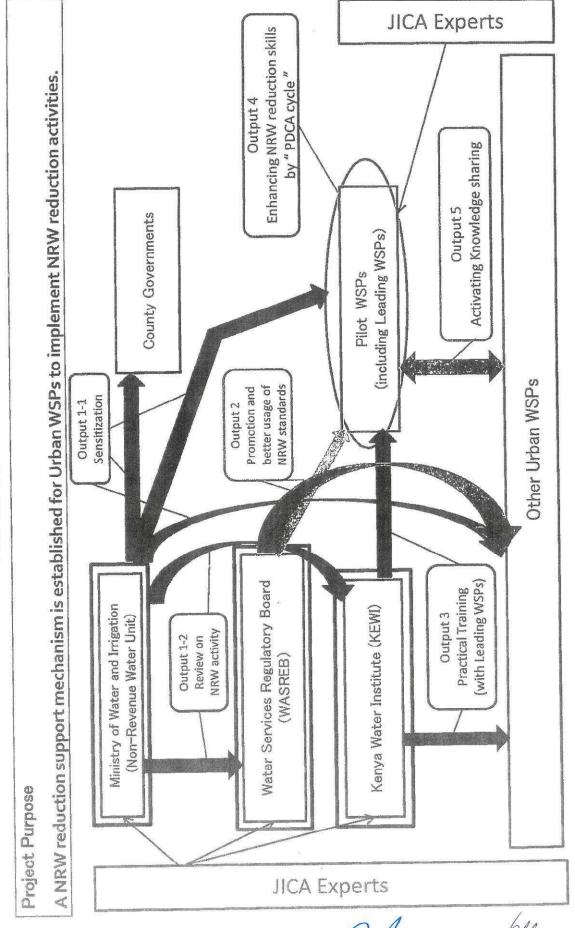
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Project Design of "Project for Strengthening Capacity in Non-Revenue Water Reduction"



Black Arrow: Technical Advice from JICA Experts Red frame: Implementing Organization

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Annex-4
Record of Discussion
(signed on 7th March, 2016)

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REPUBLIC OF KENYA MINISTRY OF WATER AND IRRIGATION STATE DEPARTMENT OF NATIONAL WATER SERVICES

Telegrams: "MAJI" Nairobi

Telephone: Nairobi +254 20 2716103

Fax: Nairobi +254 20 2728703

E-mail: ps@water.go.ke

Ref. No. WD/3/3/1338 Vol. II (19)

The Chief Representative JICA, Kenya Country Office NAIROBI

DIRECTOR OF WATER SERVICES

MAJI HOUSE NGONG ROAD

Date: 11th April 2016

NAIROBI

RE: RECORD OF DISCUSSIONS ON PROJECT FOR STRENGTHENING CAPACITY IN NON-REVENUE WATER REDUCTION PROJECT

Further to Treasury letter ref. No. MOF/ERD/20/79/78/04/z dated 31st March 2016, addressed to this office and copied to you, please find a duly signed copy of records of discussions for your further necessary action.

Eng. SAO Alima

For: DIRECTOR WATER SERVICES

CC: DWS

to see for information.

"Water is life and your right but conserve it"

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REPUBLIC OF KENYA THE NATIONAL TREASURY

Telegraphic Address: 22921 Finance – Nairobi FAX NO. 310833 Telephone: 2252299 When Replying Flease Quote THE NATIONAL TREASURY
P O BOX 30007 - 00100
NAIROBI

Ref. No. MOF/ERD/20/79/78/04/Z

31st March, 2016

The Principal Secretary
State Department of National Water Services
Ministry of Water & Irrigation
NAIROBI

RE: RECORD OF DISCUSSIONS ON PROJECT FOR STRENGHTENING CAPACITY IN NON-REVENUE WATER REDUCTION PROJECT

Please refer to your letter Ref. No. WD/3/3/1338/(15) dated 14th March, 2016 on the above subject.

We forward herewith two (2) duly signed copies of Record of Discussion for your necessary action.

We have retained one copy for our records.

Robert Gatonga

FOR: PRINCIPAL SECRETARY/THE NATIONAL TREASURY

C.C. Chief Representative JICA, Kenya Office NAIROBI



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RECORD OF DISCUSSIONS

ON

PROJECT FOR STRENGTHENING CAPACITY IN NON-REVENUE WATER REDUCTION

IN

THE REPUBLIC OF KENYA

AGREED UPON BETWEEN THE GOVERNMENT OF THE REPUBLIC OF KENYA AND

JAPAN INTERNATIONAL COOPERATION AGENCY

Nairobi, March 7th, 2016

Chief Representative

JICA Kenya Office

Prof. Fred H.K.SEGOR

Principal Secretary

State Department of National Water

Services

Ministry of Water and Irrigation

The Republic of Kenya

Dr. Kamau TAUGGE Principal Secretary The National Treasury

The Republic of Kenya

Based on the Minutes of Meetings on the Detailed Planning Survey on the Project for Strengthening Capacity in Non-Revenue Water (hereinafter referred to as "NRW") Reduction (hereinafter referred to as "the Project") signed on 4th December, 2015 between the Ministry of Water and Irrigation (hereinafter referred to as "MWI") and the Japan International Cooperation Agency (hereinafter referred to as "JICA"), JICA held a series of discussions with MWI and relevant organizations to develop a detailed plan of the Project.

Both parties agreed the details of the Project and the main points discussed as described in the Appendix 1 and the Appendix 2 respectively.

Both parties also agreed that MWI, Water Services Regulatory Board (hereinafter referred to as "WASREB"), and Kenya Water Institute (hereinafter referred to as "KEWI"), the counterparts of the Project, will be responsible for the implementation of the Project in cooperation with JICA, coordinate with other relevant organizations and ensure that the self-reliant operation of the Project is sustained during and after the implementation period in order to contribute toward social and economic development of the Republic of Kenya (hereinafter referred to as "Kenya").

The Project will be implemented within the framework of the Agreement on Technical Cooperation signed on 29th April, 2004 (hereinafter referred to as "the Agreement") and the Note Verbales exchanged on 10th and 16th July 2015 between the Government of Japan (hereinafter referred to as "GOJ") and the Government of Kenya (hereinafter referred to as "GOK").

Appendix 1: Project Description
Appendix 2: Main Points Discussed

Appendix 3: Minutes of Meetings on the Detailed Planning Survey of the Project

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PROJECT DESCRIPTION

Both parties confirmed that there is no change in the Project Description agreed on in the Minutes of Meetings on the Detailed Planning Survey on the Project signed on 4th December, 2015 (Appendix 3).

I. BACKGROUND

The National Water Master Plan 2030 recommends that water resources must be properly managed, conserved, developed and more efficiently utilized considering future impact of climate change and rapid increase of population, economic growth, etc. NRW ratio in Kenya is 42% as of 2015. This figure means that half of treated water produced in the entire country is lost which results in the loss of half of the revenue which could have been used for further improvement of water access. In Vision 2030, GOK aims to reduce NRW ratio to 25% by 2020 and 20% by 2030. GOK has therefore implemented "the Project for Non-Revenue Water Management" supported by JICA from 2010 to 2014. Under this Project, WASREB developed the Standards for NRW Reduction, which consists of the NRW Reduction Guideline for use by WSB, the NRW Reduction Manual for use by WSP and Handbooks for use by technical staffs. Furthermore, KEWI has established new training course on NRW reduction, so it is desired to actualize the reduction of NRW ratio by applying materials that have been developed and training courses.

For sustainable NRW reduction, GOK requested the GOJ technical cooperation to strengthen capacity of the responsible organization to enhance the basic knowledge and the technical capacity for tackling NRW issue.

II. OUTLINE OF THE PROJECT

Outline of the Project is described in the Logical Framework (Project Design Matrix: PDM) (Annex 1) and the tentative Plan of Operation (PO, Annex 2). The PDM and PO shall be finalized in the additional survey within 3 months after the Project commencement.

1. Input

(1) Input by JICA

JICA will take, at its own expense, the following measures according to the normal procedure under the Technical Cooperation.

(a) Dispatch of Experts

Chief adviser/NRW management

NRW reduction specialist(s)

Customer Management/Billing collection

Training management

Information/Public relation management

Other experts if necessary

(b) Training

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Training in Japan (and/or in third country)

(c) Machinery and Equipment

The equipment to be provided to the Kenyan side in the Project are tentatively itemized shown in Annex-3

(2) Input by MWI, WASREB, KEWI and Pilot WSPs

MWI, WASREB, KEWI and Pilot Water Service Providers ("Pilot WSPs") will take necessary measures to provide at its own expense:

(a) Assignments of counterpart personnel and support staff;

- (b) Payment of per-diem (daily allowance, transportation fee and accommodation fee) to the counterpart personnel;
- (c) Suitable office space with necessary equipment in MWI, KEWI, and Pilot WSPs;

(d) Utilities charges such as electricity, water supply, if any;

 (e) Supply or replacement of machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than the equipment provided by JICA;

(f) Costs of activities for sensitization and campaigns by MWI

- (g) Survey cost on the usage of current NRW reduction standards by WASREB
- (h) Expense for Training of Pilot WSPs at KEWI (short term course)
- (i) Expense for On-site training in Pilot WSPs by KEWI
- (j) Expense for On-site ToT in Pilot WSPs
- (k) Expense for NRW activities of Pilot WSPs
- (I) Information in obtaining medical service:
- (m) Available data (including maps and photographs) and information related to the Project;
- (n) Necessary facilities to the JICA experts for the remittance as well as utilization of the funds introduced into Kenya in connection with the implementation of the Project

2. Implementation Structure

Implementation Structure of the Project is given in the Annex 4. The roles and assignments of relevant organizations are as follows:

(1) MWI

(a) Project Director

Director of Department of Water Services, MWI will be responsible for overall administration and implementation of the Project.

(b) Project Manager

Deputy Director of Operation and Maintenance, State Department of National Water Services, MWI will responsible for daily operation of the Project, and administration and implementation of activities, related to output 1 and 5.

(2) WASREB

Chief Executive Officer, WASREB will be responsible for administration and implementation of activities, related to output 2.

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(3) KEWI

Director, KEWI will be responsible for administration and implementation of activities, related to output 3.

(4) Pilot WSPs

Managing Directors, Pilot WSPs will be responsible for administration and implementation of activities, related to output 4.

(5) JICA Experts

The JICA experts will give necessary technical guidance, advice and recommendations to MWI, WASREB, KEWI, and Pilot WSPs on any matters pertaining to the implementation of the Project.

(6) Joint Coordinating Committee (JCC)
Joint Coordinating Committee (hereinafter referred to as "JCC") will be established in order to facilitate inter-organizational coordination. JCC will be held at least twice a year and whenever deems it necessary. JCC will approve an annual work plan, review overall progress, conduct evaluation of the Project, and exchange opinions on major issues that arise during the implementation of the Project. A list of JCC members is shown in the Annex 5.

3. Project Site(s) and Beneficiaries

Project Area: Kenya

Beneficiaries: Staffs of MWI, WASREB, KEWI, Urban WSPs Pilot WSPs would be selected during the additional survey for three (3) months from the commencement of the Project.

4. Duration

Five (5) years (including the additional survey within 3 months)

5. Reports

- (1) Monitoring Sheet on bi-annual basis until the project completion (every six (6) months).
- (2) Also, Project Completion Report shall be drawn up one (1) month before the termination of the Project.

6. Environmental and Social Considerations

MWI, WASREB, and KEWI agreed to abide by 'JICA Guidelines for Environmental and Social Considerations' in order to ensure that appropriate considerations will be made for the environmental and social impacts of the Project.

III. UNDERTAKINGS OF GOK

- GOK will take necessary measures to:
 - (1) ensure that the technologies and knowledge acquired by the Kenya nationals as a result of Japanese technical cooperation contributes to the economic and social development of Kenya, and that the knowledge and

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experience acquired by the personnel of Kenya from technical training as well as the equipment provided by JICA will be utilized effectively in the implementation of the Project; and

- (2) grant privileges, exemptions and benefits to the JICA experts above and their families, which are no less favorable than those granted to experts and members of the missions and their families of third countries or international organizations performing similar missions in the Republic of Kenva.
- 2. MWI will take necessary measures to conclude MOU with Pilot WSPs (in particular, Embu and Meru, which is supposed to start the NRW Reduction activities in the first year of the Project) and Counties responsible of Pilot WSPs for timely implementation of the Project for three purposes as below;
 - a) To involve Counties for smooth implementation of the Project;
 - b) To acquire budget for NRW Reduction activities of Pilot WSPs; and
 - To confirm and agree the inputs and undertakings of Pilot WSPs.

An example MOU is shown in Annex-6.

- 3. GOK will take necessary measures to:
 - (1) provide security-related information as well as measures to ensure the safety of the JICA experts;
 - (2) permit the JICA experts to enter, leave and sojourn in the Republic of Kenya for the duration of their assignments therein and exempt them from foreign registration requirements and consular fees.
 - (3) exempt the JICA experts from taxes and any other charges on the machinery and other material necessary for the equipment. implementation of the Project;
 - (4) exempt the JICA experts from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to them and/or remitted to them from abroad for their services in connection with the implementation of the Project; and
 - (5) meet taxes and any other charges on the equipment, machinery and other material, referred to in II-7 above, necessary for the implementation of the Project.
- 4.GOK will bear claims, if any arises, against the JICA experts resulting from, occurring in the course of, or otherwise connected with, the discharge of their duties in the implementation of the Project, except when such claims arise from gross negligence or willful misconduct on the part of the JICA experts.

IV. MONITORING AND EVALUATION

JICA and MWI, WASREB, KEWI will jointly and regularly monitor the progress of the Project through the Monitoring Sheets based on the PDM and PO. The Monitoring Sheets shall be reviewed every six (6) months.

Also, Project Completion Report shall be drawn up one (1) month before the



termination of the Project.

V. PROMOTION OF PUBLIC SUPPORT

For the purpose of promoting for the Project, MWI, WASREB and KEWI will take appropriate measures to make the Project widely known to the people of Kenya.

VI. Misconduct

If JICA receives information related to suspected corrupt or fraudulent practices in the implementation of the Project, MWI, WASREB, KEWI and relevant organizations shall provide JICA with such information as JICA may reasonably request, including information related to any concerned official of the government and/or public organizations of Kenya.

MWI, WASREB, KEWI and relevant organizations shall not, unfairly or unfavorably treat the person and/or company which provided the information related to suspected corrupt or fraudulent practices in the implementation of the Project.

VII. MUTUAL CONSULTATION

JICA and MWI, WASREB, KEWI will consult each other whenever any major issues arise in the course of Project implementation.

VIII. AMENDMENTS

The Record of Discussions may be amended by the Minutes of Meetings between JICA, MWI and The National Treasury.

The Minutes of Meetings will be signed by authorized persons of each side who may be different from the signers of the Record of Discussions.

Annex -1 Tentative Logical Framework (Project Design Matrix: PDM)

Annex -2 Tentative Plan of Operation

Annex -3 List of equipment

Annex -4 Implementation Structure of the Project

Annex -5 A List of Proposed Members of Joint Coordinating Committee

Annex -6 An example of MOU

Annex -7 Monitoring Form

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MAIN POINTS DISCUSSED

I. Roles NRW Unit of MWI

NRW Unit of MWI has the following roles:

- a) Formulation of national policies and strategies for NRW reduction;
- b) Coordination of NRW reduction activities of related organizations; and
- c) Promotion of NRW reduction activities including sensitization of Counties.

II. Additional Survey

Both sides also agreed that the additional survey (within 3 months) will be conducted to review/decide on the following items upon commencement of the Project:

- a) Activities of Output 1. As official roles of NRW Unit is yet to be approved;
- b) Pilot WSPs of Output 4. Other than leading WSPs (Embu and Meru), more detail capacity assessment of WSPs and coordination with other development partners are required:
- c) Necessary equipment for the Project;
- d) Training in Japan or the third country

III. Terminology of WSPs in the Project

For the clarification purpose, both sides agreed with the following terminology of WSPs:

(1) Target WSPs:

All Urban WSPs

(2) Pilot WSPs:

Urban WSPs that the activities of Output 4 are conducted.

(Selection Criteria is described in XII)

(3) Leading WSPs:

Pilot WSPs which have experiences of implementing JICA projects, and capacity and willingness to support other WSPs, namely Embu and Meru WSPs.

IV. Selection Criteria of Pilot WSPs

In addition to the two leading WSPs, as indicated above, the additional survey will be conducted at the inception stage of the Project to select seven (7) candidate WSPs, i.e., one (1) WSP each from seven (7) WSBs excluding Tana WSB using the following criteria. For project implementation, four (4) Pilot WSPs will be further prioritized as the first group of cooperation to be continued for three years. The remaining three (3) Pilot WSPs are the second group subject to review at the third year for their suitability and progress of the first group. For the selection of Pilot WSPs, factors such as capacity, ownership



and geographical distribution will be considered in addition to the criteria below:

Criteria

- Urban WSPs (of Very Large, Large, and Medium, as defined by WASREB's Impact report);
- WSPs locations clarified by JICA's security guideline;
- WSPs that are not receiving other development partners' assistance with similar activities of the Project;
- · WSPs that have established NRW units:
- O&M Cost Recovery is 80 % or more;
- Metering Ratio is 75% or more;
- Water Coverage Ratio is 30% or more; and
- Water Service Hours is 10 hour or more.

V. Related Activities of other development partners

The activities of many development partners, international/national governmental /non-governmental organizations in the water sector of Kenya. Other development partners have formulation plans or implementing NRW-related projects. The selection of Pilot WSPs should be considered carefully. The project activities should also be carefully studied to prevent the overlapping of activities by the other development partners.

VI. Concluding Memorandum of Understanding (MOU)

Upon the completion of selection of Pilot WSPs, MWI will take necessary measures for the signing of MOU between Water Services Board and Pilot WSPs (initially, Embu and Meru whose activities will commence from the first year of the Project) which will be witness by MWI and Counties responsible for Pilot WSPs for smooth implementation of the Project with the following purposes:

- a) to involve Counties for smooth implementation of the Project;
- b) to acquire budget for NRW reduction activities of Pilot WSPs; and
- c) to confirm and agree the inputs and undertakings of Pilot WSPs.

VII. Flexible change of the Project design, output and activities

Both sides agreed that the Project design, output and activities may be reviewed and changed if roles of each organization were changed by Water sector reform result.

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PM Form 1 PDM

Version 0 Dated

Project Design Matrix

Project Title: Project for Strengthening Capacity in Non-Revenue Water Reduction

(mplementing Agency: MWI, WASREB, KEW

farget Group: Urban WSPs

Period of Project's years from the date when the first JICA Expert is dispatched

Remarks Achievement Important Assumption Project budget of the CPs is NRW Unit staff positions are Current WASREB's role and NRW short courses, Project budget of the CPs is MWI NRW Unit annual reports NRW reduction remains as NRW reduction remains as priority of MWI and WSPs. priority of MWI and WSPs. KEWI continues to offer authority remains. Pilot Site; Embu, Meru, and others secured. secured. NRW reduction annual reports NRW reduction annual reports Means of Verification Workshop program and list of Materials for County seminar List of seminar participants Pilot WSPs annual NRW Revised course materials Revised NRW reduction Revised course systabus NRW reduction plans JCC meeting minutes JCC meeting minutes JCC meeting minutes JCC meeting minutes Campaign materials Course participants' Platform (online) evakuation sheets reduction plans Impact reports Project reports project reports roject reports Project reports race studies standardss participants 2. X of pilot Urban WSPs continue achieving target(s) set by the 3-2 Evaluations by the MRW course participants is higher than X of pilot Urban WSPs continute achieving largets set by the 2-2 Revised MRW reduction standards are dissensinated to all Urban WSPs through workshop (s). 1. X of Urban WSPs participate knoweldge sharing activities 3-3 O% of NRW course participants formulate the workplans. 1-2 NRW reduction campaigns are conducted semi annually incorporating on-site trainings and revised course materials. 3. NRW related training capacity of KEWI Is 3-1 KEWI conducts NRW reduction courses with contents 1-1 All County representatives participate NRW related 3. NRW annual report is continuously produced and 2-1 NRW reduction standards are revised by year X. Objectively Verifiable Indicators 1-3 NRW reduction annual reports are produced. ainna NRW reduction plan for two years. before the revision of course materials. annual NRW reduction plan. established by the Project fessiminated seminar(s). Project Site: The entire country of Kenya Inder NRW reduction support mechanism. established for Urban WSPs to implement eduction activities by MWI NRW Unit are 4 WRW reduction support mechanism is 2. Use of MRW reduction standards by Urban WAPs are promoted by WASREB. Jrban WSPs enhance NRW reduction . Promotion and coordination of NRW Narrative Summary vRW reduction activities Project Purpose Overall Goa strengthened, frenginened Outputs

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5. Experiences and knowledge of NRW reduction activities are shared among Uham WSPs.		I MWH VRW Unit, in caoperation with WAS 2 MWH NRW Unit plans and implements NB 2 MWH NRW Unit plans and implements NB 3 MWH NRW Unit conducts reviews of KEW 5 MWH NRW Unit conducts reviews of KEW	WASREB conducts a survey of the usage 2 Based on the survey result as well as Out 3 WASREB promotes revised NRW reduct 4 WASREB incorporates the results surveys the results was WASREB incorporates the use KREWI surveys current status of NRW reduct KREWI reviews NRW reduction training stra SKEWI in collaboration with leading WSPs WEWI reflects on-site NRW trainings into AKEWI reflects on-site NRW training states on a AKEWI reflects on-site NRW training states on a AKEWI reflects on-site NRW training states on a AKEWI reflects on-site NRW training states on a AKEWI reflects on-site NRW training states on a AKEWI reflects on-site NRW training states on a AKEWI reflects on a AKEWI reflects on a AKEWI reflects on-site NRW training states on a AKEWI reflects o	5.5KEWI Incorporates the results of review by MV
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4.2 Each pilot WSP conducts snalyses of current NRW reduction activities and identifies its challenges.
4.3 Each pilot WSP identifies measures to solve challenges and formulates the NRW reduction plan.
4.4 Each pilot WSP formulates the annual NRW reduction plan including financial schedule based on the NRW reduction plan. 4.8 Each milat WSP haids raudar MRW netusting meetings, attended by relevant denatronens of WSP 5.1 MWI NRW Unit organizes NRW related regular meetings in cooperation with other releveant organizations. 4.6 Each pilot WSP evaluates and analyzes implementation results and revise plans. 4.7 Each pilot WSP produces the NRW reduction activity report annually. 5.2 WASREB compiles caso studies/lessons leant about NRW reduction activities. Nute: "X" is the indicator that will be decided after the project commencement. 4.5 Each pilot WSP implements the annual NRW reduction plan.

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Table: Tentative List of Equipment

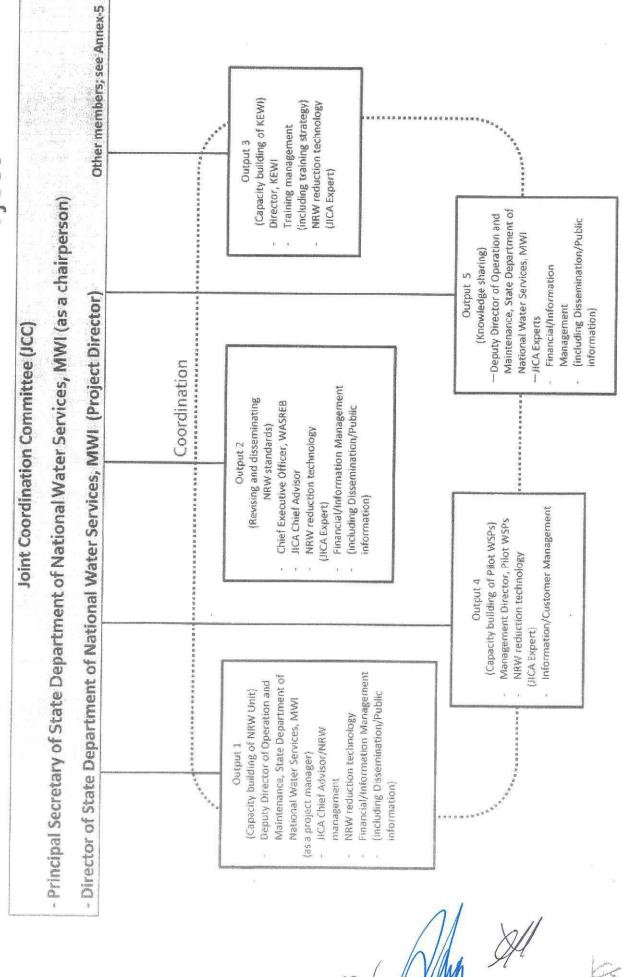
	Name of Equipment
-	Portable ultra-sonic flow meter(s)
_	Leak detector(s)
-	Water pressure gauge(s)
	Bulk meter(s)
_	Data logger(s)
-	Water pressure gauge(s)
-	Meter test bench(s)
146	Noise leak correlator
sia	Leak detection demonstration platform
-	GPS (s)
	Laptop computer
Ner The	Multi copy machine (Scanner, printer and copy functions. A-3 size)
ле	Digital camera
ste	Projector
	Other necessary equipment for monitoring and supporting NRW reduction activities in Pilot WSPs

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Implementation Structure of the Project



List of Members of Joint Coordinating Committee

Composition

1. Chairperson:

Principal Secretary, State Department of National Water Services, MWI

2. Project Director:

Director of Department of Water Services, MWI

3. Project Manager:

Deputy Director of Operation and Maintenance, State Department of National Water Services, MWI

- 4. Other Members
 - (1) The Kenva side:
 - 1) Head of Donor Coordination, MWI
 - 2) Chief Executive Officer, WASREB
 - 3) Director, KEWI
 - 4) Management Directors, Pilot WSPs (including, Leading WSPs)
 - 5) Other personnel assigned by Kenyan side
- (2) The Japanese side:
 - 1) Chief Advisor
 - 2) Other experts
 - 3) Representatives of JICA Kenya Office
 - 4) Other personnel as mutually agreed upon

Note: Officials of the Embassy of Japan in the Republic of Kenya may attend the committee meeting.

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(Example)

Memorandum of Understanding for "PROJECT FOR STRENGTHENING CAPACITY IN NON-REVENUE WATER REDUCTION"

This Memorandum of Understanding ("MoU") is made and entered by and among the following four parties:

[Name of WSB] as one party, represented by [Name, Position] ("[Abbreviated Name of WSB]");

and

[Name of Water Service Provider] as one party, represented by [Name, Position] ("[Abbreviated Name of WSP]");

witness by

Ministry of Water and Irrigation as one party, represented by [Name, Position] ("MWI");

and

[Name of County Government] as one party, represented by [Name, Position] ("the County");

1. Ground of the MoU

Based on the result of the survey conducted by JICA, [Abbreviated Name of WSP] has been selected as a Pilot Water Service Provider (WSP) of "Project for Strengthening Capacity in Non-Revenue Water Reduction" (the Project). This MoU is an agreement between the four parties specified above in regard to smooth implementation of the Project.

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- Dates of Validation and Completion of the MoU
 This MoU shall be valid from the date of MoU signing, [Date, Month, Year] and till the completion of the Project,
- 3. Amendments of the MoU Any necessary amendments and additions to the MoU may be negotiated among the four parties. Agreed amendments and additions shall be evidenced by a written document signed by all the parties.

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Terms of Reference

- The County shall support [Abbreviated Name of WSP], as its lawful owner, for the implementation of Non-Revenue Water Reduction activities of the Project.
- [Abbreviated Name of WSP] shall be responsible for the following particulars
 during the period of the Project. Some of the particulars are for experts from
 Japan International Cooperation Agency (JICA). The County shall support
 [Abbreviated Name of WSP]'s smooth implementation of NRW reduction
 activities in regard to the particulars.
 - (a) Assignments of counterpart personnel and support staff
 - (b) Payment of per-diem (daily allowance, transportation fee and accommodation fee) to the counterpart personnel
 - (c) Provision of suitable workspace with furniture and equipment for JICA experts (for at least 4 personnel)
 - (d) Utilities charges such as electricity, water supply, if any
 - (e) Supply or replacement of machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than the equipment provided by JICA
 - (f) Expense for NRW activities
 - (g) Provision of information on available medical services for JICA experts
 - (h) Provision of available data (including maps and photographs) and information necessary for project activities

[Name] Chief Executive Officer [Name of WSB] [Name] Managing Director [Name of WSP]

Witness by

[Name] [Position] [Department] Ministry of Water and Irrigation

[Position] [Department] [Name of County Government]

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TO CR of JICA Kenya OFFICE

PROJECT MONITORING SHEET

Project Title :		
Version of the Sheet: Ver. • •	(Term: Month, Year - Month, Year)	
	Name:	and arrangement
	Title: Chief Advisor	
	Submission Date:	response

I. Summary

1 Progress

- 1-1 Progress of Inputs
- 1-2 Progress of Activities
- 1-3 Achievement of Output
- 1-4 Achievement of the Project Purpose
- 1-5 Changes of Risks and Actions for Mitigation
- 1-6 Progress of Actions undertaken by JICA
- 1-7 Progress of Actions undertaken by Gov. of Republic of Kenya
- 1-8 Progress of Environmental and Social Considerations (if applicable)
- 1-9 Progress of Considerations on Gender/Peace Building/Poverty Reduction (if applicable)
- 1-10 Other remarkable/considerable issues related/affect to the project (such as other JICA's projects, activities of counterparts, other donors, private sectors, NGOs etc.)

2 Delay of Work Schedule and/or Problems (if any)

- 2-1 Detail
- 2-2 Cause
- 2-3 Action to be taken
- 2-4 Roles of Responsible Persons/Organization (JICA, Gov. of the Republic of Kenya)

3 Modification of the Project Implementation Plan

- 3-1 PO
- 3-2 Other modifications on detailed implementation plan

(Remarks: The amendment of R/D and PDM (title of the project, duration, project site(s), target group(s), implementation structure, overall goal, project purpose, outputs, activities, and input) should be authorized by JICA HDQs. If the project team deems it necessary to modify any part of R/D and PDM, the team may propose the draft.)

4 Preparation of Gov. of the Republic of Kenya toward after completion of the Project

II. PDM&PO as Project Monitoring Sheet I & II

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