

WATER SYSTEM ASSESSMENT TRANSFER IN OBONGI DISTRICT

This file contains the asset register, compiled during the condition assessment of Luwakoke, Doma, Waka and Longa I.

The worksheets include:

Condition Assessment Luwakoke	Registry of Assets in Luwakoke scheme including condition of infrastructure and recommendations for upgrade
Condition Assessment Doma	Registry of Assets in Doma scheme including condition of infrastructure and recommendations for upgrade
Condition Assessment Waka	Registry of Assets in Waka scheme including condition of infrastructure and recommendations for upgrade
Condition Assessment Longa I	Registry of Assets in Longa I scheme including condition of infrastructure and recommendations for upgrade
Operational Assessment	Calculates Key Performance Indicators to assess system efficiency

STORAGE																					
Tank #1	m ³	100	Steel tank, 10m above the ground	Dongo Village	377053	344127	Active	There is some leakage at seven 8mm water drips	31/12/2019	20	0.75	19.25	Minor repair to repair leaking drips	Likely	Major	High	Repair				
Bulk meter																					
No bulk meter																					
TRANSMISSION																					
Transmission line	km	2.69	HDPE 90mm, PN 16	Lowakoke and Dongo			Active		31/12/2019	20	0.75	19.25	Good condition	Unlikely	Minor	High	Do nothing				
Gate Valve	mm		No gate valve																		
Air valve	mm		No air valve																		
DISTRIBUTION																					
Distribution line	km	4.421	HDPE 75mm and 40mm	Dongo, Lokoi, Lowakoke village			Active		31/12/2019	20	0.75	19.25	Good condition	Unlikely	Minor	Medium	Do nothing				
Distribution line	km																				
Gate Valve	mm		No gate valve																		
Air valve	mm		No air valve																		
SERVICE CONNECTIONS																					
PSP #1	No.	10	10 tap stands with 40 taps					Broken taps	31/12/2019	10	0.75	9.25	Minor repairs to repair broken taps	Likely	Insignificant	Low	Repair				900,000
STOCK (explosives, chemicals)																					
No																					
No																					

GRADE ON CONDITION ASSESSMENT	
Good condition	Minor maintenance required
Minor defect (up to 5% of components need replacement)	Minor maintenance required
Major defect (up to 10-20% of components need replacement)	Minor maintenance considered
Extensive defect (up to 20-50% of components need replacement)	Significant repair / replace required
Very extensive / inoperable	Over 50% of asset require replacement

Pump	Flow rate	m ³ /hr	9	SP9-29	Dama Zone II			Active	No observation since the pump is already installed	01.12.2018	10	2	8	
	Power rating	kW	5.5											
	Pump installation depth	m	109											
	Bulk meter	mm	DN 50											
	Non Return Valve	mm	DN 50											
	Wash-out	mm	DN 50											
	Air Valve	mm	DN 50											
	Pressure gauge	Bar	20											
	Pump House	No.	1											
ENERGY SOURCE														
Solar Power	Solar panels	No.; Angle of tilt	40	265W, Risun	Dama Zone II			Active	The entire fenced area without structures is being used for farming by the scheme operators	01.12.2018	10	2	8	
			16											
Thermal Power	Generator set	kVA	17.6	MET ENERGY	Dama Zone II			Active		01.12.2018	10	2	8	Good condition
			0											
National Grid	Generator House #1	m ²	0	No transformer	Dama Zone II			Active	The pump house is currently used as pump house and generator house. There is no space for one to access the well head fittings	01.12.2018	30	2	28	Requires upgrade / expansion to make room for the generator
Electrical Installations	Transformer	kVA		No transformer				Active		01.12.2018	10	2	8	Good condition
			RSI											
CIVIL STRUCTURES														
Guard Houses	No.	1						Active	No lighting system in the guard house and pump house. The guard house is combined with the store. Size of the store is 9m ² (3x3) and the guard house is 4.5m ² (3x1.5)	01.12.2018	30	2	28	Requires upgrade
Latrines	No.	1						Active		01.12.2018	30	2	28	Good condition
WATER TREATMENT														

STORAGE													
Tank #1	m ³	65	Steel tank	Dongo village	377052	344120	Active	The tank is arranged as (4x4x3) but the dimension of the plates are not known. There is a leakage as shown by drops of water from the tank. The tank is shared with Abio water supply scheme	01.12.2018	20	2	18	Minor defects
Tank #2	m ³												
Bulk meter	mm	100		Dongo village									
TRANSMISSION													
Transmission line	km		HDPE					The total transmission line is not known	01.12.2018	20	2	18	Good condition
Gate Valve	mm												
Air valve	mm												
DISTRIBUTION													
Distribution lines	km		HDPE					The total distribution line is not known	01.12.2018	20	2	18	Good condition
Distribution lines	km												
Gate Valve	mm												
Air valve	mm												
SERVICE CONNECTIONS													
PSP #1	No.	12	12 tapstands with 24 taps						01.12.2018	10	2	8	
STOCK (spares, chemicals)													
	No.												
	No.												

GUIDE ON CONDITION ASSESSMENT

Good condition				Normal maintenance required
Minor defects (approx. 5% of components need replacement)				Minor maintenance required
Major defects (approx 10 - 20% of components need replacement)				Major maintenance required
Requires renewal (approx 20 - 50% of components need replacement)				Significant renewal / upgrade required
Asset failed / unserviceable				Over 50% of asset requires replacement

WATER SYSTEM ASSESSMENT AND SERVICE TRANSFER FROM UNHCR TO WATER AUTHORITIES

ASSET REGISTER AND CONDITION ASSESSMENT OF WATER SCHEME COMPONENTS

NAME OF REFUGEE SETTLEMENT Palorinya

NAME OF WATER SCHEME Longa I in Zone III West

03.10.2020

ASSET TYPE	UNITS	SIZE	DESCRIPTION (material, brand etc)	LOCATION	GPS COORD.		STATUS (Active; Not operational)	FIELD OBSERVATION	INSTALLATION DATE	Estimated Useful Life (EUL)	AGE
					N	E					
WATER SOURCE											
Borehole DWD (insert No.)		66773		Longa Village	341115	377686	Active		Jan.17		
Pump test yield	m ³ /hr	16.2									
Borehole depth	m	90									
Casing diameter	mm										
Static water level	m	20.12									
Dynamic water level	m	39.37									
Draw-down	m										

Pump			SP9-29				Active	No observation since the pump is already installed	Jän.17	10	3.75
Flow rate	m ³ /hr	9									
Power rating	kW	5.5		Longa Village							
Pump installation depth	m	55									
Bulk meter	mm	DN 50									
Non Return Valve	mm	DN 50									
Wash-out	mm	DN 50									
Air Valve	mm	DN 50									
Pressure gauge	Bar	20									
Pump House	No.	1							Jän.17	10	3.75
ENERGY SOURCE											
Solar Power		72	Solinc solar panels	Longa Village			Active	The entire fenced area without structures is being used for farming by the scheme operators	Jän.17	10	3.75
Solar panels	No., Angle of tilt	18°									
Thermal Power											
Generator set	kVA	25					Active		Jän.17	10	3.75
Generator House #1	m ²	12							Jän.17	30	120.75
National Grid											
Transformer	kVA										
Electrical Installations											
Electrical installations - control panels		RSI	Grundfos				Active		Jän.17	10	3.75
CIVIL STRUCTURES											
Guard Houses	No.	1							Jän.17	30	3.75
Latrines	No.	1							Jän.17	30	3.75
WATER TREATMENT											
Disinfection											
Chlorination Unit			N/A								
Chemical House	m ²		N/A								

STORAGE												
Tank #1	m ³	50	Steel tank	Dongo village	377052	344120	Active	The tank area is fenced		Jän.17	20	3.75
Tank #2	m ³											
Bulk meter	mm											
TRANSMISSION												
Transmission line	km		HDPE Pipes				Active			Jän.17	20	3.75
Gate Valve	mm											
Air valve	mm											
DISTRIBUTION												
Distribution lines	km		HDPE Pipes				Active			Jän.17	20	3.75
Distribution lines	km		HDPE Pipes				Active					
Gate Valve	mm											
Air valve	mm											
SERVICE CONNECTIONS												
PSP #1	No.	16	69 taps (44 taps in Longa I and 25 taps in Longa II)	Longa, Village A, Idiwa1, Idiwa 2			Active	Broken taps		Jän.17	10	3.75
STOCK (spares, chemicals)												
	No.											
	No.											

GUIDE ON CONDITION ASSESSMENT

Good condition		
Minor defects (approx. 5% of components need replacement)		
Major defects (approx 10 - 20% of components need replacement)		
Requires renewal (approx 20 - 50% of components need replacement)		
Asset failed / unserviceable		

Remaining Useful Life (RUL)	CONDITION RANKING (see table below for guidance)
	Good condition; Minor defects; Major defects; Requires upgrade; Asset failed
	Good condition

6.25	
6.25	
6.25	Good condition
6.25	Good condition
90.75	
6.25	Good condition
26.25	Good condition
26.25	Good condition

16.25	Good condition
16.25	Good condition
16.25	Good condition
	Good condition
6.25	Minor repairs

	Normal maintenance required
	Minor maintenance required
	Major maintenance required
	Significant renewal / upgrade required
	Over 50% of asset requires replacement

WATER SYSTEM ASSESSMENT AND SERVICE TRANSFER FROM UNHCR TO WATER AUTHORITIES

ASSET REGISTER AND CONDITION ASSESSMENT OF WATER SCHEME COMPONENTS

NAME OF REFUGEE SETTLEMENT

Palorinya _____

NAME OF WATER SCHEME

Waka in Zone III West _____

03.10.2020

ASSET TYPE	UNITS	SIZE	DESCRIPTION	LOCATION	GPS COORD.		STATUS	FIELD OBSERVATION	INSTALLATION DATE	Estimated Useful Life (EUL)	AGE
			(material, brand etc)		N	E	(Active; Not operational)				
WATER SOURCE											
Borehole DWD (insert No.)		15	PVC	Dongo West	375560	339157	Active	The place is not accessible in rainy season due to poor road and the soil type	01.10.2018		
Borehole pump tests	m ³ /hr	66.31									
Borehole depth	m										
Casing diameter	mm	140									
Static water level	m										
Dynamic water level	m										
Draw-down	m										

STORAGE												
Tank #1	m ³	125	Steel tank on a 10m tower	Idiwa	378577	340010	Active		01.10.2018	20	2.00	
Tank #2	m ³											
Bulk meter	mm	DN 80						Not working				
TRANSMISSION												
Transmission line	km		No information available						01.10.2018	20	2.00	
Gate Valve	mm		No information available									
Air valve	mm		No information available									
DISTRIBUTION												
Distribution lines	km		No information available						01.10.2018	20	2	
Distribution lines	km		No information available									
Gate Valve	mm		No information available									
Air valve	mm		No information available									
SERVICE CONNECTIONS												
PSP #1	No.	22	Each tap stand has 4 or 2 taps, a total of 44 taps	Village B, C, D, E, J, K and L				The system is currently functioning except 3 tap stands which are malfunctioning	01.10.2018	10	2	
STOCK (spares, chemicals)												
	No.											
	No.											

GUIDE ON CONDITION ASSESSMENT

Good condition		
Minor defects (approx. 5% of components need replacement)		
Major defects (approx 10 - 20% of components need replacement)		
Requires renewal (approx 20 - 50% of components need replacement)		
Asset failed / unserviceable		

Remaining Useful Life (RUL)	CONDITION RANKING (see table below for guidance)
	Good condition; Minor defects; Major defects; Requires upgrade; Asset failed
	Good condition

8.00	
8.00	
8.00	Good condition
8.00	Good condition
28.00	
8.00	Good condition
28.00	
28.00	

18.00	Good condition
18.00	
18	
8	

	Normal maintenance required
	Minor maintenance required
	Major maintenance required
	Significant renewal / upgrade required
	Over 50% of asset requires replacement

ASSESSMENT OF PERFORMANCE OF WATER SYSTEM

NAME OF REFUGEE SETTLEMENT

Palorinya

MONTH UNDER ASSESSMENT

Jul.20

PERFORMANCE INDICATORS

			Luwakoke
	SERVICE STANDARD INDICATORS		
1	Population within Scheme	No.	7,134
2	Total Water Demand	cub.m/d	173
3	Number of connections		
	<i>No of Domestic Connections</i>	No.	
	<i>No. of Standpipes</i>	No.	10
	<i>No. of Institutional Connections</i>	No.	
	Total no. of service connections	No.	10
4	No. of taps (on standpipes)	No.	40
5	No. of persons per public tap	No./tap	178
	OPERATIONAL INDICATORS		
6	System capacity	cub.m/d	176
7	Volume of Water produced	cub.m/d	22
8	Capacity Utilisation	%	13%
9	Storage capacity	cub.m	108
10	Manpower	No.	
11	Total Network Length	km	
12	Per capita consumption	l/c/d	3
	EFFICIENCY INDICATORS		
13	Energy Consumption		
	<i>Generator</i>	l/month	
	<i>Fuel for trucking</i>	l/month	
14	Chemical Consumption		
	Chlorine	kg/month	
	<i>Chlorine</i>	kg/cub.m	-

ASSESSMENT OF PERFORMANCE OF WATER SYSTEM

NAME OF REFUGEE SETTLEMENT

Palorinya

MONTH UNDER ASSESSMENT

Jul.20

PERFORMANCE INDICATORS

COST INDICATORS			
Operating Expenses			
15	Salaries/Benefits	UGX/month	
16	Diesel / Fuel costs		
	<i>Generator</i>	<i>UGX/month</i>	
	<i>Fuel for trucking</i>	<i>UGX/month</i>	
	Total fuel cost	UGX/month	-
	Unit Fuel Cost	UGX/cub.m	-
17	Chemical costs		
	<i>Chlorine</i>	<i>UGX/month</i>	
	Total chemical cost	UGX/month	-
	Unit Chemical costs	UGX/cub.m	-
18	Administrative Expenses	UGX/month	
19	Other Overheads	UGX/month	
20	Repairs & Maintenance (O&M)	UGX/month	
21	Capital Maintenance Expenditure	UGX/month	
	Total Expenses	UGX/month	-
TARIFF INDICATORS			
22	Unit Cost of Production	UGX/cub.m	-