Data 7

Small Town Profiles

Small Town Profile (ES-1)

	ID	ES-1
	Administrative	
	Town	Wonji Shewa Alemtena
	Woreda	Adama Zuria
	Zone	East Shewa
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	523983
	UTM-N (Adindan)	927885
	Altitude (m)	1539
No.	Item	
1	Population etc.	
1-1	Population (2014)	8,525
1-2	Category urban/rural	Urban
1-3	Satellite villages	3 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Amhara (40%), Oromo (35%), Others (25%)
1-6	Main occupation	Public officer
1-7	Grade of the town	None
1-8	Distance from paved road (km)	17
1-9	Rate of power failure (%)	7%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	Adama Town Water Supply Service Enterprise (treated river water)
2-1(2)	Operation time	2 days/week and 3 hrs/day (both season)
2-2	Pump	
2-2 (1)	Type	not applicable
2-2 (2)	Manufacturer	not applicable
2-2 (3)	Model, specification	not applicable
2-2 (4)	Output (kW)	not applicable
2-2 (5)	Cycle (Hz), speed (rpm)	not applicable
2-2 (6)	Total head (m)	not applicable
2-2 (7)	Period of usage (installation month/ year)	not applicable
2-2 (8)	Diameter/ material of riser pipes	not applicable
2-2 (9)	Unit length/total number of riser pipes	not applicable
2-2 (10)	Existence of water flow meter	not applicable
2-3	Power source	
2-3(1)	Type	not applicable
2-3(2)	Manufacturer	not applicable
2-3(3)	Model, specification	not applicable
2-3(4)	Output (kVA)	not applicable
2-3(5)	Period of usage (installation month/ year)	not applicable
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	not applicable
2-4 (2)	Depth and material of borehole	not applicable
2-4 (3)	Depth and diameter of pumping chamber	not applicable
2-4 (4)	Depth, diameter and material of screen	not applicable
2-4 (5)	Aquifer	not applicable
2-4 (6)	Static water level (m)	not applicable
2-4 (7)	Pumping rate and draw down (pumping test)	not applicable
2-4 (8)	Pumping rate and draw down (actual)	not applicable
2-4 (9)	Position of pump (depth)	not applicable
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	no data
2-5 (2)	Specification of distribution reservoir	not applicable
2-5 (3)	Dia., length and material of distribution pipe	no data
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	2
2-5 (4)-2	Private connections (set)	31
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	installed and functioning
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	water committee not formally established & Adama Town WSSSE
3-1 (2)	Year of establishment	2008
3-1 (3)	Contact person	Sisay Abebe, Deputy Head of Kebele Administration, 0911-838107
3-2	Staffs	
3-2 (1)	Number of staffs	3
3-2 (2)	Experience of operator (year)	no operator
3-2 (3)	Operator's experience of training	not applicable
3-3	Water tariff	
3-3 (1)	Water tariff	5 birr/m^3
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m^3/day)	24.1
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	cash in the village
3-4 (2)	Name of financial institutions	not applicable
3-4 (3)	Amount of remaining funds	not applicable
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	temporary collection
3-5 (2)	To whom ask to repair	Adama Town WSSSE
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	50,000 - 60,000 birr
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	6 birr/m^3
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	5～10
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	3-10 (assumption)
5-2 (2)	Total hardness (mg/L)	< 300 (assumption)
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	2.8
6-2	Sufficiency rate of safe water (%)	4.6
7	Any other water supply projects	None

Legend

BH: Borehole, SP: Spring, RV: River, CC: Collection Chamber, BP: Booster Pumping Station, RT: Reservoir Tank, PT: Public Tap, CT: Cattle Trough, BHHP: Borehole with Hand Pump, DWHP: Hand Dug Well with Hand Pump

Small Town Profile (ES-2)

	ID	ES-2
	Administrative	
	Town	Geldiya
	Woreda	Adama Zuria
	Zone	East Shewa
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	537805
	UTM-N (Adindan)	957201
	Altitude (m)	1561
No.	Item	
1	Population etc.	
1-1	Population (2014)	2,257
1-2	Category urban/rural	Urban
1-3	Satellite villages	2 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (80%), Amhara (20%)
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	4-C
1-8	Distance from paved road (km)	7
1-9	Rate of power failure (%)	7%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (1)
2-1(2)	Operation time	7 days/week and 6 hrs/day (both season)
2-2	Pump	
2-2 (1)	Type	submersible pump
2-2 (2)	Manufacturer	no data
2-2 (3)	Model, specification	no data
2-2 (4)	Output (kW)	11kW
2-2 (5)	Cycle (Hz), speed (rpm)	no data
2-2 (6)	Total head (m)	no data
2-2 (7)	Period of usage (installation month/ year)	9 years (since 2005)
2-2 (8)	Diameter/ material of riser pipes	50mm (GS)
2-2 (9)	Unit length/total number of riser pipes	6m/ 22.5 pieces
2-2 (10)	Existence of water flow meter	installed and functioning
2-3	Power source	
2-3(1)	Type	public power supply
2-3(2)	Manufacturer	not applicable
2-3(3)	Model, specification	not applicable
2-3(4)	Output (kVA)	not applicable
2-3(5)	Period of usage (installation month/ year)	not applicable
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	2003/ World Vision
2-4 (2)	Depth and material of borehole	150m/ uPVC
2-4 (3)	Depth and diameter of pumping chamber	150m/ 150mm (6")
2-4 (4)	Depth, diameter and material of screen	no data
2-4 (5)	Aquifer	no data
2-4 (6)	Static water level (m)	no data
2-4 (7)	Pumping rate and draw down (pumping test)	no data

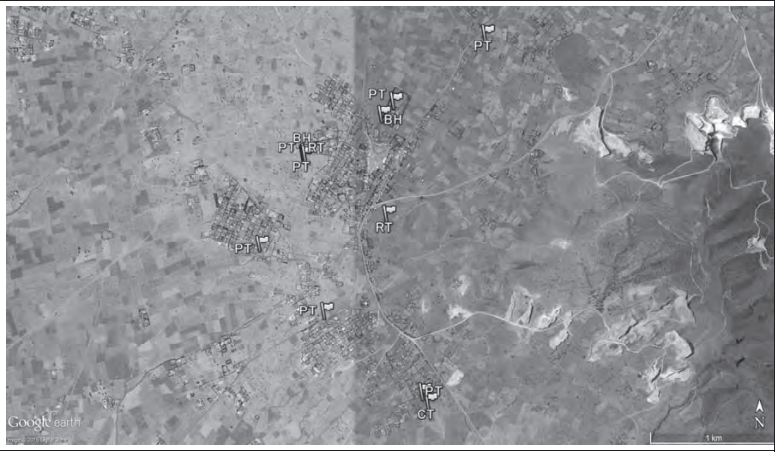
2-4 (8)	Pumping rate and draw down (actual)	no data
2-4 (9)	Position of pump (depth)	137m
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	50mm, 65mm/ no data/ GSP
2-5 (2)	Specification of distribution reservoir	25m^3
2-5 (3)	Dia., length and material of distribution pipe	50mm, 40mm, 25mm/ no data/ GSP
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	4
2-5 (4)-2	Private connections (set)	250
2-5 (4)-3	Cattle troughs (set)	2
2-5 (5)	Existence of water meter	all installed and 1 piece not functioning
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	water committee
3-1 (2)	Year of establishment	2003
3-1 (3)	Contact person	Tilaye Gebre Kidan, Chairman, 0921-727779
3-2	Staffs	
3-2 (1)	Number of staffs	14
3-2 (2)	Experience of operator (year)	17 years
3-2 (3)	Operator's experience of training	yes (on site) for 1 week
3-3	Water tariff	
3-3 (1)	Water tariff	7 birr/m^3
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m^3/day)	93.8
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	2003/ Oromia Credit & Saving Association/ Chora Chore Water Committee
3-4 (3)	Amount of remaining funds	yes/ 320,000 birr (bank) and 2,000 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	operator
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	10-20% of the total project cost
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	7-10 birr/m3
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	10～
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	1.69
5-2 (2)	Total hardness (mg/L)	106
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	41.6
6-2	Sufficiency rate of safe water (%)	69.1
7	Any other water supply projects	None

Legend

BH: Borehole, SP: Spring, RV: River, CC: Collection Chamber, BP: Booster Pumping Station, RT: Reservoir Tank, PT: Public Tap, CT: Cattle Trough, BHHP: Borehole with Hand Pump, DWHP: Hand Dug Well with Hand Pump

Small Town Profile (ES-3)

	ID	ES-3
	Administrative	
	Town	Dire
	Woreda	Ada
	Zone	East Shewa
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	488864
	UTM-N (Adindan)	961034
	Altitude (m)	1958
No.	Item	
1	Population etc.	
1-1	Population (2014)	6,811
1-2	Category urban/rural	Urban
1-3	Satellite villages	3 Kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (97%), Amhara (3%)
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	4-A
1-8	Distance from paved road (km)	12
1-9	Rate of power failure (%)	5%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (2)
2-1(2)	Operation time	4 days/week and 4 hrs/day (both BH1 and BH2 for both season)
2-2	Pump	
2-2 (1)	Type	submersible pump (BH1 and BH2)
2-2 (2)	Manufacturer	no data
2-2 (3)	Model, specification	no data
2-2 (4)	Output (kW)	15kW
2-2 (5)	Cycle (Hz), speed (rpm)	no data
2-2 (6)	Total head (m)	no data
2-2 (7)	Period of usage (installation month/ year)	3 years since Jan. 2011 (BH1), 17 years since 1997 (BH2)
2-2 (8)	Diameter/ material of riser pipes	50mm (BH2)
2-2 (9)	Unit length/total number of riser pipes	6m/ 23 pieces (BH2)
2-2 (10)	Existence of water flow meter	not exist (BH1 and BH2)
2-3	Power source	
2-3(1)	Type	public power supply (both)
2-3(2)	Manufacturer	not applicable
2-3(3)	Model, specification	not applicable
2-3(4)	Output (kVA)	not applicable
2-3(5)	Period of usage (installation month/ year)	not applicable
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	BH1/ 1997/ NGO (Medical Sisters Mission), BH2/1987/ Government
2-4 (2)	Depth and material of borehole	180m-BH1-steel, 180m-BH2-steel
2-4 (3)	Depth and diameter of pumping chamber	180m-300mm (BH-1) and 180m-200mm (BH-2)
2-4 (4)	Depth, diameter and material of screen	no data
2-4 (5)	Aquifer	no data
2-4 (6)	Static water level (m)	148m(BH1)/ 120m(BH2)
2-4 (7)	Pumping rate and draw down (pumping test)	no data
2-4 (8)	Pumping rate and draw down (actual)	no data
2-4 (9)	Position of pump (depth)	160m(BH1)/ 140m(BH2)
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	3", 900m, GSP (BH1) / 2", no data, GSP (BH2)
2-5 (2)	Specification of distribution reservoir	$25m^3$ (BH1) and $10m^3$ (BH2)
2-5 (3)	Dia., length and material of distribution pipe	2", 1.5km, GSP (BH1), no data (BH2)
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	7
2-5 (4)-2	Private connections (set)	90
2-5 (4)-3	Cattle troughs (set)	5
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	2 water committees for each borehole (BH1and BH2)
3-1 (2)	Year of establishment	1996 (Dire Medhanyalem, WC1) for BH1, 1987 (Dire Arerti, WC2) for BH2
3-1 (3)	Contact person	Worku Dadi (WC1), Kassahun Negusu (WC2), 0926-850523
3-2	Staffs	
3-2 (1)	Number of staffs	21
3-2 (2)	Experience of operator (year)	unknown for WC1, 5 years for WC2
3-2 (3)	Operator's experience of training	no for WC1, yes (2 days by Woreda office) for WC2
3-3	Water tariff	
3-3 (1)	Water tariff	6 birr/m^3 (WC-1) and 8 birr/m^3 (WC-2)
3-3 (2)	Collection rate (%)	yes (both WC1 and WC2)
3-3 (3)	The amount of the water used (m^3/day)	64.9
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	bank for both WC1 and WC2
3-4 (2)	Name of financial institutions	1997, CBE-Bishoftu Branch, Dire Medhanyalem Water Committee for WC1, 1987, CBE-Bishoftu Branch, Dire Arerti Water Committee for WC2
3-4 (3)	Amount of remaining funds	yes/ 70,000 birr (bank) and 1,500 birr (cash) for WC1, unknown for WC2
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund for WC1 and WC2
3-5 (2)	To whom ask to repair	Woreda WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes for WC1 and WC2
4-2	Maximum amount pay for construction	20% of the total project cost for WC1 and WC2
4-3	Intension to establish O&M organization	yes for WC1 and WC2
4-4	Set tariff per cubic meter	8 birr/m^3 for WC1 and WC2
4-5	Intension to pay for equipment replacement cost	yes for WC1 and WC2
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	10～
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	4.49/2.44
5-2 (2)	Total hardness (mg/L)	188/172
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	9.5
6-2	Sufficiency rate of safe water (%)	16.1
7	Any other water supply projects	None



Legend

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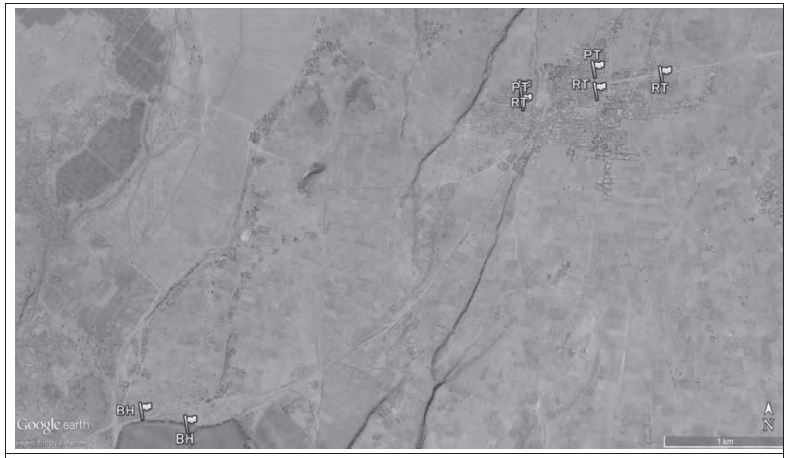
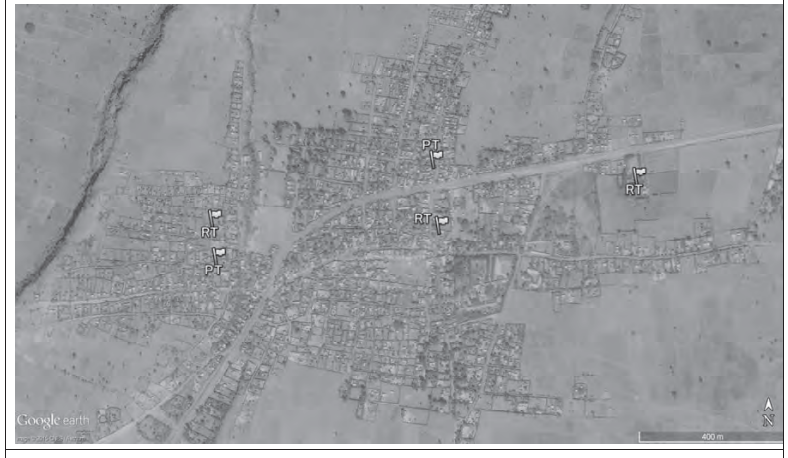
Small Town Profile (ES-4)

	ID	ES-4
	Administrative	
	Town	Bofa
	Woreda	Boset
	Zone	East Shewa
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	549706
	UTM-N (Adindan)	935610
	Altitude (m)	1426
No.	Item	
1	Population etc.	
1-1	Population (2014)	4,185
1-2	Category urban/rural	Urban
1-3	Satellite villages	7 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (85%), Amhara (10%) & others (5%)
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	4-C
1-8	Distance from paved road (km)	9
1-9	Rate of power failure (%)	7%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (2)
2-1(2)	Operation time	7 days/week and 12 hrs/day (rainy season), 7 days/week and 24 hrs/day (dry season)
2-2	Pump	
2-2 (1)	Type	submersible pump (BH1 and BH2)
2-2 (2)	Manufacturer	no data
2-2 (3)	Model, specification	no data
2-2 (4)	Output (kW)	18.5kW
2-2 (5)	Cycle (Hz), speed (rpm)	no data
2-2 (6)	Total head (m)	no data
2-2 (7)	Period of usage (installation month/ year)	8 years since 2006 (BH1) and 9 years since 2005 (BH2)
2-2 (8)	Diameter/ material of riser pipes	no data
2-2 (9)	Unit length/total number of riser pipes	6m-9pcs (BH1), 6m-14pcs (BH2)
2-2 (10)	Existence of water flow meter	installed and functioning for both
2-3	Power source	
2-3(1)	Type	public power supply (both)
2-3(2)	Manufacturer	not applicable
2-3(3)	Model, specification	not applicable
2-3(4)	Output (kVA)	not applicable
2-3(5)	Period of usage (installation month/ year)	not applicable
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	1982-China (BH1), 2005-World Vision (BH2)
2-4 (2)	Depth and material of borehole	steel (both)
2-4 (3)	Depth and diameter of pumping chamber	no data
2-4 (4)	Depth, diameter and material of screen	no data
2-4 (5)	Aquifer	no data
2-4 (6)	Static water level (m)	no data
2-4 (7)	Pumping rate and draw down (pumping test)	no data

2-4 (8)	Pumping rate and draw down (actual)	14.4m^3/hr, no data (BH1) and 19.8m^3/hr, no data (BH2)
2-4 (9)	Position of pump (depth)	56m (BH1) and 86m (BH2)
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	3", 10396m, GSP
2-5 (2)	Specification of distribution reservoir	25m^3, 50m^3, 50m^3
2-5 (3)	Dia., length and material of distribution pipe	2.5"-2200m-GSP and 2", 2"-900m-HDP
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	11
2-5 (4)-2	Private connections (set)	232
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	Bofa Town Water Supply Service Office
3-1 (2)	Year of establishment	2008
3-1 (3)	Contact person	Abebexh Yadete, Manager of Town Water Supply Service Office, 0921-728219
3-2	Staffs	
3-2 (1)	Number of staffs	11
3-2 (2)	Experience of operator (year)	3 operators with experience of 13years, 2years and 1years
3-2 (3)	Operator's experience of training	yes (7 days in Mojo) for 3 operators
3-3	Water tariff	
3-3 (1)	Water tariff	4.0 birr/m^3 (public tap), 5.20 birr/m^3 (0-3m^3), 5.8 birr/m^3 (4-6m^3), 6.2 birr/m^3 (7-10m^3), 7.1 birr/m^3 (over 11m^3)
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m^3/day)	229.8
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	Sep. 2000, CBE Adama Branch, Bofa Town Water Supply Service Office
3-4 (3)	Amount of remaining funds	yes/ 532,000 birr (bank) and 3,000 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	operator
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	129,000 birr or more
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	same as existing tariff
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	5～10
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	1.96
5-2 (2)	Total hardness (mg/L)	130
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	54.9
6-2	Sufficiency rate of safe water (%)	92.2
7	Any other water supply projects	None





Legend

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Small Town Profile (ES-5)

	ID	ES-5
	Administrative	
	Town	Bole
	Woreda	Boset
	Zone	East Shewa
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	582430
	UTM-N (Adindan)	956118
	Altitude (m)	1174
No.	Item	
1	Population etc.	
1-1	Population (2014)	5,275
1-2	Category urban/rural	Urban
1-3	Satellite villages	1 town + 2 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (75%), Amhara (10%) & others (15%)
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	3-C
1-8	Distance from paved road (km)	24
1-9	Rate of power failure (%)	8%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (1)
2-1(2)	Operation time	7 days/week and 14 hrs/day (both season)
2-2	Pump	
2-2 (1)	Type	submersible pump
2-2 (2)	Manufacturer	Caprari
2-2 (3)	Model, specification	E6VX27/31+MC640-9V
2-2 (4)	Output (kW)	30kW, 400V
2-2 (5)	Cycle (Hz), speed (rpm)	50 Hz、2850rpm
2-2 (6)	Total head (m)	195 m
2-2 (7)	Period of usage (installation month/ year)	4 years since Sep. 2010
2-2 (8)	Diameter/ material of riser pipes	65mm/ GSP
2-2 (9)	Unit length/total number of riser pipes	6m/ 32pcs
2-2 (10)	Existence of water flow meter	installed and functioning
2-3	Power source	
2-3(1)	Type	diesel generator
2-3(2)	Manufacturer	Perkins
2-3(3)	Model, specification	1006-6TG
2-3(4)	Output（kVA）	100 kVA
2-3(5)	Period of usage (installation month/ year)	3 years and 4 months (since Sep. 2010)
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	2010, Ethio-Italy
2-4 (2)	Depth and material of borehole	steel
2-4 (3)	Depth and diameter of pumping chamber	no data, 7"
2-4 (4)	Depth, diameter and material of screen	steel
2-4 (5)	Aquifer	no data
2-4 (6)	Static water level (m)	no data
2-4 (7)	Pumping rate and draw down (pumping test)	no data

2-4 (8)	Pumping rate and draw down (actual)	25.2m^3/hr, no data
2-4 (9)	Position of pump (depth)	194m
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	3", 3800m, GSP
2-5 (2)	Specification of distribution reservoir	50m^3, 10m^3
2-5 (3)	Dia., length and material of distribution pipe	no data
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	11
2-5 (4)-2	Private connections (set)	251
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	Bole-Golegota Town Water Supply Service Office
3-1 (2)	Year of establishment	Sep, 2013
3-1 (3)	Contact person	Tesfaye Mulatu, Manager, Water Supply Service office, 0912-217684
3-2	Staffs	
3-2 (1)	Number of staffs	24
3-2 (2)	Experience of operator (year)	16 years
3-2 (3)	Operator's experience of training	yes (15days at Arsi zonal WME office)
3-3	Water tariff	
3-3 (1)	Water tariff	16.0 birr/m^3 (public tap), 17.0 birr/m^3 (0-5m^3), 17.5 birr/m^3 (6-10m^3), 18.5 birr/m^3 (11-30m^3), 20.0 birr/m^3 (over 30m^3)
3-3 (2)	Collection rate (%)	90 to 95%
3-3 (3)	The amount of the water used (m^3/day)	75.4
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	Sep. 2010, Cooperative Bank of Oromia Bole branch, Bole Golgota water supply service office
3-4 (3)	Amount of remaining funds	yes/ 464,647 birr (bank) and 500 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	Zonal WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	50% of the remaining fund
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	the water supply service office has plan to reduce tariff in case public electric power will be supplied by Ethiopian Electric power Corporation
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential（L/sec）	5～10
5-2	Water quality potential	
5-2 (1)	Fluoride（mg/L）	1.26/1.63
5-2 (2)	Total hardness（mg/L）	220/182
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	14.3
6-2	Sufficiency rate of safe water (%)	23.4
7	Any other water supply projects	On going (Oromia regional government)

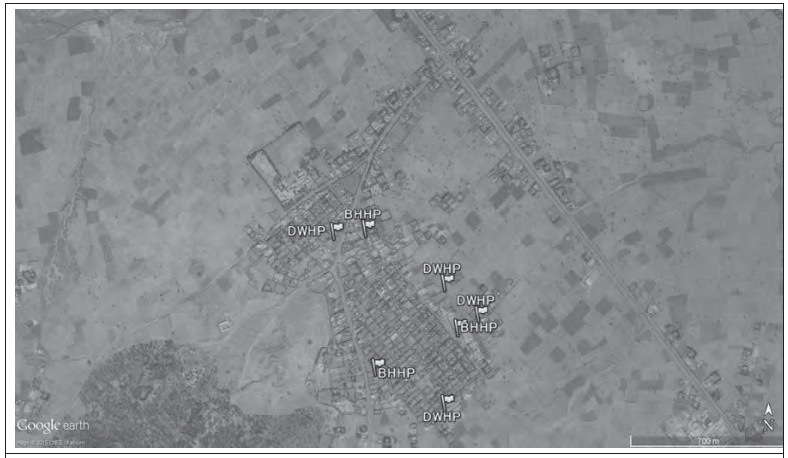
Legend

BH: Borehole, SP: Spring, RV: River, CC: Collection Chamber, BP: Booster Pumping Station, RT: Reservoir Tank, PT: Public Tap, CT: Cattle Trough, BHHP: Borehole with Hand Pump, DWHP: Hand Dug Well with Hand Pump

Small Town Profile (ES-6)

	ID	ES-6
	Administrative	
	Town	Ude Dhankaka
	Woreda	Ada
	Zone	East Shewa
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	504593
	UTM-N (Adindan)	959074
	Altitude (m)	1869
No.	Item	
1	Population etc.	
1-1	Population (2014)	5,763
1-2	Category urban/rural	Urban
1-3	Satellite villages	0
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (85%), Amhara (15%)
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	4-C
1-8	Distance from paved road (km)	0
1-9	Rate of power failure (%)	4%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	borehole with hand pump (3)
2-1(2)	Operation time	7 days/week and 24 hrs/day
2-2	Pump	
2-2 (1)	Type	hand pump
2-2 (2)	Manufacturer	various
2-2 (3)	Model, specification	India Mark 2 and AFRIDEV
2-2 (4)	Output (kW)	not applicable
2-2 (5)	Cycle (Hz), speed (rpm)	not applicable
2-2 (6)	Total head (m)	not applicable
2-2 (7)	Period of usage (installation month/ year)	3 years for 3 hand pumps with borehole
2-2 (8)	Diameter/ material of riser pipes	no data
2-2 (9)	Unit length/total number of riser pipes	no data
2-2 (10)	Existence of water flow meter	not applicable
2-3	Power source	
2-3(1)	Type	not applicable
2-3(2)	Manufacturer	not applicable
2-3(3)	Model, specification	not applicable
2-3(4)	Output (kVA)	not applicable
2-3(5)	Period of usage (installation month/ year)	not applicable
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	2011/ Catholic Church
2-4 (2)	Depth and material of borehole	PVC
2-4 (3)	Depth and diameter of pumping chamber	52m, no data
2-4 (4)	Depth, diameter and material of screen	no data
2-4 (5)	Aquifer	no data
2-4 (6)	Static water level (m)	no data
2-4 (7)	Pumping rate and draw down (pumping test)	no data

2-4 (8)	Pumping rate and draw down (actual)	no data
2-4 (9)	Position of pump (depth)	no data
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	not applicable
2-5 (2)	Specification of distribution reservoir	not applicable
2-5 (3)	Dia., length and material of distribution pipe	not applicable
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	not applicable
2-5 (4)-2	Private connections (set)	not applicable
2-5 (4)-3	Cattle troughs (set)	not applicable
2-5 (5)	Existence of water meter	not applicable
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	water committee
3-1 (2)	Year of establishment	Aug. 2011
3-1 (3)	Contact person	Bekele Shume, Secretary of Water Committee, 0911-081670
3-2	Staffs	
3-2 (1)	Number of staffs	24
3-2 (2)	Experience of operator (year)	no operator
3-2 (3)	Operator's experience of training	no operator
3-3	Water tariff	
3-3 (1)	Water tariff	10 birr/ month/ household
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m^3/day)	0.0
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	2003, Cooperative Bank of Oromia Bishoftu branch, water committee
3-4 (3)	Amount of remaining funds	yes/ 3,000 birr (bank) and 600 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	no breakdown in the past
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	no idea
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	12.5 birr/m^3
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	10～
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	0.71
5-2 (2)	Total hardness (mg/L)	250
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	0.0
6-2	Sufficiency rate of safe water (%)	0
7	Any other water supply projects	None



Legend

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Small Town Profile (ES-7)

	ID	ES-7
	Administrative	
	Town	Bekejo
	Woreda	Ada
	Zone	East Shewa
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	493382
	UTM-N (Adindan)	952238
	Altitude (m)	1820
No.	Item	
1	Population etc.	
1-1	Population (2014)	6,624
1-2	Category urban/rural	Rural
1-3	Satellite villages	0
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (95%), Amhara (5%)
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	None
1-8	Distance from paved road (km)	25
1-9	Rate of power failure (%)	8%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (1)
2-1(2)	Operation time	7 days/week and 2 hrs/day (water is finished after 2 hours pumping)
2-2	Pump	
2-2 (1)	Type	submersible pump
2-2 (2)	Manufacturer	Grundfoss
2-2 (3)	Model, specification	no data
2-2 (4)	Output (kW)	7.5kW
2-2 (5)	Cycle (Hz), speed (rpm)	50 Hz
2-2 (6)	Total head (m)	no data
2-2 (7)	Period of usage (installation month/ year)	27 years
2-2 (8)	Diameter/ material of riser pipes	50mm/ GSP
2-2 (9)	Unit length/total number of riser pipes	6m-16pcs
2-2 (10)	Existence of water flow meter	not installed
2-3	Power source	
2-3(1)	Type	diesel generator
2-3(2)	Manufacturer	Deutz
2-3(3)	Model, specification	F4L912
2-3(4)	Output (kVA)	38 kVA
2-3(5)	Period of usage (installation month/ year)	27 years (since 1987)
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	1987/ no data
2-4 (2)	Depth and material of borehole	103.5m-steel
2-4 (3)	Depth and diameter of pumping chamber	no data/ 8"
2-4 (4)	Depth, diameter and material of screen	no data
2-4 (5)	Aquifer	no data
2-4 (6)	Static water level (m)	no data
2-4 (7)	Pumping rate and draw down (pumping test)	no data

2-4 (8)	Pumping rate and draw down (actual)	no data
2-4 (9)	Position of pump (depth)	no data
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	65mm, 800m, GSP
2-5 (2)	Specification of distribution reservoir	25m^3
2-5 (3)	Dia., length and material of distribution pipe	2", GSP
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	4
2-5 (4)-2	Private connections (set)	26
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	water committee
3-1 (2)	Year of establishment	1987
3-1 (3)	Contact person	Guchi Tulu, Chairman, Water Committee, 0921-719609
3-2	Staffs	
3-2 (1)	Number of staffs	13
3-2 (2)	Experience of operator (year)	5 month
3-2 (3)	Operator's experience of training	yes (2 days on site by Woreda office)
3-3	Water tariff	
3-3 (1)	Water tariff	22 birr/m^3
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m^3/day)	33.0
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	unknown, CBE Bishoftu Branch, Bekejo water committee
3-4 (3)	Amount of remaining funds	yes/ 57,000 birr (bank) and 4,500 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	Woreda WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	whatever amount is asked by the project
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	22 birr/m^3 unless public power supply is connected
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	10～
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	3.14
5-2 (2)	Total hardness (mg/L)	216
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	5.0
6-2	Sufficiency rate of safe water (%)	14.5
7	Any other water supply projects	None

Legend

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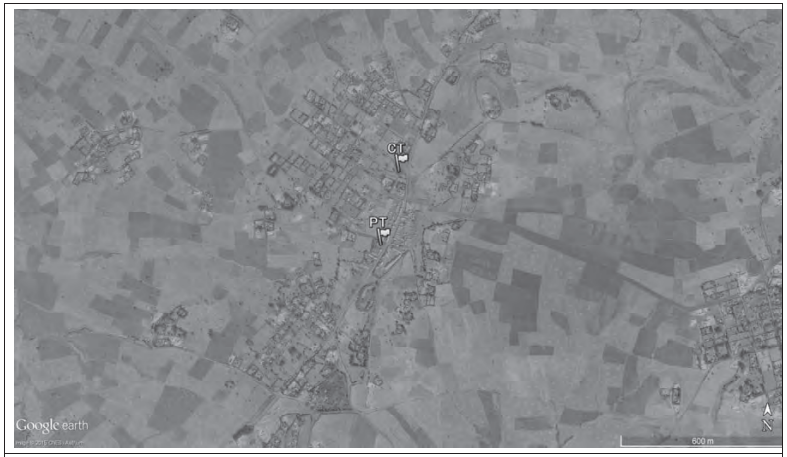
Small Town Profile (ES-8)

	ID	ES-8
	Administrative	
	Town	Kamise
	Woreda	Lume
	Zone	East Shewa
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	512241
	UTM-N (Adindan)	963884
	Altitude (m)	1938
No.	Item	
1	Population etc.	
1-1	Population (2014)	4,846
1-2	Category urban/rural	Urban
1-3	Satellite villages	3 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (80%), Amhara (20%)
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	4-C
1-8	Distance from paved road (km)	11
1-9	Rate of power failure (%)	Unelectrified
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	Gimbichu-Fentale Town Water Supply Service Enterprise (spring)
2-1(2)	Operation time	5-6 days/week and 9 hrs/day (rainy season), 4days/week and 7 hrs/day (dry season)
2-2	Pump	
2-2 (1)	Type	not applicable
2-2 (2)	Manufacturer	not applicable
2-2 (3)	Model, specification	not applicable
2-2 (4)	Output (kW)	not applicable
2-2 (5)	Cycle (Hz), speed (rpm)	not applicable
2-2 (6)	Total head (m)	not applicable
2-2 (7)	Period of usage (installation month/ year)	not applicable
2-2 (8)	Diameter/ material of riser pipes	not applicable
2-2 (9)	Unit length/total number of riser pipes	not applicable
2-2 (10)	Existence of water flow meter	not applicable
2-3	Power source	
2-3(1)	Type	not applicable
2-3(2)	Manufacturer	not applicable
2-3(3)	Model, specification	not applicable
2-3(4)	Output (kVA)	not applicable
2-3(5)	Period of usage (installation month/ year)	not applicable
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	not applicable
2-4 (2)	Depth and material of borehole	not applicable
2-4 (3)	Depth and diameter of pumping chamber	not applicable
2-4 (4)	Depth, diameter and material of screen	not applicable
2-4 (5)	Aquifer	not applicable
2-4 (6)	Static water level (m)	not applicable
2-4 (7)	Pumping rate and draw down (pumping test)	not applicable

2-4 (8)	Pumping rate and draw down (actual)	not applicable
2-4 (9)	Position of pump (depth)	not applicable
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	not applicable
2-5 (2)	Specification of distribution reservoir	not applicable
2-5 (3)	Dia., length and material of distribution pipe	75mm, 65mm, and 40mm, no data and PVC
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	2
2-5 (4)-2	Private connections (set)	1
2-5 (4)-3	Cattle troughs (set)	1
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	Water Committee/ Gimbichu-Fentale Rural Water Supply Service Enterprise
3-1 (2)	Year of establishment	Aug, 2010
3-1 (3)	Contact person	Kassa Zewdie, Chairman, 0911-944549
3-2	Staffs	
3-2 (1)	Number of staffs	7
3-2 (2)	Experience of operator (year)	not in the town
3-2 (3)	Operator's experience of training	not in the town
3-3	Water tariff	
3-3 (1)	Water tariff	6.25 birr/m^3
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m^3/day)	11.5
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	Gimbichu-Fentale Rural Water Supply Service Enterprise
3-4 (2)	Name of financial institutions	not applicable
3-4 (3)	Amount of remaining funds	not applicable
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	temporary collection
3-5 (2)	To whom ask to repair	Gimbichu-Fentale Rural Water Supply Service Enterprise
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	200,000 birr
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	10 Birr/m^3
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	10～
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	< 1.5 (assumption)
5-2 (2)	Total hardness (mg/L)	< 300 (assumption)
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	2.4
6-2	Sufficiency rate of safe water (%)	4
7	Any other water supply projects	None



Legend

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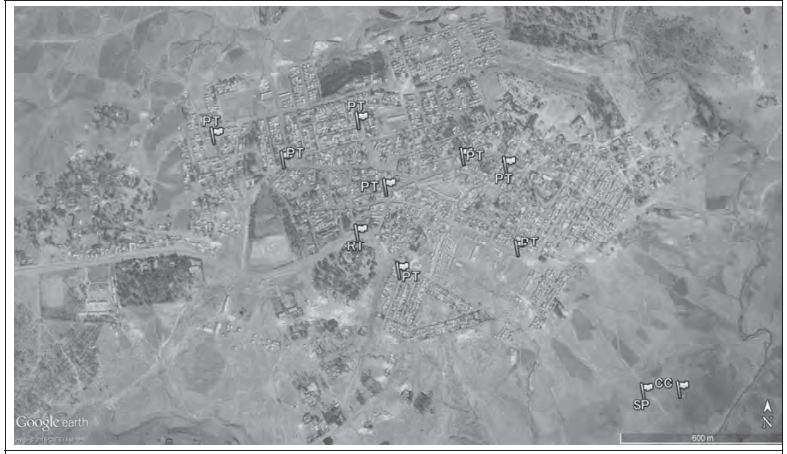
Small Town Profile (ES-9)

	ID	ES-9
	Administrative	
	Town	Chefe Donsa
	Woreda	Gimbichu
	Zone	East Shewa
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	513210
	UTM-N (Adindan)	991145
	Altitude (m)	2414
No.	Item	
1	Population etc.	
1-1	Population (2014)	8,386
1-2	Category urban/rural	Urban
1-3	Satellite villages	2 kebele
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (75%), Amhara (16%) and Others (9%)
1-6	Main occupation	Merchant (employee)
1-7	Grade of the town	3-B
1-8	Distance from paved road (km)	34
1-9	Rate of power failure (%)	20%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized spring (1)
2-1(2)	Operation time	7 days/week and 9 hrs/day (both season)
2-2	Pump	
2-2 (1)	Type	submersible pump
2-2 (2)	Manufacturer	no data
2-2 (3)	Model, specification	no data
2-2 (4)	Output (kW)	18.5kW
2-2 (5)	Cycle (Hz), speed (rpm)	no data
2-2 (6)	Total head (m)	no data
2-2 (7)	Period of usage (installation month/ year)	2 years (August 2012)
2-2 (8)	Diameter/ material of riser pipes	65mm/ GSP
2-2 (9)	Unit length/total number of riser pipes	no data
2-2 (10)	Existence of water flow meter	installed but not working properly
2-3	Power source	
2-3(1)	Type	public power supply (standby diesel generator)
2-3(2)	Manufacturer	Deutz
2-3(3)	Model, specification	F4L912
2-3(4)	Output (kVA)	40 kVA
2-3(5)	Period of usage (installation month/ year)	no data
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	1983, government of Ethiopia
2-4 (2)	Depth and material of borehole	no data
2-4 (3)	Depth and diameter of pumping chamber	no data
2-4 (4)	Depth, diameter and material of screen	no data
2-4 (5)	Aquifer	no data
2-4 (6)	Static water level (m)	no data
2-4 (7)	Pumping rate and draw down (pumping test)	no data

2-4 (8)	Pumping rate and draw down (actual)	10.8 m^3/hr, no data
2-4 (9)	Position of pump (depth)	no data
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	2000m, 75mm, GSP
2-5 (2)	Specification of distribution reservoir	90 m^3
2-5 (3)	Dia., length and material of distribution pipe	no data
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	10
2-5 (4)-2	Private connections (set)	920
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	Chefe Donsa Town Water Supply Service Office
3-1 (2)	Year of establishment	Oct. 2010
3-1 (3)	Contact person	Belete Taye, Manager of TWSS office, 0913-950132
3-2	Staffs	
3-2 (1)	Number of staffs	18
3-2 (2)	Experience of operator (year)	2 person, 10years and 3years
3-2 (3)	Operator's experience of training	old operator trained 2 weeks by East shewa zonal office/ new operator never trained
3-3	Water tariff	
3-3 (1)	Water tariff	5 Birr/m^3
3-3 (2)	Collection rate (%)	90%
3-3 (3)	The amount of the water used (m^3/day)	213.8
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	Oct. 2010, CBE Chefe Donsa branch, Chefe Donsa Town Water Supply Service office
3-4 (3)	Amount of remaining funds	yes/ 140,000 birr (bank) and 5,000 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund and temporary collection in case remaining fund is not enough
3-5 (2)	To whom ask to repair	Zonnal WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	200,000 birr
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	7 Birr/m^3
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	10～
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	< 1.5 (assumption)
5-2 (2)	Total hardness (mg/L)	< 300 (assumption)
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	25.5
6-2	Sufficiency rate of safe water (%)	41.6
7	Any other water supply projects	On going (Oromia regional government)



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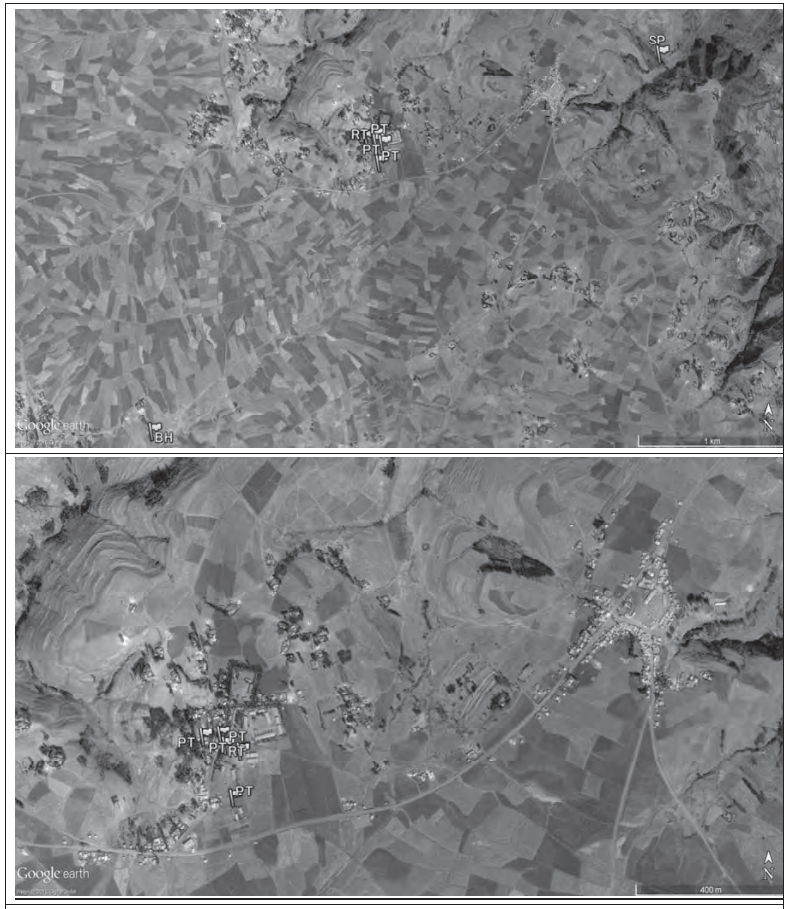
Small Town Profile (ES-10)

	ID	ES-10
	Administrative	
	Town	Areda
	Woreda	Gimbichu
	Zone	East Shewa
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	529573
	UTM-N (Adindan)	1004272
	Altitude (m)	2520
No.	Item	
1	Population etc.	
1-1	Population (2014)	2,752
1-2	Category urban/rural	Urban
1-3	Satellite villages	4kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Amhara (90%) and Oromo(10%)
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	4-C
1-8	Distance from paved road (km)	64
1-9	Rate of power failure (%)	Unelectrified
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (1)
2-1(2)	Operation time	3 days/week and 4 hrs/day (both season)
2-2	Pump	
2-2 (1)	Type	submersible pump
2-2 (2)	Manufacturer	no data
2-2 (3)	Model, specification	no data
2-2 (4)	Output (kW)	15kW
2-2 (5)	Cycle (Hz), speed (rpm)	no data
2-2 (6)	Total head (m)	no data
2-2 (7)	Period of usage (installation month/ year)	12 years (2012)
2-2 (8)	Diameter/ material of riser pipes	2"/ GSP
2-2 (9)	Unit length/total number of riser pipes	6m-17pcs
2-2 (10)	Existence of water flow meter	not installed
2-3	Power source	
2-3(1)	Type	diesel generator
2-3(2)	Manufacturer	no data
2-3(3)	Model, specification	no data
2-3(4)	Output (kVA)	no data
2-3(5)	Period of usage (installation month/ year)	10 years (2002)
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	2001, no data
2-4 (2)	Depth and material of borehole	180m, steel
2-4 (3)	Depth and diameter of pumping chamber	no data
2-4 (4)	Depth, diameter and material of screen	no data
2-4 (5)	Aquifer	no data
2-4 (6)	Static water level (m)	no data
2-4 (7)	Pumping rate and draw down (pumping test)	no data

2-4 (8)	Pumping rate and draw down (actual)	16.7 m^3/hr, no data
2-4 (9)	Position of pump (depth)	no data
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	50mm, no data, GSP
2-5 (2)	Specification of distribution reservoir	25m^3
2-5 (3)	Dia., length and material of distribution pipe	50mm, no data, GSP
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	2
2-5 (4)-2	Private connections (set)	3
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	Water Committee
3-1 (2)	Year of establishment	2002
3-1 (3)	Contact person	Chara Dugma/ chairman/ 0920-465080
3-2	Staffs	
3-2 (1)	Number of staffs	10
3-2 (2)	Experience of operator (year)	1 year
3-2 (3)	Operator's experience of training	1 day OJT on site by Woreda office
3-3	Water tariff	
3-3 (1)	Water tariff	25 Birr/m^3
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m^3/day)	11.0
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	Apr. 2013, Cooperative Bank of Oromia Chefe Donsa branch, Areda Wera water committee
3-4 (3)	Amount of remaining funds	yes/ 2,229 birr (bank) and 103 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	Woreda WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	no idea
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	25 birr/m^3
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	5～10
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	0.79
5-2 (2)	Total hardness (mg/L)	204
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	4.0
6-2	Sufficiency rate of safe water (%)	6.7
7	Any other water supply projects	None



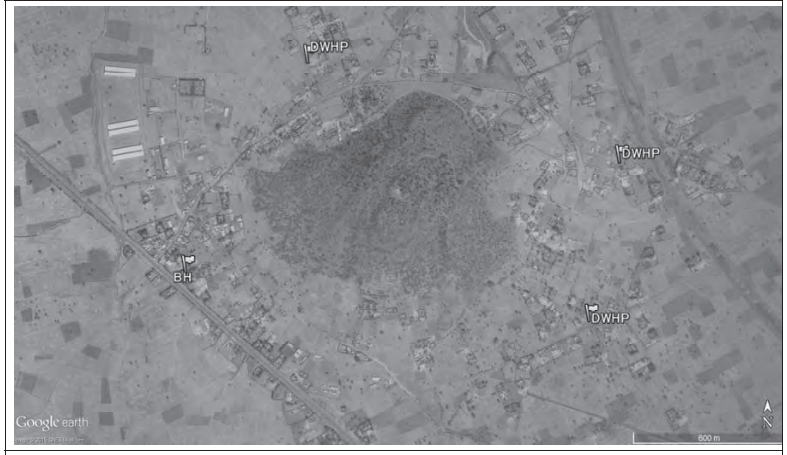
Legend

BH: Borehole, SP: Spring, RV: River, CC: Collection Chamber, BP: Booster Pumping Station, RT: Reservoir Tank, PT: Public Tap, CT: Cattle Trough, BHHP: Borehole with Hand Pump, DWHP: Hand Dug Well with Hand Pump

Small Town Profile (ES-11)

	ID	ES-11
	Administrative	
	Town	Biyo
	Woreda	Lume
	Zone	East Shewa
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	507829
	UTM-N (Adindan)	956072
	Altitude (m)	1846
No.	Item	
1	Population etc.	
1-1	Population (2014)	2,708
1-2	Category urban/rural	Urban
1-3	Satellite villages	0
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (84%), Amhara (10%) & others (6%)
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	4-C
1-8	Distance from paved road (km)	0
1-9	Rate of power failure (%)	4%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	borehole with windmill pump (1), hand dug well with hand pump (4)
2-1(2)	Operation time	no data
2-2	Pump	
2-2 (1)	Type	windmill pump
2-2 (2)	Manufacturer	no data
2-2 (3)	Model, specification	no data
2-2 (4)	Output (kW)	no data
2-2 (5)	Cycle (Hz), speed (rpm)	no data
2-2 (6)	Total head (m)	no data
2-2 (7)	Period of usage (installation month/ year)	15 years (1999)
2-2 (8)	Diameter/ material of riser pipes	no data
2-2 (9)	Unit length/total number of riser pipes	no data
2-2 (10)	Existence of water flow meter	installed/ not working
2-3	Power source	
2-3(1)	Type	windmill
2-3(2)	Manufacturer	no data
2-3(3)	Model, specification	no data
2-3(4)	Output (kVA)	no data
2-3(5)	Period of usage (installation month/ year)	15 years (1999)
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	1999
2-4 (2)	Depth and material of borehole	48m, steel
2-4 (3)	Depth and diameter of pumping chamber	no data
2-4 (4)	Depth, diameter and material of screen	no data
2-4 (5)	Aquifer	no data
2-4 (6)	Static water level (m)	no data
2-4 (7)	Pumping rate and draw down (pumping test)	14.3 m^3/hr

2-4 (8)	Pumping rate and draw down (actual)	no data
2-4 (9)	Position of pump (depth)	no data
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	no data
2-5 (2)	Specification of distribution reservoir	10m^3
2-5 (3)	Dia., length and material of distribution pipe	no data
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	1
2-5 (4)-2	Private connections (set)	0
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	installed and functioning
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	Water Committee
3-1 (2)	Year of establishment	1999
3-1 (3)	Contact person	Bahiru Begashaw, Chairman, 0931-299302
3-2	Staffs	
3-2 (1)	Number of staffs	10
3-2 (2)	Experience of operator (year)	no operator
3-2 (3)	Operator's experience of training	not applicable
3-3	Water tariff	
3-3 (1)	Water tariff	12.5 birr/m^3
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m^3/day)	0.0
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	cash in the village and bank
3-4 (2)	Name of financial institutions	no data
3-4 (3)	Amount of remaining funds	no data
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	no data
3-5 (2)	To whom ask to repair	Woreda WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	100 birr/ household
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	25 birr/m^3
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	10～
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	< 1.5 (assumption)
5-2 (2)	Total hardness (mg/L)	< 300 (assumption)
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	0.0
6-2	Sufficiency rate of safe water (%)	0
7	Any other water supply projects	None



Legend

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Small Town Profile (ES-12)

	ID	ES-12
	Administrative	
	Town	Adulala
	Woreda	Liben Zikuala
	Zone	East Shewa
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	489099
	UTM-N (Adindan)	943666
	Altitude (m)	1729
No.	Item	
1	Population etc.	
1-1	Population (2014)	3,882
1-2	Category urban/rural	Urban
1-3	Satellite villages	2 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (95%) and Amhara (5%)
1-6	Main occupation	Merchant (employee)
1-7	Grade of the town	3-B
1-8	Distance from paved road (km)	34
1-9	Rate of power failure (%)	11%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (1)
2-1(2)	Operation time	7 days/week and 5 hrs/day (rainy season), 7 days/week and 8 hrs/day (dry season)
2-2	Pump	
2-2 (1)	Type	submersible pump
2-2 (2)	Manufacturer	Pleuger
2-2 (3)	Model, specification	no data
2-2 (4)	Output (kW)	7.5 kW, 400 V
2-2 (5)	Cycle (Hz), speed (rpm)	50 Hz
2-2 (6)	Total head (m)	190m@7m^3/hr
2-2 (7)	Period of usage (installation month/ year)	21 years (Oct. 1993)
2-2 (8)	Diameter/ material of riser pipes	50mm, GSP
2-2 (9)	Unit length/total number of riser pipes	6m/ 15.5pcs
2-2 (10)	Existence of water flow meter	installed and working
2-3	Power source	
2-3(1)	Type	public power supply (standby diesel generator)
2-3(2)	Manufacturer	Deutz
2-3(3)	Model, specification	F4M1011F
2-3(4)	Output (kVA)	27 kVA
2-3(5)	Period of usage (installation month/ year)	18 years (July 1999)
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	1989, Government
2-4 (2)	Depth and material of borehole	96m, steel
2-4 (3)	Depth and diameter of pumping chamber	no data, 6"
2-4 (4)	Depth, diameter and material of screen	no data
2-4 (5)	Aquifer	no data
2-4 (6)	Static water level (m)	no data
2-4 (7)	Pumping rate and draw down (pumping test)	no data

2-4 (8)	Pumping rate and draw down (actual)	14.4 m^3/hr
2-4 (9)	Position of pump (depth)	93 m
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	3", 1090m and GSP
2-5 (2)	Specification of distribution reservoir	50 m^3 and 25m^3 (abandoned)
2-5 (3)	Dia., length and material of distribution pipe	2.5"-370m-GSP, 2"-322m-GSP, 1.5"-1300m-GSP
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	3
2-5 (4)-2	Private connections (set)	393
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	Adulala Town Water Supply Service Office
3-1 (2)	Year of establishment	Oct, 2010
3-1 (3)	Contact person	Sisay Lemma/ Manager/ 0911-866658
3-2	Staffs	
3-2 (1)	Number of staffs	11
3-2 (2)	Experience of operator (year)	21 years
3-2 (3)	Operator's experience of training	1month at East Shewa zonal office
3-3	Water tariff	
3-3 (1)	Water tariff	5.0 birr/m^3 (public tap), 5.5 birr/m^3 (0-3m^3), 6.3 birr/m^3 (4-6m^3), 7.5 birr/m^3 (7-10m^3), 8.7 birr/m^3 (over 11m^3)
3-3 (2)	Collection rate (%)	98%
3-3 (3)	The amount of the water used (m^3/day)	142.1
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	1993, CBE Adulala branch, Adulala Town Water Supply Service Office
3-4 (3)	Amount of remaining funds	yes/ 330,719.72 birr (bank) and 5,000 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	Zonnal WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	300,000 birr
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	same as existing tariff
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	5～10
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	1.79
5-2 (2)	Total hardness (mg/L)	172
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	36.6
6-2	Sufficiency rate of safe water (%)	59.8
7	Any other water supply projects	On going (One Wash Program)

Legend

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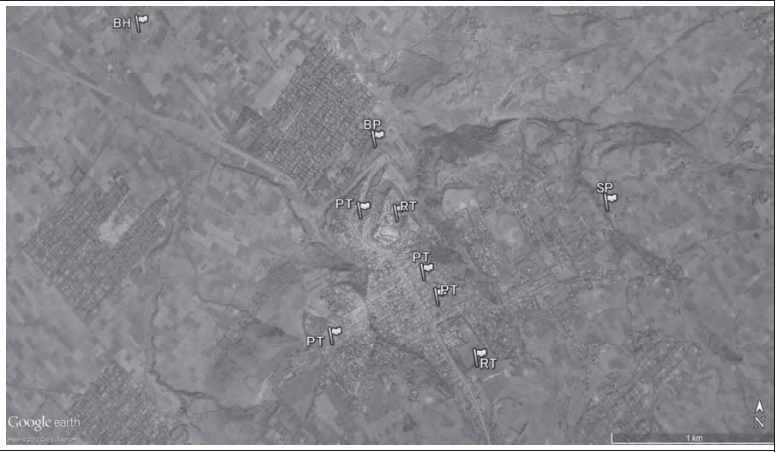
Small Town Profile (AR-1)

	ID	AR-1
	Administrative	
	Town	Sire
	Woreda	Sire
	Zone	Arsi
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	553789
	UTM-N (Adindan)	914629
	Altitude (m)	1989
No.	Item	
1	Population etc.	
1-1	Population (2014)	11,097
1-2	Category urban/rural	Urban
1-3	Satellite villages	1 kebele
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Amhara (60%) and Oromo(40%)
1-6	Main occupation	Merchant (employee)
1-7	Grade of the town	3-D
1-8	Distance from paved road (km)	17
1-9	Rate of power failure (%)	18%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (1), motorized spring (1)
2-1(2)	Operation time	7 days/week-9 hrs/day (rainy season), 7 days/week-6 hrs/day (dry season)
2-2	Pump	
2-2 (1)	Type	3 submersible pump (spring, borehole and booster station)
2-2 (2)	Manufacturer	no data
2-2 (3)	Model, specification	no data
2-2 (4)	Output (kW)	no data
2-2 (5)	Cycle (Hz), speed (rpm)	50 Hz
2-2 (6)	Total head (m)	no data
2-2 (7)	Period of usage (installation month/ year)	33 years since 1981(spring), 3 years since June 2010 (borehole and booster station)
2-2 (8)	Diameter/ material of riser pipes	50mm-GSP (spring), 65mm-GSP (borehole and booster)
2-2 (9)	Unit length/total number of riser pipes	6m-0.5pieces (spring), 6m-26pieces (borehole)
2-2 (10)	Existence of water flow meter	installed and working (3)
2-3	Power source	
2-3(1)	Type	public power supply (spring), 2 diesel generators (borehole and booster station)
2-3(2)	Manufacturer	IVECO (2)
2-3(3)	Model, specification	F4GE0485C*F650 (2)
2-3(4)	Output (kVA)	85 kVA (2)
2-3(5)	Period of usage (installation month/ year)	3 years since June 2010 (2)
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	no data (spring), Jun 2010, UNICEF (borehole)
2-4 (2)	Depth and material of borehole	172m, steel
2-4 (3)	Depth and diameter of pumping chamber	6"
2-4 (4)	Depth, diameter and material of screen	no data
2-4 (5)	Aquifer	no data
2-4 (6)	Static water level (m)	no data
2-4 (7)	Pumping rate and draw down (pumping test)	21.6 m^3/hr (borehole)/ 14.4m^3/hr (spring)

2-4 (8)	Pumping rate and draw down (actual)	12.5 m^3/hr (borehole)
2-4 (9)	Position of pump (depth)	156 m (borehole)
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	4500m-3.5"-GSP, 2500m-3"-GSP
2-5 (2)	Specification of distribution reservoir	65m^3, 50m^3, 50m^3(booster station)
2-5 (3)	Dia., length and material of distribution pipe	4"-400m-GSP, 2.5"-GSP, 2"-GSP, 1.5"-HDP
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	21
2-5 (4)-2	Private connections (set)	516
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	Sire-Merfe Water Management Board
3-1 (2)	Year of establishment	Jun. 2010
3-1 (3)	Contact person	Belihu Bogale/ Chairman/ 0913-047753
3-2	Staffs	
3-2 (1)	Number of staffs	11
3-2 (2)	Experience of operator (year)	2years (borehole), 5years (spring), 9years (booster pump)
3-2 (3)	Operator's experience of training	3 days on the job training
3-3	Water tariff	
3-3 (1)	Water tariff	22 birr/m^3
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m^3/day)	75.5
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	Oct. 2012, CBE and Oromia Credit & Saving Bank, Sire-Merfe Water Management Board
3-4 (3)	Amount of remaining funds	yes/ 381,072 birr (bank) and 1,000 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	Zonal WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	500,000 birr
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	7-10 birr/m^3 in case connected to public power supply at borehole and booster station
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	10～
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	0.70
5-2 (2)	Total hardness (mg/L)	250
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	6.8
6-2	Sufficiency rate of safe water (%)	11.2
7	Any other water supply projects	On going (One Wash Program)



Legend

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Small Town Profile (AR-2)

	ID	AR-2
	Administrative	
	Town	Bolo
	Woreda	Jeju
	Zone	Arsi
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	563663
	UTM-N (Adindan)	911085
	Altitude (m)	2548
No.	Item	
1	Population etc.	
1-1	Population (2014)	1,579
1-2	Category urban/rural	Urban
1-3	Satellite villages	4 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo（98%）, Amhara（2%）
1-6	Main occupation	Merchant (employee)
1-7	Grade of the town	4-C
1-8	Distance from paved road (km)	37
1-9	Rate of power failure (%)	7%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (1)
2-1(2)	Operation time	7 days/week-6 hrs/day (rainy season), 7 days/week-6 hrs/day (dry season)
2-2	Pump	
2-2 (1)	Type	submersible pump
2-2 (2)	Manufacturer	no data
2-2 (3)	Model, specification	no data
2-2 (4)	Output (kW)	no data
2-2 (5)	Cycle (Hz), speed (rpm)	50 Hz
2-2 (6)	Total head (m)	no data
2-2 (7)	Period of usage (installation month/ year)	14years since 2000
2-2 (8)	Diameter/ material of riser pipes	50mm/ GSP
2-2 (9)	Unit length/total number of riser pipes	no data
2-2 (10)	Existence of water flow meter	installed and working
2-3	Power source	
2-3(1)	Type	public power supply (standby diesel generator)
2-3(2)	Manufacturer	Deutz
2-3(3)	Model, specification	F3L912
2-3(4)	Output（kVA）	27.5 kVA
2-3(5)	Period of usage (installation month/ year)	14 years since 2000
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	2006/ Oromia regional government
2-4 (2)	Depth and material of borehole	no data/ steel
2-4 (3)	Depth and diameter of pumping chamber	no data/ 6"
2-4 (4)	Depth, diameter and material of screen	no data
2-4 (5)	Aquifer	no data
2-4 (6)	Static water level (m)	no data
2-4 (7)	Pumping rate and draw down (pumping test)	no data

2-4 (8)	Pumping rate and draw down (actual)	around 13m³/hr
2-4 (9)	Position of pump (depth)	no data
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	65mm, 1000m, GSP
2-5 (2)	Specification of distribution reservoir	40m^3
2-5 (3)	Dia., length and material of distribution pipe	2", no data, GSP
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	4
2-5 (4)-2	Private connections (set)	56
2-5 (4)-3	Cattle troughs (set)	1
2-5 (5)	Existence of water meter	all installed (1not functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	water committee
3-1 (2)	Year of establishment	2000
3-1 (3)	Contact person	Abe Menza/ Chairman/ 0920-394377
3-2	Staffs	
3-2 (1)	Number of staffs	10
3-2 (2)	Experience of operator (year)	4 years
3-2 (3)	Operator's experience of training	no
3-3	Water tariff	
3-3 (1)	Water tariff	14 birr/m^3 for public taps and 18 birr/m^3 for private connection
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m^3/day)	24.2
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	2000, Commercial Bank of Ethiopia Dera branch, Bolo Town Water Supply Station
3-4 (3)	Amount of remaining funds	yes/ 0.00 birr (bank) and 0.00 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	Zonal WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	40% of project cost
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	10 birr/m^3
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	10～
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	0.73
5-2 (2)	Total hardness (mg/L)	202
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	15.3
6-2	Sufficiency rate of safe water (%)	25.3
7	Any other water supply projects	None

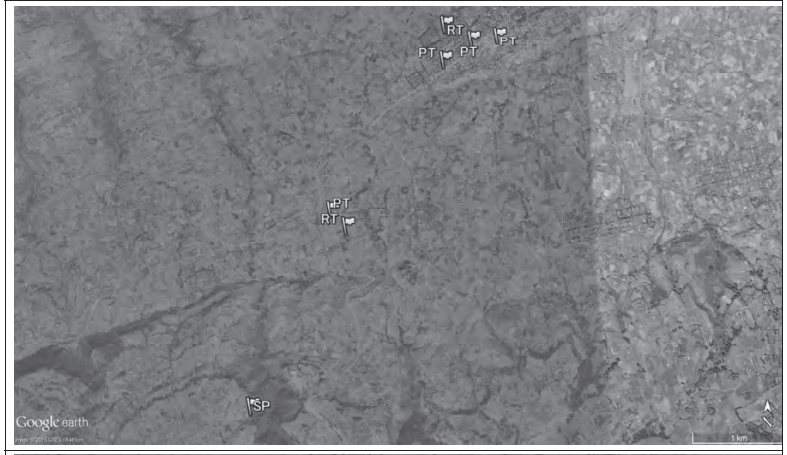
Legend

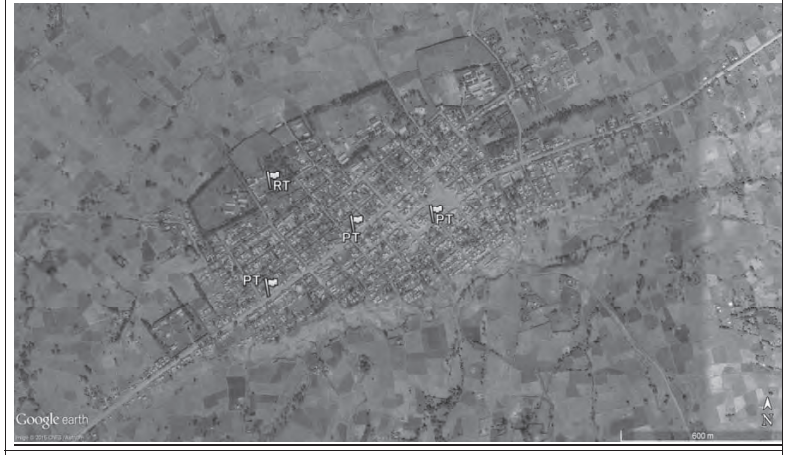
BH: Borehole, SP: Spring, RV: River, CC: Collection Chamber, BP: Booster Pumping Station, RT: Reservoir Tank, PT: Public Tap, CT: Cattle Trough, BHHP: Borehole with Hand Pump, DWHP: Hand Dug Well with Hand Pump

Small Town Profile (AR-3)

	ID	AR-3
	Administrative	
	Town	Arboye
	Woreda	Jeju
	Zone	Arsi
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	575105
	UTM-N (Adindan)	926450
	Altitude (m)	2115
No.	Item	
1	Population etc.	
1-1	Population (2014)	7,272
1-2	Category urban/rural	Urban
1-3	Satellite villages	9 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (90%), Amhara (8%), Others (2%)
1-6	Main occupation	Merchant (employee), public officer
1-7	Grade of the town	4-A
1-8	Distance from paved road (km)	70
1-9	Rate of power failure (%)	17%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	spring with gravity system (1)
2-1(2)	Operation time	7 days/week-24 hrs/day (rainy season), 7 days/week-24 hrs/day (dry season), (available water collection time 1-3 hrs/day)
2-2	Pump	
2-2 (1)	Type	not applicable
2-2 (2)	Manufacturer	not applicable
2-2 (3)	Model, specification	not applicable
2-2 (4)	Output (kW)	not applicable
2-2 (5)	Cycle (Hz), speed (rpm)	not applicable
2-2 (6)	Total head (m)	not applicable
2-2 (7)	Period of usage (installation month/ year)	not applicable
2-2 (8)	Diameter/ material of riser pipes	not applicable
2-2 (9)	Unit length/total number of riser pipes	not applicable
2-2 (10)	Existence of water flow meter	not installed
2-3	Power source	
2-3(1)	Type	not applicable (gravity system)
2-3(2)	Manufacturer	not applicable
2-3(3)	Model, specification	not applicable
2-3(4)	Output (kVA)	not applicable
2-3(5)	Period of usage (installation month/ year)	not applicable
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	1982, Arsi Rural Development Unit (ARDU)
2-4 (2)	Depth and material of borehole	not applicable
2-4 (3)	Depth and diameter of pumping chamber	not applicable
2-4 (4)	Depth, diameter and material of screen	not applicable
2-4 (5)	Aquifer	not applicable
2-4 (6)	Static water level (m)	not applicable
2-4 (7)	Pumping rate and draw down (pumping test)	no data

2-4 (8)	Pumping rate and draw down (actual)	no data
2-4 (9)	Position of pump (depth)	not applicable
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	no data, 3.5", GSP
2-5 (2)	Specification of distribution reservoir	$10m^3$, $40m^3$
2-5 (3)	Dia., length and material of distribution pipe	GSP, uPVC
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	7
2-5 (4)-2	Private connections (set)	529
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (3 non functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	water committee
3-1 (2)	Year of establishment	2006
3-1 (3)	Contact person	Kamilo Aliyi, Manager, 0911-700786
3-2	Staffs	
3-2 (1)	Number of staffs	21
3-2 (2)	Experience of operator (year)	no operator
3-2 (3)	Operator's experience of training	not applicable
3-3	Water tariff	
3-3 (1)	Water tariff	2 birr/m^3 for public taps, 2.75 birr/m^3 for private connection
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m^3/day)	271.7
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	2006, CBE Arboye branch, Arboye Town Water Committee
3-4 (3)	Amount of remaining funds	yes, 10,500 birr (bank) and 0 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	water committee
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	5% of the total project cost
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	3.5 birr/m^3
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	5～10
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	< 1.5 (assumption)
5-2 (2)	Total hardness (mg/L)	< 300 (assumption)
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	37.4
6-2	Sufficiency rate of safe water (%)	59.3
7	Any other water supply projects	None





Legend

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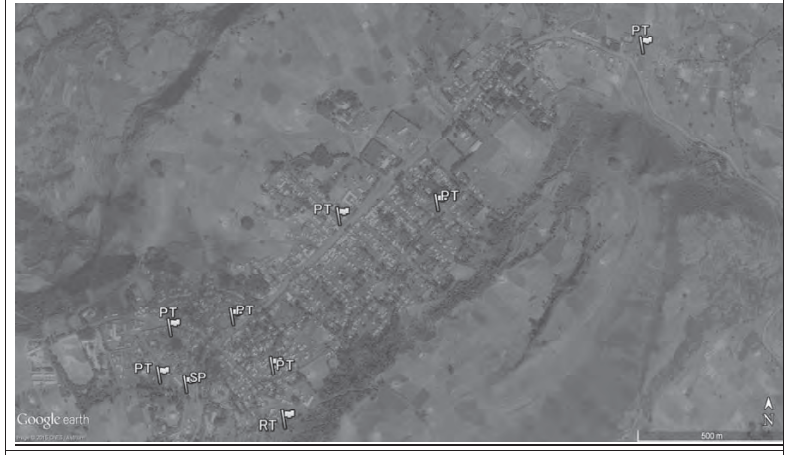
Small Town Profile (AR-4)

	ID	AR-4
	Administrative	
	Town	Aseko
	Woreda	Aseko
	Zone	Arsi
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	612898
	UTM-N (Adindan)	940113
	Altitude (m)	2115
No.	Item	
1	Population etc.	
1-1	Population (2014)	5,283
1-2	Category urban/rural	Urban
1-3	Satellite villages	0
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo（56%）,Amhara（36%), Others（8％）
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	4-C
1-8	Distance from paved road (km)	91
1-9	Rate of power failure (%)	40%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized spring (1), spring on spot (1)
2-1(2)	Operation time	7 days/week-4 hrs/day (rainy season), 7 days/week-4 hrs/day (dry season)
2-2	Pump	
2-2 (1)	Type	submersible pump
2-2 (2)	Manufacturer	Grundfoss
2-2 (3)	Model, specification	no data
2-2 (4)	Output (kW)	no data
2-2 (5)	Cycle (Hz), speed (rpm)	no data
2-2 (6)	Total head (m)	no data
2-2 (7)	Period of usage (installation month/ year)	5 years, 2009
2-2 (8)	Diameter/ material of riser pipes	65mm
2-2 (9)	Unit length/total number of riser pipes	1.5 m/ 1piece
2-2 (10)	Existence of water flow meter	not installed
2-3	Power source	
2-3(1)	Type	public power supply (standby diesel generator)
2-3(2)	Manufacturer	IVECO
2-3(3)	Model, specification	30591
2-3(4)	Output（kVA）	30 kVA
2-3(5)	Period of usage (installation month/ year)	6 years since 2008
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	2009, Oromia Regional Government
2-4 (2)	Depth and material of borehole	not applicable
2-4 (3)	Depth and diameter of pumping chamber	not applicable
2-4 (4)	Depth, diameter and material of screen	not applicable
2-4 (5)	Aquifer	not applicable
2-4 (6)	Static water level (m)	not applicable
2-4 (7)	Pumping rate and draw down (pumping test)	3 m^3/hr

2-4 (8)	Pumping rate and draw down (actual)	12.5 m³/hr
2-4 (9)	Position of pump (depth)	1.5 m
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	65mm-2300m-GSP, 50mm-150m-GSP
2-5 (2)	Specification of distribution reservoir	25m^3
2-5 (3)	Dia., length and material of distribution pipe	3"-300m-GSP, 2.5"-GSP, 2"-552m-GSP, 1.5"-793m-GSP
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	6
2-5 (4)-2	Private connections (set)	66
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (2 not functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	water committee
3-1 (2)	Year of establishment	Apr. 2009
3-1 (3)	Contact person	Negash Mekennen, Chairman, 0920-932920
3-2	Staffs	
3-2 (1)	Number of staffs	17
3-2 (2)	Experience of operator (year)	5 years
3-2 (3)	Operator's experience of training	no
3-3	Water tariff	
3-3 (1)	Water tariff	9 birr/m^3
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m^3/day)	46.3
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	2012, Oromia Credit & Saving Association and CBE, Aseko branch, Aseko Town Water Committee
3-4 (3)	Amount of remaining funds	yes, 27,400 birr (bank) and 0 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	Woreda WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	50,000 - 100,000 birr
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	13 birr/m^3
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	5～10
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	< 1.5 (assumption)
5-2 (2)	Total hardness (mg/L)	< 300 (assumption)
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	8.8
6-2	Sufficiency rate of safe water (%)	14.4
7	Any other water supply projects	None



Legend

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Small Town Profile (AR-5)

	ID	AR-5
	Administrative	
	Town	Golegota
	Woreda	Merti
	Zone	Arsi
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	582942
	UTM-N (Adindan)	955787
	Altitude (m)	1163
No.	Item	
1	Population etc.	
1-1	Population (2014)	7,377
1-2	Category urban/rural	Urban
1-3	Satellite villages	1 town + 2 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (75%), Amhara (10%) & others (15%)
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	4-C
1-8	Distance from paved road (km)	24
1-9	Rate of power failure (%)	13%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (1)
2-1(2)	Operation time	7 days/week and 14 hrs/day (both season)
2-2	Pump	
2-2 (1)	Type	submersible pump
2-2 (2)	Manufacturer	Caprari
2-2 (3)	Model, specification	E6VX27/31+MC640-9V
2-2 (4)	Output (kW)	30kW, 400V
2-2 (5)	Cycle (Hz), speed (rpm)	50 Hz、2850rpm
2-2 (6)	Total head (m)	195 m
2-2 (7)	Period of usage (installation month/ year)	4 years since Sep. 2010
2-2 (8)	Diameter/ material of riser pipes	65mm/ GSP
2-2 (9)	Unit length/total number of riser pipes	6m/ 32pcs
2-2 (10)	Existence of water flow meter	installed and functioning
2-3	Power source	
2-3(1)	Type	diesel generator
2-3(2)	Manufacturer	Perkins
2-3(3)	Model, specification	1006-6TG
2-3(4)	Output（kVA）	100 kVA
2-3(5)	Period of usage (installation month/ year)	3 years and 4 months (since Sep. 2010)
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	2010, Ethio-Italy
2-4 (2)	Depth and material of borehole	steel
2-4 (3)	Depth and diameter of pumping chamber	no data, 7"
2-4 (4)	Depth, diameter and material of screen	steel
2-4 (5)	Aquifer	no data
2-4 (6)	Static water level (m)	no data
2-4 (7)	Pumping rate and draw down (pumping test)	no data

2-4 (8)	Pumping rate and draw down (actual)	25.2 m^3/hr, no data
2-4 (9)	Position of pump (depth)	194 m
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	3", 3800m, GSP
2-5 (2)	Specification of distribution reservoir	50m^3, 10m^3
2-5 (3)	Dia., length and material of distribution pipe	no data
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	11
2-5 (4)-2	Private connections (set)	251
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	Bole-Golegota Town Water Supply Service Office
3-1 (2)	Year of establishment	Sep, 2013
3-1 (3)	Contact person	Tesfaye Mulatu, Manager, Water Supply Service office, 0912-217684
3-2	Staffs	
3-2 (1)	Number of staffs	24
3-2 (2)	Experience of operator (year)	16 years
3-2 (3)	Operator's experience of training	yes (15days at Arsi zonal WME office)
3-3	Water tariff	
3-3 (1)	Water tariff	16.0 birr/m^3 (public tap), 17.0 birr/m^3 (0-5m^3), 17.5 birr/m^3 (6-10m^3), 18.5 birr/m^3 (11-30m^3), 20.0 birr/m^3 (over 30m^3)
3-3 (2)	Collection rate (%)	90 to 95%
3-3 (3)	The amount of the water used (m^3/day)	105.3
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	Sep. 2010, Cooperative Bank of Oromia Bole branch, Bole Golgota water supply service office
3-4 (3)	Amount of remaining funds	yes/ 464,647 Birr (bank) and 500 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	Zonal WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	50% of the remaining fund
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	the water supply service office has plan to reduce tariff in case public electric power will be supplied by Ethiopian Electric power Corporation
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential（L/sec）	5～10
5-2	Water quality potential	
5-2 (1)	Fluoride（mg/L）	1.26/1.63
5-2 (2)	Total hardness（mg/L）	220/182
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	14.3
6-2	Sufficiency rate of safe water (%)	23.9
7	Any other water supply projects	On going (Oromia regional government)

Legend

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Small Town Profile (AR-6)

	ID	AR-6
	Administrative	
	Town	Gonde
	Woreda	Tiyo
	Zone	Arsi
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	521176
	UTM-N (Adindan)	888123
	Altitude (m)	2262
No.	Item	
1	Population etc.	
1-1	Population (2014)	3,434
1-2	Category urban/rural	Urban
1-3	Satellite villages	0
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo（43%）, Amhara（32%）, Silte（10%）, Others（15%）
1-6	Main occupation	Merchant (employee)
1-7	Grade of the town	4-C
1-8	Distance from paved road (km)	0
1-9	Rate of power failure (%)	6%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	spring with gravity system (1)
2-1(2)	Operation time	7 days/week-24 hrs/day (rainy season）, 7 days/week-24 hrs/day (dry season）
2-2	Pump	
2-2 (1)	Type	not applicable
2-2 (2)	Manufacturer	not applicable
2-2 (3)	Model, specification	not applicable
2-2 (4)	Output (kW)	not applicable
2-2 (5)	Cycle (Hz), speed (rpm)	not applicable
2-2 (6)	Total head (m)	not applicable
2-2 (7)	Period of usage (installation month/ year)	not applicable
2-2 (8)	Diameter/ material of riser pipes	not applicable
2-2 (9)	Unit length/total number of riser pipes	not applicable
2-2 (10)	Existence of water flow meter	not installed
2-3	Power source	
2-3(1)	Type	not applicable (gravity system)
2-3(2)	Manufacturer	not applicable
2-3(3)	Model, specification	not applicable
2-3(4)	Output（kVA）	not applicable
2-3(5)	Period of usage (installation month/ year)	not applicable
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	Mar 2006, Town Administration and Water Board
2-4 (2)	Depth and material of borehole	not applicable
2-4 (3)	Depth and diameter of pumping chamber	not applicable
2-4 (4)	Depth, diameter and material of screen	not applicable
2-4 (5)	Aquifer	not applicable
2-4 (6)	Static water level (m)	not applicable
2-4 (7)	Pumping rate and draw down (pumping test)	no data

2-4 (8)	Pumping rate and draw down (actual)	no data
2-4 (9)	Position of pump (depth)	not applicable
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	not exist
2-5 (2)	Specification of distribution reservoir	not exist
2-5 (3)	Dia., length and material of distribution pipe	75mm-100m-GSP, 65mm-500m-GSP, 40mm-400m-HDPE, 25mm-HDPE, 15mm-HDPE, 12mm-HDPE
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	5
2-5 (4)-2	Private connections (set)	278
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	Gonde-Iteya Water Management Board
3-1 (2)	Year of establishment	1999
3-1 (3)	Contact person	Wado Kedir, Manager, 0912-064354
3-2	Staffs	
3-2 (1)	Number of staffs	18
3-2 (2)	Experience of operator (year)	no operator
3-2 (3)	Operator's experience of training	not applicable
3-3	Water tariff	
3-3 (1)	Water tariff	5 birr/m^3 (public taps), 4.25 birr/m^3 (0-30m^3) 5 birr/m^3 (over 30m^3)
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m^3/day)	116.2
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	1999, CBE Asela branch and Cooperation Bank of Oromia Iteya branch, Gonde-Iteya Town Water Management Board
3-4 (3)	Amount of remaining funds	yes, 1,300,000 birr (bank) and 500 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	Zonal WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	200,000 birr
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	7 - 8 birr/m^3
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	5～10
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	< 1.5 (assumption)
5-2 (2)	Total hardness (mg/L)	< 300 (assumption)
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	33.8
6-2	Sufficiency rate of safe water (%)	56.2
7	Any other water supply projects	None

Legend

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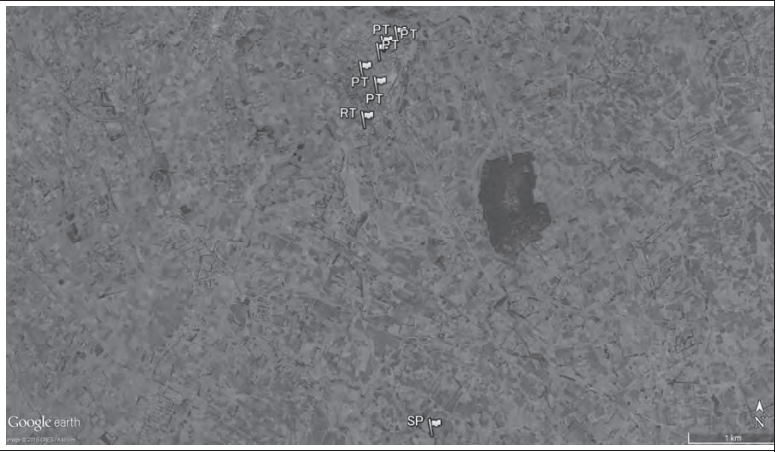
Small Town Profile (AR-7)

	ID	AR-7
	Administrative	
	Town	Arbe Gebeya
	Woreda	Lodehetosa
	Zone	Arsi
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	547813
	UTM-N (Adindan)	898826
	Altitude (m)	2441
No.	Item	
1	Population etc.	
1-1	Population (2014)	2,433
1-2	Category urban/rural	Urban
1-3	Satellite villages	2 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo（85%）, Amhara（10%）, Others（5％）
1-6	Main occupation	Merchant (employee)
1-7	Grade of the town	4-A
1-8	Distance from paved road (km)	28
1-9	Rate of power failure (%)	40%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	spring with gravity system (1), spring on spot (1)
2-1(2)	Operation time	7 days/week-24 hrs/day (rainy season）, 7 days/week-24 hrs/day (dry season）
2-2	Pump	
2-2 (1)	Type	not applicable
2-2 (2)	Manufacturer	not applicable
2-2 (3)	Model, specification	not applicable
2-2 (4)	Output (kW)	not applicable
2-2 (5)	Cycle (Hz), speed (rpm)	not applicable
2-2 (6)	Total head (m)	not applicable
2-2 (7)	Period of usage (installation month/ year)	not applicable
2-2 (8)	Diameter/ material of riser pipes	not applicable
2-2 (9)	Unit length/total number of riser pipes	not applicable
2-2 (10)	Existence of water flow meter	not installed
2-3	Power source	
2-3(1)	Type	not applicable (gravity system)
2-3(2)	Manufacturer	not applicable
2-3(3)	Model, specification	not applicable
2-3(4)	Output（kVA）	not applicable
2-3(5)	Period of usage (installation month/ year)	not applicable
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	May 1995, Oromia government
2-4 (2)	Depth and material of borehole	not applicable
2-4 (3)	Depth and diameter of pumping chamber	not applicable
2-4 (4)	Depth, diameter and material of screen	not applicable
2-4 (5)	Aquifer	not applicable
2-4 (6)	Static water level (m)	not applicable
2-4 (7)	Pumping rate and draw down (pumping test)	no data

2-4 (8)	Pumping rate and draw down (actual)	no data
2-4 (9)	Position of pump (depth)	not applicable
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	100mm-GSP, 75mm-GSP/uPVC
2-5 (2)	Specification of distribution reservoir	50m^3
2-5 (3)	Dia., length and material of distribution pipe	75mm-GSP, 65mm-GSP
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	5
2-5 (4)-2	Private connections (set)	340
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (4 not functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	water committee
3-1 (2)	Year of establishment	May 1995
3-1 (3)	Contact person	Demis Hailiye, Chairman, 0913-745174
3-2	Staffs	
3-2 (1)	Number of staffs	11
3-2 (2)	Experience of operator (year)	no operator
3-2 (3)	Operator's experience of training	not applicable
3-3	Water tariff	
3-3 (1)	Water tariff	1.5 birr/m^3 plus 2 birr/month/connection as water meter rental fee
3-3 (2)	Collection rate (%)	85%
3-3 (3)	The amount of the water used (m^3/day）	220.7
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	May 1995, CBE Huruta branch, Jimata Lode Water Committee
3-4 (3)	Amount of remaining funds	yes, 10,200 birr (bank) and 5,000 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	Woreda WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	10% of the project cost
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	3.0 birr/m^3
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential（L/sec）	5～10
5-2	Water quality potential	
5-2 (1)	Fluoride（mg/L）	< 1.5 (assumption)
5-2 (2)	Total hardness（mg/L）	< 300 (assumption)
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	90.7
6-2	Sufficiency rate of safe water (%)	131.1
7	Any other water supply projects	None



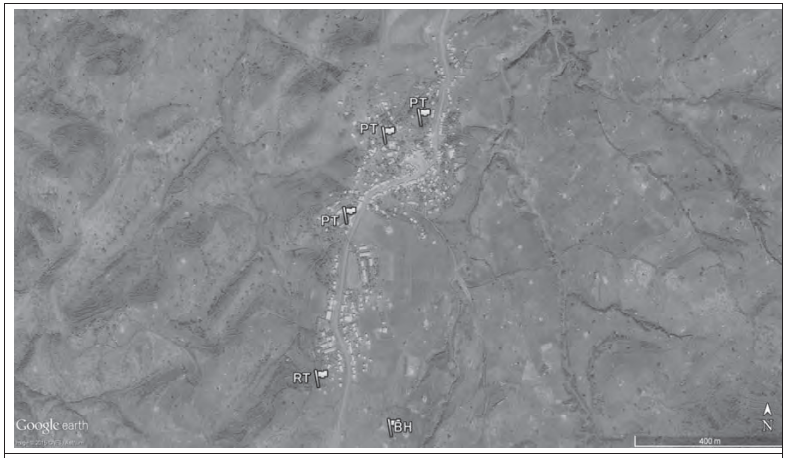
Legend

BH: Borehole, SP: Spring, RV: River, CC: Collection Chamber, BP: Booster Pumping Station, RT: Reservoir Tank, PT: Public Tap, CT: Cattle Trough, BHHP: Borehole with Hand Pump, DWHP: Hand Dug Well with Hand Pump

Small Town Profile (WH-1)

	ID	WH-1
	Administrative	
	Town	Chorora
	Woreda	Anchar
	Zone	West Hararge
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	641097
	UTM-N (Adindan)	971517
	Altitude (m)	1691
No.	Item	
1	Population etc.	
1-1	Population (2014)	2,729
1-2	Category urban/rural	Rural
1-3	Satellite villages	3 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo（85%）, Argoba（14%）, Amhara（1%）
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	なし
1-8	Distance from paved road (km)	82
1-9	Rate of power failure (%)	13%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (1)
2-1(2)	Operation time	7days/week-11hrs/day (rainy season）, 7days/week-11hrs/day (dry season）
2-2	Pump	
2-2 (1)	Type	submersible pump
2-2 (2)	Manufacturer	no data
2-2 (3)	Model, specification	no data
2-2 (4)	Output (kW)	11 kW, 400V
2-2 (5)	Cycle (Hz), speed (rpm)	50Hz, 2890rpm
2-2 (6)	Total head (m)	170
2-2 (7)	Period of usage (installation month/ year)	12 yeas since 2002
2-2 (8)	Diameter/ material of riser pipes	2"
2-2 (9)	Unit length/total number of riser pipes	no data
2-2 (10)	Existence of water flow meter	not installed
2-3	Power source	
2-3(1)	Type	diesel generator
2-3(2)	Manufacturer	VM
2-3(3)	Model, specification	SUN3105
2-3(4)	Output（kVA）	30 kVA
2-3(5)	Period of usage (installation month/ year)	12 years since 2002
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	2002, Oromia Regional Government
2-4 (2)	Depth and material of borehole	99.7m, steel
2-4 (3)	Depth and diameter of pumping chamber	99.7m, 200mm
2-4 (4)	Depth, diameter and material of screen	no data
2-4 (5)	Aquifer	no data
2-4 (6)	Static water level (m)	36.32 m
2-4 (7)	Pumping rate and draw down (pumping test)	21.6 m^3/hr

2-4 (8)	Pumping rate and draw down (actual)	16.7 m³/hr, no data
2-4 (9)	Position of pump (depth)	83 m
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	50mm-GSP
2-5 (2)	Specification of distribution reservoir	50m³
2-5 (3)	Dia., length and material of distribution pipe	40mm-GSP
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	3
2-5 (4)-2	Private connections (set)	139
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	water committee
3-1 (2)	Year of establishment	2002
3-1 (3)	Contact person	Tahir Mohamed, Chairman, 0913-185947
3-2	Staffs	
3-2 (1)	Number of staffs	11
3-2 (2)	Experience of operator (year)	4 years
3-2 (3)	Operator's experience of training	no
3-3	Water tariff	
3-3 (1)	Water tariff	18 birr/m^3 for public taps and 21 birr/m^3 for private connection
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m^3/day)	21.2
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	May 2005, CBE Gelemso branch and Oromia Credit & Saving Bank Cheleleka branch, Chorora Town Water Committee
3-4 (3)	Amount of remaining funds	yes, 36,500 birr (bank) and 4,000 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	Zonal WME office through Woreda WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	50,000 birr
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	20 birr/m³
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	5～10
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	0.54
5-2 (2)	Total hardness (mg/L)	272
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	7.8
6-2	Sufficiency rate of safe water (%)	21.7
7	Any other water supply projects	None



Legend

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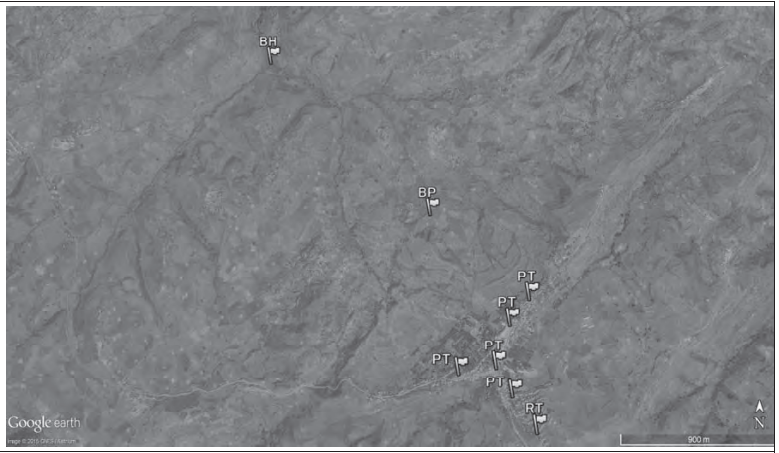
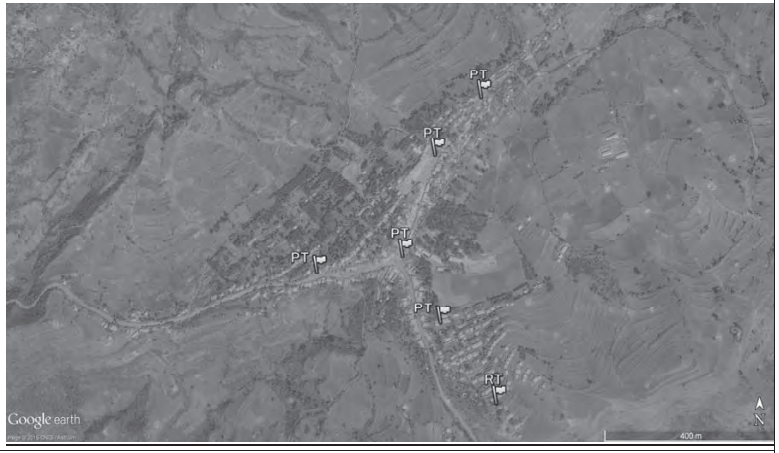
Small Town Profile (WH-2)

	ID	WH-2
	Administrative	
	Town	Bedeyi
	Woreda	Anchar
	Zone	West Hararge
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	627376
	UTM-N (Adindan)	954910
	Altitude (m)	2149
No.	Item	
1	Population etc.	
1-1	Population (2014)	2,945
1-2	Category urban/rural	Urban
1-3	Satellite villages	4 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo（70%）, Amhara（25%）, Argoba（5%）
1-6	Main occupation	Merchant (employee)
1-7	Grade of the town	4-C
1-8	Distance from paved road (km)	73
1-9	Rate of power failure (%)	Unelectrified
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (1)
2-1(2)	Operation time	7 days/week-9 hrs/day (rainy season）, 7 days/week-9 hrs/day (dry season)
2-2	Pump	
2-2 (1)	Type	submersible pump (borehole), turbine pump (booster PS)
2-2 (2)	Manufacturer	CMS (borehole) and KSB (booster)
2-2 (3)	Model, specification	QB 25 (borehole) and 20619146/10 (booster PS)
2-2 (4)	Output (kW)	18.5 kW / 22 kW, 400V
2-2 (5)	Cycle (Hz), speed (rpm)	50Hz, 2890rpm
2-2 (6)	Total head (m)	no data
2-2 (7)	Period of usage (installation month/ year)	7 years since 1995
2-2 (8)	Diameter/ material of riser pipes	65mm/ no data
2-2 (9)	Unit length/total number of riser pipes	no data (both)
2-2 (10)	Existence of water flow meter	installed and working (2)
2-3	Power source	
2-3(1)	Type	2 diesel generators (1 for borehole, 1 for booster pumping station)
2-3(2)	Manufacturer	Perkins (borehole), John Deere (booster PS)
2-3(3)	Model, specification	1103A-337 (borehole) and 60JD (booster PS)
2-3(4)	Output（kVA）	60 kVA (both)
2-3(5)	Period of usage (installation month/ year)	7 years since 2007 (both)
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	May 2007, Oromia Regional Government
2-4 (2)	Depth and material of borehole	87.65m, steel
2-4 (3)	Depth and diameter of pumping chamber	87.65m, 6"
2-4 (4)	Depth, diameter and material of screen	no data
2-4 (5)	Aquifer	no data
2-4 (6)	Static water level (m)	34.10m
2-4 (7)	Pumping rate and draw down (pumping test)	18.0 m^3/hr

2-4 (8)	Pumping rate and draw down (actual)	8.3 m^3/hr, no data
2-4 (9)	Position of pump (depth)	no data
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	100mm, GSP 75mm, GSP
2-5 (2)	Specification of distribution reservoir	50 m^3 and 25m^3 (booster PS)
2-5 (3)	Dia., length and material of distribution pipe	80mm-GSP, 75mm-GSP, 65mm-GSP, 50mm-GSP
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	5
2-5 (4)-2	Private connections (set)	101
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	water committee
3-1 (2)	Year of establishment	May 2007
3-1 (3)	Contact person	Abebe Aytenfisu, Chairman, 0932-406431
3-2	Staffs	
3-2 (1)	Number of staffs	16
3-2 (2)	Experience of operator (year)	2 operators with 7years and 2months experience
3-2 (3)	Operator's experience of training	3-4 days on the job training at Woreda Office
3-3	Water tariff	
3-3 (1)	Water tariff	38 birr/m^3 for public taps and 42 birr/m^3 for private connections
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m^3/day）	16.8
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	cash in the village
3-4 (2)	Name of financial institutions	not applicable
3-4 (3)	Amount of remaining funds	no, 10,000 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund and temporary collection
3-5 (2)	To whom ask to repair	Regional WME bureau via Zonal WME office via Woreda WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	20,000 - 25,000 birr
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	42 birr/m^3 (in case of generator) or 8 birr/m^3 (in case of public power supply)
4-5	Intension to pay for equipment replacement cost	no, difficult to pay for pumps and generators
5	Groundwater development potential	
5-1	Water quantity potential（L/sec）	5～10
5-2	Water quality potential	
5-2 (1)	Fluoride（mg/L）	0.50
5-2 (2)	Total hardness（mg/L）	354
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	5.7
6-2	Sufficiency rate of safe water (%)	9.2
7	Any other water supply projects	None





Legend

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Small Town Profile (WH-3)

	ID	WH-3
	Administrative	
	Town	Hardim
	Woreda	Guba Qoricha
	Zone	West Hararge
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	656277
	UTM-N (Adindan)	975905
	Altitude (m)	1632
No.	Item	
1	Population etc.	
1-1	Population (2014)	5,905
1-2	Category urban/rural	Urban
1-3	Satellite villages	2 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo（80%）, Amhara（20%）
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	4-C
1-8	Distance from paved road (km)	51
1-9	Rate of power failure (%)	20%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (1)
2-1(2)	Operation time	7 days/week-10 hrs/day (rainy season）, 7 days/week-10 hrs/day (dry season）
2-2	Pump	
2-2 (1)	Type	submersible pump
2-2 (2)	Manufacturer	Pleuger
2-2 (3)	Model, specification	no data
2-2 (4)	Output (kW)	14.5 kW, 400V
2-2 (5)	Cycle (Hz), speed (rpm)	50Hz, 2890rpm
2-2 (6)	Total head (m)	170m
2-2 (7)	Period of usage (installation month/ year)	19 years since 1995
2-2 (8)	Diameter/ material of riser pipes	65mm/ GSP
2-2 (9)	Unit length/total number of riser pipes	6m, 12pieces
2-2 (10)	Existence of water flow meter	installed (not functioning)
2-3	Power source	
2-3(1)	Type	diesel generator
2-3(2)	Manufacturer	Deutz
2-3(3)	Model, specification	F4L912
2-3(4)	Output（kVA）	38 kVA
2-3(5)	Period of usage (installation month/ year)	2 years since 2012 (second hand)
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	1994, Oromia Regional Government
2-4 (2)	Depth and material of borehole	78m, steel
2-4 (3)	Depth and diameter of pumping chamber	78m, 200mm
2-4 (4)	Depth, diameter and material of screen	no data
2-4 (5)	Aquifer	no data
2-4 (6)	Static water level (m)	18.10m
2-4 (7)	Pumping rate and draw down (pumping test)	no data

2-4 (8)	Pumping rate and draw down (actual)	8.3 m³/hr
2-4 (9)	Position of pump (depth)	72 m
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	75mm-GSP
2-5 (2)	Specification of distribution reservoir	25m³
2-5 (3)	Dia., length and material of distribution pipe	75mm-GSP, 50mm-GSP
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	7
2-5 (4)-2	Private connections (set)	88
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	water committee
3-1 (2)	Year of establishment	1995
3-1 (3)	Contact person	Husein Ahmed, Chairman, 0924-169999
3-2	Staffs	
3-2 (1)	Number of staffs	13
3-2 (2)	Experience of operator (year)	19 years
3-2 (3)	Operator's experience of training	10.5 month at Zonal WME office
3-3	Water tariff	
3-3 (1)	Water tariff	19 birr/m3 for public taps and 25 birr/m3 for private connection
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m^3/day)	18.1
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	May 1997, CBE Gelemso branch
3-4 (3)	Amount of remaining funds	yes, 10,000 birr (bank) and 15,000 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	Zonal WME office through Woreda WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	100,000 birr
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	19-25 birr/m³ (in case of generator) or 5-6 birr/m3 (in case of public power supply by EEPCO is available)
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	10～
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	0.71
5-2 (2)	Total hardness (mg/L)	400
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	3.1
6-2	Sufficiency rate of safe water (%)	5.1
7	Any other water supply projects	None

Legend

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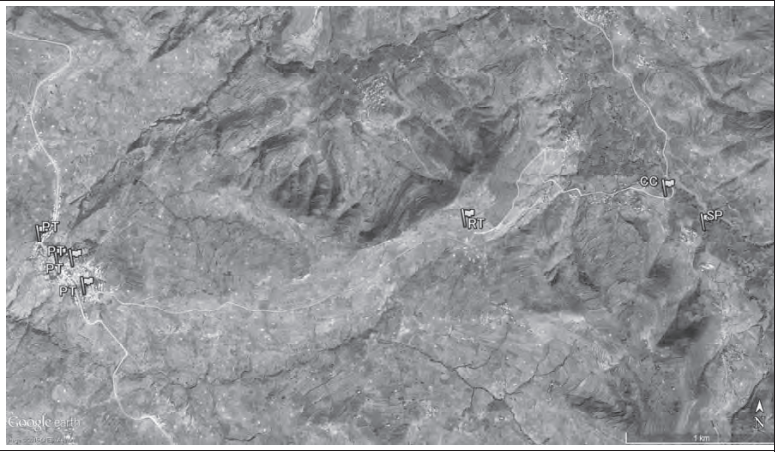
Small Town Profile (WH-4)

	ID	WH-4
	Administrative	
	Town	Bube
	Woreda	Guba Qoricha
	Zone	West Hararge
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	662813
	UTM-N (Adindan)	979936
	Altitude (m)	1991
No.	Item	
1	Population etc.	
1-1	Population (2014)	6,246
1-2	Category urban/rural	Rural
1-3	Satellite villages	2 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (90%), Amhara (7%), Somali (3%)
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	None
1-8	Distance from paved road (km)	26
1-9	Rate of power failure (%)	Unelectrified
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized spring (1)
2-1(2)	Operation time	2.3 days/week-4 hrs/day (rainy season), 1.8 days/week-4 hrs/day (dry season)
2-2	Pump	
2-2 (1)	Type	submersible pump
2-2 (2)	Manufacturer	no data
2-2 (3)	Model, specification	no data
2-2 (4)	Output (kW)	18.5 kW, 400V
2-2 (5)	Cycle (Hz), speed (rpm)	50Hz
2-2 (6)	Total head (m)	no data
2-2 (7)	Period of usage (installation month/ year)	4 years since 2010
2-2 (8)	Diameter/ material of riser pipes	2"/ 4"
2-2 (9)	Unit length/total number of riser pipes	no data
2-2 (10)	Existence of water flow meter	not installed
2-3	Power source	
2-3(1)	Type	diesel generator
2-3(2)	Manufacturer	Perkins
2-3(3)	Model, specification	2320/1500
2-3(4)	Output (kVA)	40 kVA
2-3(5)	Period of usage (installation month/ year)	4 years since 2010
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	2006, Zonal Water Mineral & Energy Office of West Hararge
2-4 (2)	Depth and material of borehole	not applicable
2-4 (3)	Depth and diameter of pumping chamber	not applicable
2-4 (4)	Depth, diameter and material of screen	not applicable
2-4 (5)	Aquifer	not applicable
2-4 (6)	Static water level (m)	not applicable
2-4 (7)	Pumping rate and draw down (pumping test)	3.5liter/sec

2-4 (8)	Pumping rate and draw down (actual)	no data
2-4 (9)	Position of pump (depth)	no data
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	50mm-GSP
2-5 (2)	Specification of distribution reservoir	50m³
2-5 (3)	Dia., length and material of distribution pipe	no data
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	4
2-5 (4)-2	Private connections (set)	16
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	water committee
3-1 (2)	Year of establishment	2006
3-1 (3)	Contact person	Ahmedsani Abrahim, Chairman, 0919-215340
3-2	Staffs	
3-2 (1)	Number of staffs	10
3-2 (2)	Experience of operator (year)	8 years
3-2 (3)	Operator's experience of training	no
3-3	Water tariff	
3-3 (1)	Water tariff	20 birr/m^3 for public taps and 21 birr/m^3 for private connections
3-3 (2)	Collection rate (%)	100% only for public taps
3-3 (3)	The amount of the water used (m^3/day)	18.1
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	2013, CBE Gelemso branch, Bube Town Water Committee
3-4 (3)	Amount of remaining funds	yes, 15,000 birr (bank) and unknown (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	Zonal WME office through Woreda WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	5% of the project cost
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	20-21 birr/m³ (in case of generator) or 8 birr/m³ (in case of public power supply by EEPCO will be available)
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	0～5
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	< 1.5 (assumption)
5-2 (2)	Total hardness (mg/L)	< 300 (assumption)
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	2.9
6-2	Sufficiency rate of safe water (%)	8.4
7	Any other water supply projects	None



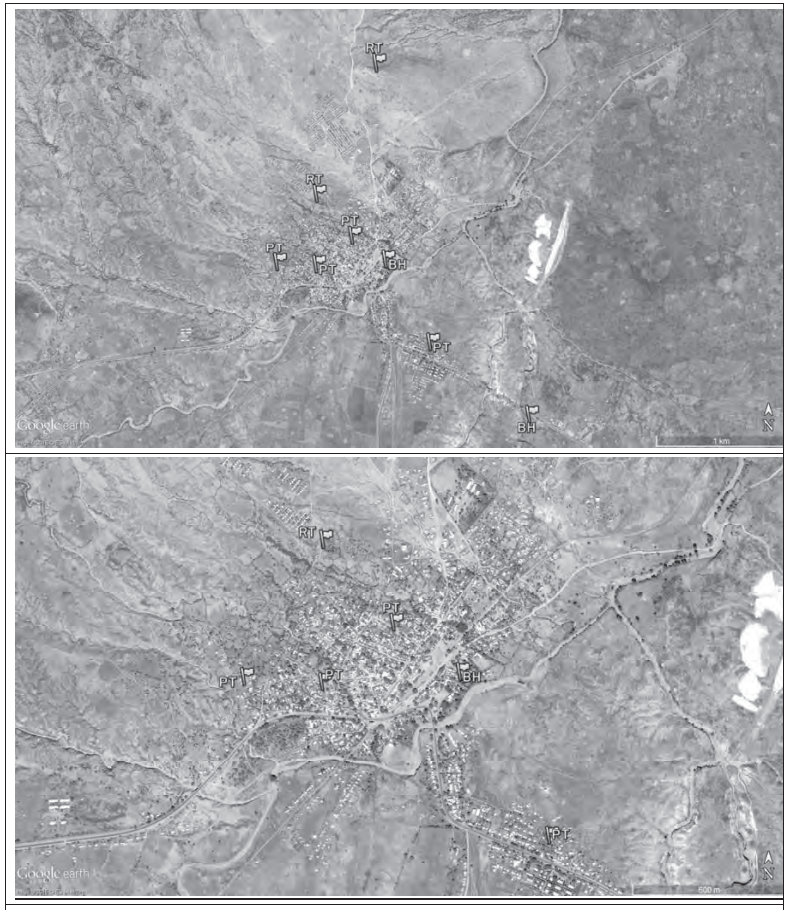
Legend

BH: Borehole, SP: Spring, RV: River, CC: Collection Chamber, BP: Booster Pumping Station, RT: Reservoir Tank, PT: Public Tap, CT: Cattle Trough, BHHP: Borehole with Hand Pump, DWHP: Hand Dug Well with Hand Pump

Small Town Profile (WH-5)

	ID	WH-5
	Administrative	
	Town	Mieso
	Woreda	Mieso
	Zone	West Hararge
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	692799
	UTM-N (Adindan)	1021080
	Altitude (m)	1323
No.	Item	
1	Population etc.	
1-1	Population (2014)	17,672
1-2	Category urban/rural	Urban
1-3	Satellite villages	6 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (60%), Amhara (20%), Somali (10%), Others (10%)
1-6	Main occupation	Daily worker
1-7	Grade of the town	4-A
1-8	Distance from paved road (km)	0
1-9	Rate of power failure (%)	5%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (2)
2-1(2)	Operation time	7 days/week-24 hrs/day (rainy season), 7 days/week-24 hrs/day) (dry season)
2-2	Pump	
2-2 (1)	Type	submersible pump (2)
2-2 (2)	Manufacturer	Grundfoss (BH1), CMS (BH2)
2-2 (3)	Model, specification	AF11-1A (BH-1) CMSE-10909 (BH-2)
2-2 (4)	Output (kW)	11kW-380V (BH-1) 22kW-400V (BH-2)
2-2 (5)	Cycle (Hz), speed (rpm)	50Hz (both)
2-2 (6)	Total head (m)	no data
2-2 (7)	Period of usage (installation month/ year)	6 years since March 2008 (BH1), 2 years since 2012 (BH2)
2-2 (8)	Diameter/ material of riser pipes	50mm-GSP (BH-1), 100mm-GSP (BH-2)
2-2 (9)	Unit length/total number of riser pipes	no data (BH1), 6m-11.5pieces (BH2)
2-2 (10)	Existence of water flow meter	installed and working (2)
2-3	Power source	
2-3(1)	Type	public power supply (BH1), public power supply (standby diesel generator) (BH2)
2-3(2)	Manufacturer	FPT (BH2)
2-3(3)	Model, specification	F4GE0455A-F650
2-3(4)	Output (kVA)	70 kVA
2-3(5)	Period of usage (installation month/ year)	2 years since 2012
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	1977-Government (BH1), 2001-China (BH2)
2-4 (2)	Depth and material of borehole	94m-steel (BH1) and 120m-steel (BH2)
2-4 (3)	Depth and diameter of pumping chamber	94m-5" (BH1), 120m-10" (BH-2)
2-4 (4)	Depth, diameter and material of screen	no data
2-4 (5)	Aquifer	no data
2-4 (6)	Static water level (m)	30m (BH-1), 78m (BH-2)
2-4 (7)	Pumping rate and draw down (pumping test)	8.3 m^3/hr - no data (BH1), 21.6 m^3/hr - no data (BH2)

2-4 (8)	Pumping rate and draw down (actual)	8.3 m³/hr - no data (BH1), 19-20 m³/hr - no data (BH2)
2-4 (9)	Position of pump (depth)	no data (BH1)/ 69m (BH2)
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	65mm, no data, GSP (BH1), 75mm, no data, GSP (BH-2)
2-5 (2)	Specification of distribution reservoir	70m³ (1977), 50m^3 (2001)
2-5 (3)	Dia., length and material of distribution pipe	no data
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	10
2-5 (4)-2	Private connections (set)	712
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	Mieso Town Water Supply Service Office
3-1 (2)	Year of establishment	2005
3-1 (3)	Contact person	Almaz Mekonnen, Manager, 0913-997881
3-2	Staffs	
3-2 (1)	Number of staffs	11
3-2 (2)	Experience of operator (year)	10 years both 2 operators
3-2 (3)	Operator's experience of training	no (both)
3-3	Water tariff	
3-3 (1)	Water tariff	7.5 birr/m³ for public taps and 6.0 birr/m^3 for private connection plus 2 birr/ month/ connection as water meter rental fee
3-3 (2)	Collection rate (%)	72%
3-3 (3)	The amount of the water used (m^3/day)	224.8
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	June 2005, CBE Mieso branch, Mieso Town Water Supply Service Office
3-4 (3)	Amount of remaining funds	yes, 314,586.24 birr (bank) and 2,000 birr (cash))
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	Zonal WME office through Woreda WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	50,000 birr
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	10 birr/m³
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	5～10
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	0.69
5-2 (2)	Total hardness (mg/L)	210
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	12.7
6-2	Sufficiency rate of safe water (%)	21.1
7	Any other water supply projects	On going (One Wash Program)



Legend

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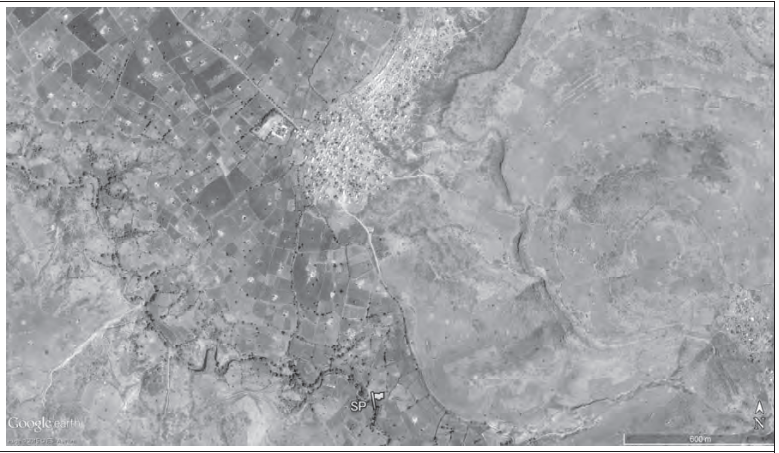
Small Town Profile (WH-6)

	ID	WH-6
	Administrative	
	Town	Hargeti
	Woreda	Mieso
	Zone	West Hararge
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	674221
	UTM-N (Adindan)	1003489
	Altitude (m)	1349
No.	Item	
1	Population etc.	
1-1	Population (2014)	3,365
1-2	Category urban/rural	Rural
1-3	Satellite villages	0
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo（100 %）
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	None
1-8	Distance from paved road (km)	14
1-9	Rate of power failure (%)	Unelectrified
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	no facility, surface water (Arba river)
2-1(2)	Operation time	not applicable
2-2	Pump	
2-2 (1)	Type	not applicable
2-2 (2)	Manufacturer	not applicable
2-2 (3)	Model, specification	not applicable
2-2 (4)	Output (kW)	not applicable
2-2 (5)	Cycle (Hz), speed (rpm)	not applicable
2-2 (6)	Total head (m)	not applicable
2-2 (7)	Period of usage (installation month/ year)	not applicable
2-2 (8)	Diameter/ material of riser pipes	not applicable
2-2 (9)	Unit length/total number of riser pipes	not applicable
2-2 (10)	Existence of water flow meter	not applicable
2-3	Power source	
2-3(1)	Type	not applicable
2-3(2)	Manufacturer	not applicable
2-3(3)	Model, specification	not applicable
2-3(4)	Output（kVA）	not applicable
2-3(5)	Period of usage (installation month/ year)	not applicable
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	not applicable
2-4 (2)	Depth and material of borehole	not applicable
2-4 (3)	Depth and diameter of pumping chamber	not applicable
2-4 (4)	Depth, diameter and material of screen	not applicable
2-4 (5)	Aquifer	not applicable
2-4 (6)	Static water level (m)	not applicable
2-4 (7)	Pumping rate and draw down (pumping test)	not applicable

2-4 (8)	Pumping rate and draw down (actual)	not applicable
2-4 (9)	Position of pump (depth)	not applicable
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	not applicable
2-5 (2)	Specification of distribution reservoir	not applicable
2-5 (3)	Dia., length and material of distribution pipe	not applicable
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	not applicable
2-5 (4)-2	Private connections (set)	not applicable
2-5 (4)-3	Cattle troughs (set)	not applicable
2-5 (5)	Existence of water meter	not applicable
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	not applicable
3-1 (2)	Year of establishment	not applicable
3-1 (3)	Contact person	not applicable
3-2	Staffs	
3-2 (1)	Number of staffs	0
3-2 (2)	Experience of operator (year)	not applicable
3-2 (3)	Operator's experience of training	not applicable
3-3	Water tariff	
3-3 (1)	Water tariff	not applicable
3-3 (2)	Collection rate (%)	not applicable
3-3 (3)	The amount of the water used (m^3/day)	0.0
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	not applicable
3-4 (2)	Name of financial institutions	not applicable
3-4 (3)	Amount of remaining funds	not applicable
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	not applicable
3-5 (2)	To whom ask to repair	not applicable
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	no idea
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	no idea
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential（L/sec）	10～
5-2	Water quality potential	
5-2 (1)	Fluoride（mg/L）	< 1.5 (assumption)
5-2 (2)	Total hardness（mg/L）	< 300 (assumption)
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	0.0
6-2	Sufficiency rate of safe water (%)	0
7	Any other water supply projects	None



Legend

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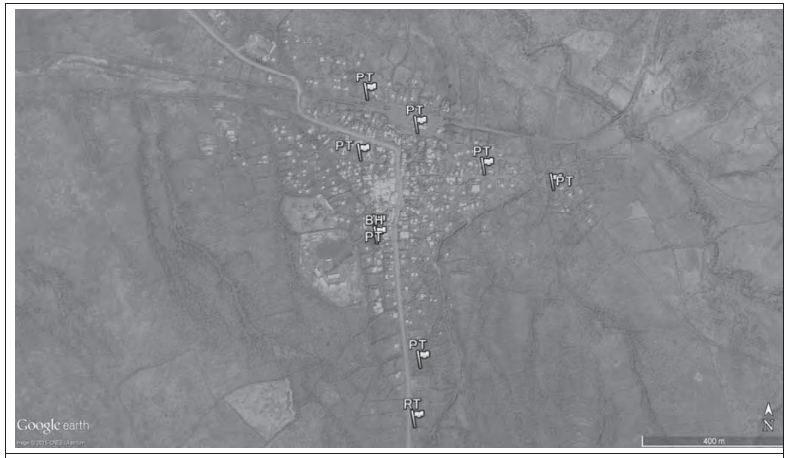
Small Town Profile (WH-7)

	ID	WH-7
	Administrative	
	Town	Bordede
	Woreda	Mieso
	Zone	West Hararge
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	652603
	UTM-N (Adindan)	996461
	Altitude (m)	1100
No.	Item	
1	Population etc.	
1-1	Population (2014)	2,940
1-2	Category urban/rural	Urban
1-3	Satellite villages	4 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (97%), Other (3%)
1-6	Main occupation	Merchant (employee)
1-7	Grade of the town	4-B
1-8	Distance from paved road (km)	2
1-9	Rate of power failure (%)	9%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (1)
2-1(2)	Operation time	7 days/week-10 hrs/day (rainy season), 7 days/week-11 hrs/day (dry season)
2-2	Pump	
2-2 (1)	Type	submersible pump
2-2 (2)	Manufacturer	Flankline
2-2 (3)	Model, specification	no data
2-2 (4)	Output (kW)	15 kW
2-2 (5)	Cycle (Hz), speed (rpm)	50Hz, 2860rpm
2-2 (6)	Total head (m)	225m @ 30m^3/hr
2-2 (7)	Period of usage (installation month/ year)	9 month since June 2013
2-2 (8)	Diameter/ material of riser pipes	2"/ GSP
2-2 (9)	Unit length/total number of riser pipes	no data
2-2 (10)	Existence of water flow meter	installed and working
2-3	Power source	
2-3(1)	Type	diesel generator (quality of public power supply is very poor so that pumps were burned 3 times)
2-3(2)	Manufacturer	IVECO
2-3(3)	Model, specification	F4GE0455C*F600
2-3(4)	Output (kVA)	60 kVA
2-3(5)	Period of usage (installation month/ year)	5 years since 2009
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	1976/ Government
2-4 (2)	Depth and material of borehole	130m, steel
2-4 (3)	Depth and diameter of pumping chamber	130m, 200mm
2-4 (4)	Depth, diameter and material of screen	no data
2-4 (5)	Aquifer	no data
2-4 (6)	Static water level (m)	120 m
2-4 (7)	Pumping rate and draw down (pumping test)	10.8 m^3/hr

2-4 (8)	Pumping rate and draw down (actual)	8 m³/hr
2-4 (9)	Position of pump (depth)	120m
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	no data, 65mm, GSP
2-5 (2)	Specification of distribution reservoir	50m³
2-5 (3)	Dia., length and material of distribution pipe	100mm-GSP, 75mm-GSP, 65mm-GSP, 50mm-GSP, 25mm-GSP
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	9
2-5 (4)-2	Private connections (set)	168
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	water committee
3-1 (2)	Year of establishment	2005
3-1 (3)	Contact person	Mohamed Yuya, Chairman, 0920-932333
3-2	Staffs	
3-2 (1)	Number of staffs	14
3-2 (2)	Experience of operator (year)	8 years
3-2 (3)	Operator's experience of training	1 month and 5 days by IRC in 2004
3-3	Water tariff	
3-3 (1)	Water tariff	20 birr/m^3 (6 birr/m^3 when using public power supply in the past)
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m^3/day)	60.6
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	CBE Mieso Branch, Bordede Town Water Committee
3-4 (3)	Amount of remaining funds	yes, 50,000 birr (bank) and 5,000 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	Zonal WME office through Woreda WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	no idea
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	20 birr/m³ (in case of generator) and 5-6 birr/m3 (in case of public power supply)
4-5	Intension to pay for equipment replacement cost	no, difficult to pay for pumps and generators
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	5～10
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	0.84
5-2 (2)	Total hardness (mg/L)	290
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	20.6
6-2	Sufficiency rate of safe water (%)	34.5
7	Any other water supply projects	On going (Oromia regional government)



Legend

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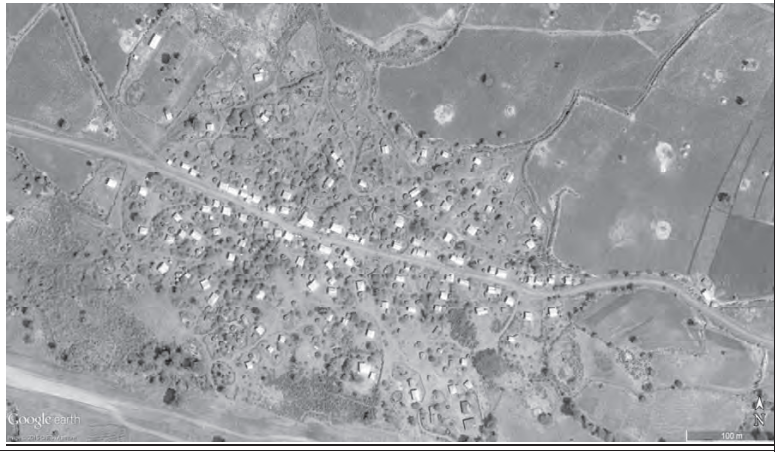
Small Town Profile (WH-8)

	ID	WH-8
	Administrative	
	Town	Kenteri
	Woreda	Mieso
	Zone	West Hararge
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	670893
	UTM-N (Adindan)	1005689
	Altitude (m)	1279
No.	Item	
1	Population etc.	
1-1	Population (2014)	1,752
1-2	Category urban/rural	Rural
1-3	Satellite villages	0
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo（100 %）
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	None
1-8	Distance from paved road (km)	10
1-9	Rate of power failure (%)	25%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	no facility, surface water (Kora river)
2-1(2)	Operation time	not applicable
2-2	Pump	
2-2 (1)	Type	not applicable
2-2 (2)	Manufacturer	not applicable
2-2 (3)	Model, specification	not applicable
2-2 (4)	Output (kW)	not applicable
2-2 (5)	Cycle (Hz), speed (rpm)	not applicable
2-2 (6)	Total head (m)	not applicable
2-2 (7)	Period of usage (installation month/ year)	not applicable
2-2 (8)	Diameter/ material of riser pipes	not applicable
2-2 (9)	Unit length/total number of riser pipes	not applicable
2-2 (10)	Existence of water flow meter	not applicable
2-3	Power source	
2-3(1)	Type	not applicable
2-3(2)	Manufacturer	not applicable
2-3(3)	Model, specification	not applicable
2-3(4)	Output（kVA）	not applicable
2-3(5)	Period of usage (installation month/ year)	not applicable
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	not applicable
2-4 (2)	Depth and material of borehole	not applicable
2-4 (3)	Depth and diameter of pumping chamber	not applicable
2-4 (4)	Depth, diameter and material of screen	not applicable
2-4 (5)	Aquifer	not applicable
2-4 (6)	Static water level (m)	not applicable
2-4 (7)	Pumping rate and draw down (pumping test)	not applicable

2-4 (8)	Pumping rate and draw down (actual)	not applicable
2-4 (9)	Position of pump (depth)	not applicable
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	not applicable
2-5 (2)	Specification of distribution reservoir	not applicable
2-5 (3)	Dia., length and material of distribution pipe	not applicable
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	not applicable
2-5 (4)-2	Private connections (set)	not applicable
2-5 (4)-3	Cattle troughs (set)	not applicable
2-5 (5)	Existence of water meter	not applicable
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	not applicable
3-1 (2)	Year of establishment	not applicable
3-1 (3)	Contact person	not applicable
3-2	Staffs	
3-2 (1)	Number of staffs	0
3-2 (2)	Experience of operator (year)	not applicable
3-2 (3)	Operator's experience of training	not applicable
3-3	Water tariff	
3-3 (1)	Water tariff	not applicable
3-3 (2)	Collection rate (%)	not applicable
3-3 (3)	The amount of the water used (m^3/day)	0.0
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	not applicable
3-4 (2)	Name of financial institutions	not applicable
3-4 (3)	Amount of remaining funds	not applicable
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	not applicable
3-5 (2)	To whom ask to repair	not applicable
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	200 birr/ household
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	25-50 birr/m^3
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential（L/sec）	10～
5-2	Water quality potential	
5-2 (1)	Fluoride（mg/L）	< 1.5 (assumption)
5-2 (2)	Total hardness（mg/L）	< 300 (assumption)
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	0.0
6-2	Sufficiency rate of safe water (%)	0
7	Any other water supply projects	None



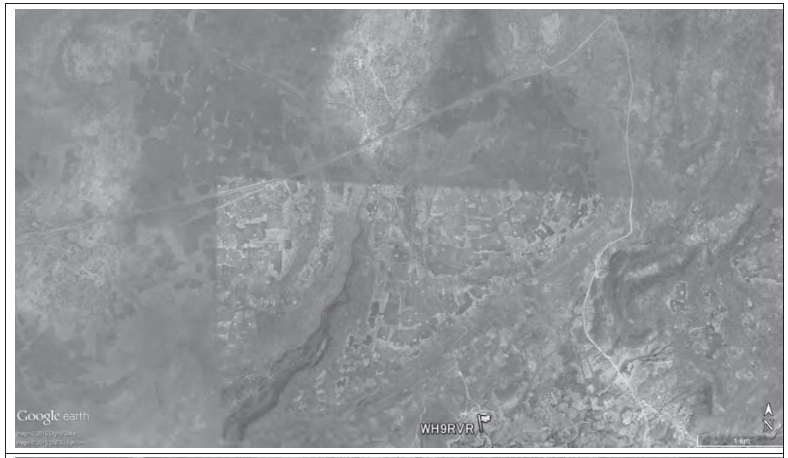
Legend

BH: Borehole, SP: Spring, RV: River, CC: Collection Chamber, BP: Booster Pumping Station, RT: Reservoir Tank, PT: Public Tap, CT: Cattle Trough, BHHP: Borehole with Hand Pump, DWHP: Hand Dug Well with Hand Pump

Small Town Profile (WH-9)

	ID	WH-9
	Administrative	
	Town	Aneno
	Woreda	Mieso
	Zone	West Hararge
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	665114
	UTM-N (Adindan)	1010056
	Altitude (m)	1319
No.	Item	
1	Population etc.	
1-1	Population (2014)	2,851
1-2	Category urban/rural	Rural
1-3	Satellite villages	0
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (100%)
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	None
1-8	Distance from paved road (km)	0
1-9	Rate of power failure (%)	27%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	no facility, surface water (Kora river)
2-1(2)	Operation time	not applicable
2-2	Pump	
2-2 (1)	Type	not applicable
2-2 (2)	Manufacturer	not applicable
2-2 (3)	Model, specification	not applicable
2-2 (4)	Output (kW)	not applicable
2-2 (5)	Cycle (Hz), speed (rpm)	not applicable
2-2 (6)	Total head (m)	not applicable
2-2 (7)	Period of usage (installation month/ year)	not applicable
2-2 (8)	Diameter/ material of riser pipes	not applicable
2-2 (9)	Unit length/total number of riser pipes	not applicable
2-2 (10)	Existence of water flow meter	not applicable
2-3	Power source	
2-3(1)	Type	not applicable
2-3(2)	Manufacturer	not applicable
2-3(3)	Model, specification	not applicable
2-3(4)	Output (kVA)	not applicable
2-3(5)	Period of usage (installation month/ year)	not applicable
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	not applicable
2-4 (2)	Depth and material of borehole	not applicable
2-4 (3)	Depth and diameter of pumping chamber	not applicable
2-4 (4)	Depth, diameter and material of screen	not applicable
2-4 (5)	Aquifer	not applicable
2-4 (6)	Static water level (m)	not applicable
2-4 (7)	Pumping rate and draw down (pumping test)	not applicable

2-4 (8)	Pumping rate and draw down (actual)	not applicable
2-4 (9)	Position of pump (depth)	not applicable
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	not applicable
2-5 (2)	Specification of distribution reservoir	not applicable
2-5 (3)	Dia., length and material of distribution pipe	not applicable
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	not applicable
2-5 (4)-2	Private connections (set)	not applicable
2-5 (4)-3	Cattle troughs (set)	not applicable
2-5 (5)	Existence of water meter	not applicable
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	not applicable
3-1 (2)	Year of establishment	not applicable
3-1 (3)	Contact person	not applicable
3-2	Staffs	
3-2 (1)	Number of staffs	0
3-2 (2)	Experience of operator (year)	not applicable
3-2 (3)	Operator's experience of training	not applicable
3-3	Water tariff	
3-3 (1)	Water tariff	not applicable
3-3 (2)	Collection rate (%)	not applicable
3-3 (3)	The amount of the water used (m^3/day)	0.0
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	not applicable
3-4 (2)	Name of financial institutions	not applicable
3-4 (3)	Amount of remaining funds	not applicable
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	not applicable
3-5 (2)	To whom ask to repair	not applicable
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	10,000 birr or more
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	25 birr/m^3
4-5	Intension to pay for equipment replacement cost	no, difficult to pay for pumps and generators
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	0～5
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	< 1.5 (assumption)
5-2 (2)	Total hardness (mg/L)	< 300 (assumption)
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	0.0
6-2	Sufficiency rate of safe water (%)	0
7	Any other water supply projects	None



Legend

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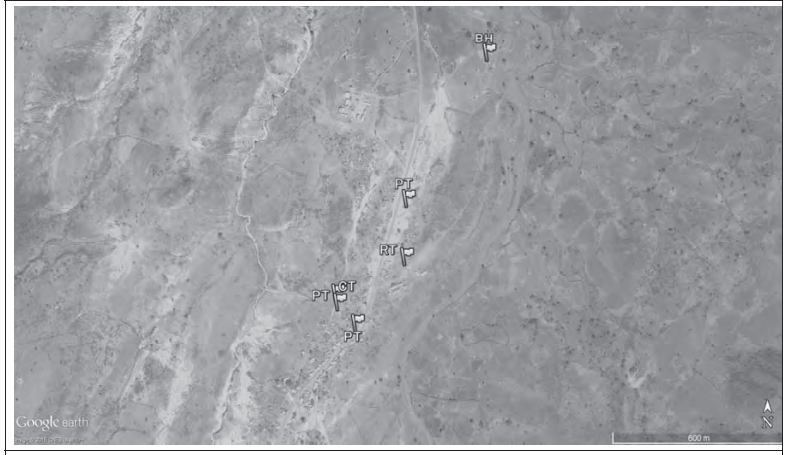
Small Town Profile (WH-10)

	ID	WH-10
	Administrative	
	Town	Belo
	Woreda	Mieso
	Zone	West Hararge
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	644399
	UTM-N (Adindan)	983865
	Altitude (m)	1232
No.	Item	
1	Population etc.	
1-1	Population (2014)	4,690
1-2	Category urban/rural	Rural
1-3	Satellite villages	3 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (97%), Argoba (3%)
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	None
1-8	Distance from paved road (km)	18
1-9	Rate of power failure (%)	33%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (1)
2-1(2)	Operation time	7 days/week - 9 hrs/day (rainy season), 7 days/week - 9 hrs/day (dry season)
2-2	Pump	
2-2 (1)	Type	submersible pump
2-2 (2)	Manufacturer	Grundfos
2-2 (3)	Model, specification	no data
2-2 (4)	Output (kW)	13 kW,400V
2-2 (5)	Cycle (Hz), speed (rpm)	50Hz, 2890rpm
2-2 (6)	Total head (m)	no data
2-2 (7)	Period of usage (installation month/ year)	10 years since 2004
2-2 (8)	Diameter/ material of riser pipes	65mm/ GSP
2-2 (9)	Unit length/total number of riser pipes	no data
2-2 (10)	Existence of water flow meter	not installed
2-3	Power source	
2-3(1)	Type	diesel generator
2-3(2)	Manufacturer	Tianjin Lovol
2-3(3)	Model, specification	1003TG14
2-3(4)	Output (kVA)	40 kVA
2-3(5)	Period of usage (installation month/ year)	8 months since June 2013
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	2004, Oromia Regional Government
2-4 (2)	Depth and material of borehole	130m, steel
2-4 (3)	Depth and diameter of pumping chamber	130m, 150mm
2-4 (4)	Depth, diameter and material of screen	no data
2-4 (5)	Aquifer	no data
2-4 (6)	Static water level (m)	no data
2-4 (7)	Pumping rate and draw down (pumping test)	no data

2-4 (8)	Pumping rate and draw down (actual)	2.6 m^3/hr
2-4 (9)	Position of pump (depth)	105 m
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	no data, 75mm, GSP
2-5 (2)	Specification of distribution reservoir	80m^3
2-5 (3)	Dia., length and material of distribution pipe	no data-75mm-GSP, no data-50mm-GSP, no data-40mm-GSP
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	3
2-5 (4)-2	Private connections (set)	0
2-5 (4)-3	Cattle troughs (set)	1
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	water committee
3-1 (2)	Year of establishment	2004
3-1 (3)	Contact person	Usman Hasano, Chairman, 0926-641723
3-2	Staffs	
3-2 (1)	Number of staffs	11
3-2 (2)	Experience of operator (year)	11 years
3-2 (3)	Operator's experience of training	yes, 1 week on the job site by Woreda WME office
3-3	Water tariff	
3-3 (1)	Water tariff	20 birr/m^3
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m^3/day)	12.2
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	CBE Mieso branch, Gololcha Water Committee
3-4 (3)	Amount of remaining funds	yes, 11,000 birr (bank) and 5,000 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	maintenance by Woreda WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	20% of the project cost
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	20 birr/m^3 (in case of generator) and 15 birr/m3 (in case of public power supply)
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	0～5
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	0.65
5-2 (2)	Total hardness (mg/L)	78
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	2.6
6-2	Sufficiency rate of safe water (%)	7.7
7	Any other water supply projects	None



Legend

BH: Borehole, SP: Spring, RV: River, CC: Collection Chamber, BP: Booster Pumping Station, RT: Reservoir Tank, PT: Public Tap, CT: Cattle Trough, BHHP: Borehole with Hand Pump, DWHP: Hand Dug Well with Hand Pump

Small Town Profile (WH-11)

	ID	WH-11
	Administrative	
	Town	Kora
	Woreda	Mieso
	Zone	West Hararge
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	668599
	UTM-N (Adindan)	1006889
	Altitude (m)	1263
No.	Item	
1	Population etc.	
1-1	Population (2014)	2,376
1-2	Category urban/rural	Rural
1-3	Satellite villages	5 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo（95%）, Others（5%）
1-6	Main occupation	Merchant (employee)
1-7	Grade of the town	None
1-8	Distance from paved road (km)	6
1-9	Rate of power failure (%)	8%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (1)
2-1(2)	Operation time	7 days/week - 2.5 hrs/day (rainy season）, 7 days/week - 2.5 hrs/day (dry season）
2-2	Pump	
2-2 (1)	Type	submersible pump
2-2 (2)	Manufacturer	Grundfos
2-2 (3)	Model, specification	no data
2-2 (4)	Output (kW)	13 kW,400V
2-2 (5)	Cycle (Hz), speed (rpm)	50Hz, 3950rpm
2-2 (6)	Total head (m)	170m
2-2 (7)	Period of usage (installation month/ year)	10 yeas since 2004
2-2 (8)	Diameter/ material of riser pipes	50mm/ GSP
2-2 (9)	Unit length/total number of riser pipes	no data
2-2 (10)	Existence of water flow meter	installed but not working
2-3	Power source	
2-3(1)	Type	diesel generator
2-3(2)	Manufacturer	Sisu Diesel
2-3(3)	Model, specification	320 DRG (DN3-AJ48PSCI)
2-3(4)	Output（kVA）	40 kVA
2-3(5)	Period of usage (installation month/ year)	1 year 2 month since Dec. 2012
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	2004, IRC (International Rescue Committee)
2-4 (2)	Depth and material of borehole	40m, steel
2-4 (3)	Depth and diameter of pumping chamber	40m/ 150mm
2-4 (4)	Depth, diameter and material of screen	no data
2-4 (5)	Aquifer	no data
2-4 (6)	Static water level (m)	20 m
2-4 (7)	Pumping rate and draw down (pumping test)	18.7m^3/hr

2-4 (8)	Pumping rate and draw down (actual)	20 m³/hr
2-4 (9)	Position of pump (depth)	37 m
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	no data, 75mm, GSP
2-5 (2)	Specification of distribution reservoir	50m³
2-5 (3)	Dia., length and material of distribution pipe	no data, 65mm, GSP
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	4
2-5 (4)-2	Private connections (set)	75
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	water committee
3-1 (2)	Year of establishment	2004
3-1 (3)	Contact person	Nejibo Jadido, Chairman, 0920-364079
3-2	Staffs	
3-2 (1)	Number of staffs	12
3-2 (2)	Experience of operator (year)	2 years
3-2 (3)	Operator's experience of training	no
3-3	Water tariff	
3-3 (1)	Water tariff	19 birr/m^3 for public taps and 20 birr/m^3 for private connection
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m^3/day)	37.8
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	CBE Mieso branch, Kora Rural Town Water Committee
3-4 (3)	Amount of remaining funds	yes, 87,000 birr (bank) and 5,000 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	repaired at private garage in Awash Town
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	no idea
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	20 birr/m³ (if case of generator), reducing tariff in case public power supply will be connected
4-5	Intension to pay for equipment replacement cost	no, difficult to pay for pumps and generators
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	10～
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	0.50
5-2 (2)	Total hardness (mg/L)	656
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	15.9
6-2	Sufficiency rate of safe water (%)	45.8
7	Any other water supply projects	None

Legend

BH: Borehole, SP: Spring, RV: River, CC: Collection Chamber, BP: Booster Pumping Station, RT: Reservoir Tank, PT: Public Tap, CT: Cattle Trough, BHHP: Borehole with Hand Pump, DWHP: Hand Dug Well with Hand Pump

Data 8

Layout of Provisional Water Supply Plans

Legend	
▲	New borehole
■	New reservoir tank
●	New public taps
	New transmission pipeline
	New primary distribution pipeline
	New secondary distribution pipeline
	New connecting pipe
Title	Plan view of Geldia (ES-2)
Scale	1: 10000
The project for Groundwater Resources Assessment in the Middle Awash River Basin	
Kokusai Kogyo Co., Ltd.	
Japan International Cooperation Agency	

Layout of Provisional Water Supply Plans (1/19)

Legend	
	New borehole
	New reservoir tank
	New public taps
	New transmission pipeline
	New primary distribution pipeline
	New secondary distribution pipeline
	New connecting pipe
Title	Plan view of Bofa (ES-4)
Scale	1: 10000
The project for Groundwater Resources Assessment in the Middle Awash River Basin	
Kokusai Kogyo Co., Ltd.	
Japan International Cooperation Agency	

Layout of Provisional Water Supply Plans (2/19)

Legend	
▲	New borehole
■	New reservoir tank
●	New public taps
	New transmission pipeline
	New primary distribution pipeline
	New secondary distribution pipeline
	New connecting pipe
Title	Plan view of Ude Dhankaka (ES-6)
Scale	1: 10000
The project for Groundwater Resources Assessment in the Middle Awash River Basin	
Kokusai Kogyo Co., Ltd.	
Japan International Cooperation Agency	

Layout of Provisional Water Supply Plans (3/19)

Legend	
▲	New borehole
■	New reservoir tank
●	New public taps
	New transmission pipeline
	New primary distribution pipeline
	New secondary distribution pipeline
	New connecting pipe
Title	Plan view of Kamise (ES-8)
Scale	1: 10000

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Layout of Provisional Water Supply Plans (4/19)

Legend	
▲	New borehole
■	New reservoir tank
●	New public taps
	New transmission pipeline
	New primary distribution pipeline
	New secondary distribution pipeline
	New connecting pipe
Title	Plan view of Areda (ES-10)
Scale	1: 10000
The project for Groundwater Resources Assessment in the Middle Awash River Basin	
Kokusai Kogyo Co., Ltd.	
Japan International Cooperation Agency	

Layout of Provisional Water Supply Plans (5/19)

Legend	
▲	New borehole
■	New reservoir tank
●	New public taps
	New transmission pipeline
	New primary distribution pipeline
	New secondary distribution pipeline
	New connecting pipe
Title	Plan view of Biyo (ES-11)
Scale	1: 10000
The project for Groundwater Resources Assessment in the Middle Awash River Basin	
Kokusai Kogyo Co., Ltd.	
Japan International Cooperation Agency	

Layout of Provisional Water Supply Plans (6/19)

Legend	
▲	New borehole
■	New reservoir tank
●	New public taps
	New transmission pipeline
	New primary distribution pipeline
	New secondary distribution pipeline
	New connecting pipe
Title	Plan view of Bolo (AR-2)
Scale	1: 5000
The project for Groundwater Resources Assessment in the Middle Awash River Basin	
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Layout of Provisional Water Supply Plans (7/19)

Legend	
▲	New borehole
■	New reservoir tank
●	New public taps
	New transmission pipeline
	New primary distribution pipeline
	New secondary distribution pipeline
	New connecting pipe
Title	Plan view of Arboye (AR-3)
Scale	1: 5000
The project for Groundwater Resources Assessment in the Middle Awash River Basin	
Kokusai Kogyo Co., Ltd.	
Japan International Cooperation Agency	

Layout of Provisional Water Supply Plans (8/19)

Legend	
	New borehole
	New reservoir tank
	New public taps
	New transmission pipeline
	New primary distribution pipeline
	New secondary distribution pipeline
	New connecting pipe
Title	Plan view of Aseko (AR-4)
Scale	1: 10000
The project for Groundwater Resources Assessment in the Middle Awash River Basin	
Kokusai Kogyo Co., Ltd.	
Japan International Cooperation Agency	

Layout of Provisional Water Supply Plans (9/19)

Legend	
▲	New borehole
■	New reservoir tank
●	New public taps
	New transmission pipeline
	New primary distribution pipeline
	New secondary distribution pipeline
	New connecting pipe
Title	Plan view of Gonde (AR-6)
Scale	1: 5000

The project for Groundwater Resources Assessment in the Middle Awash River Basin

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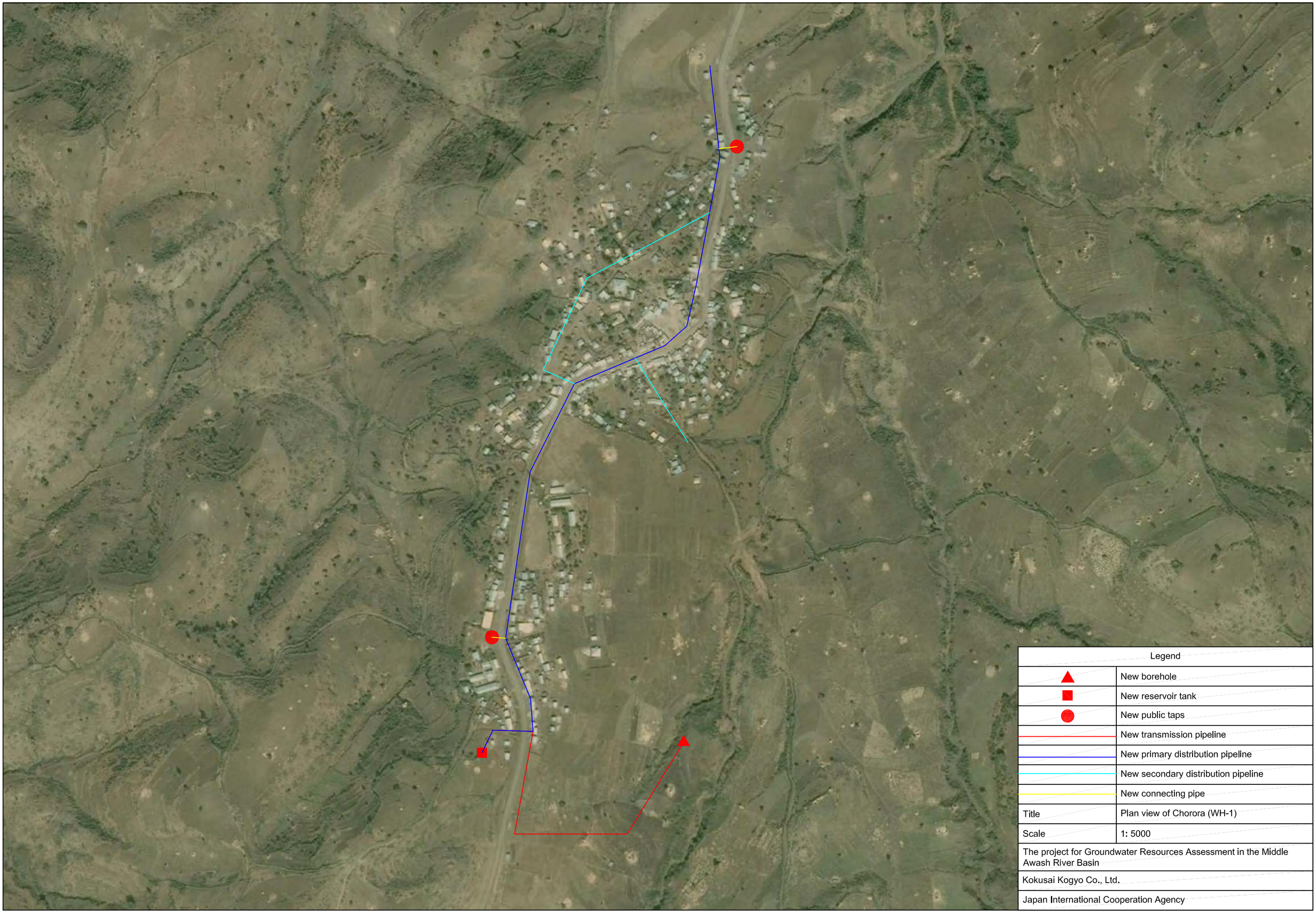
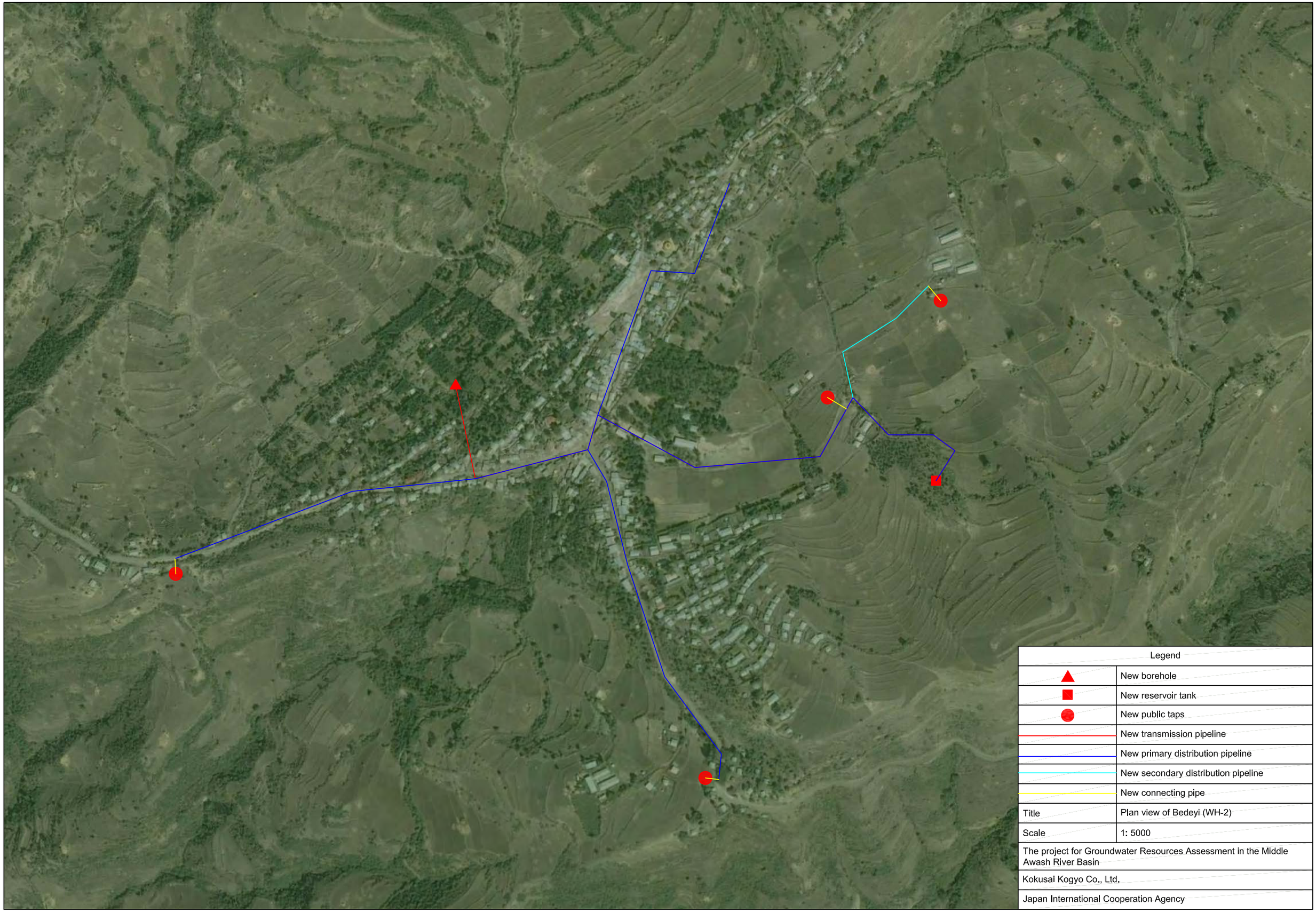
Layout of Provisional Water Supply Plans (10/19)



Layout of Provisional Water Supply Plans (11/19)



Legend	
▲	New borehole
■	New reservoir tank
●	New public taps
	New transmission pipeline
	New primary distribution pipeline
	New secondary distribution pipeline
	New connecting pipe
Title	Plan view of Bedeyi (WH-2)
Scale	1: 5000
The project for Groundwater Resources Assessment in the Middle Awash River Basin	
Kokusai Kogyo Co., Ltd.	
Japan International Cooperation Agency	

Layout of Provisional Water Supply Plans (12/19)

Legend	
	New borehole
	New reservoir tank
	New public taps
	New transmission pipeline
	New primary distribution pipeline
	New secondary distribution pipeline
	New connecting pipe
Title	Plan view of Hardim (WH-3)
Scale	1: 10000
The project for Groundwater Resources Assessment in the Middle Awash River Basin	
Kokusai Kogyo Co., Ltd.	
Japan International Cooperation Agency	

Layout of Provisional Water Supply Plans (13/19)

Legend	
▲	New borehole
■	New reservoir tank
●	New public taps
	New transmission pipeline
	New primary distribution pipeline
	New secondary distribution pipeline
	New connecting pipe
Title	Plan view of Bube (WH-4)
Scale	1: 10000
The project for Groundwater Resources Assessment in the Middle Awash River Basin	
Kokusai Kogyo Co., Ltd.	
Japan International Cooperation Agency	

Layout of Provisional Water Supply Plans (14/19)

Legend	
▲	New borehole
■	New reservoir tank
●	New public taps
	New transmission pipeline
	New primary distribution pipeline
	New secondary distribution pipeline
	New connecting pipe
Title	Plan view of Hargeti (WH-6)
Scale	1: 5000
The project for Groundwater Resources Assessment in the Middle Awash River Basin	
Kokusai Kogyo Co., Ltd.	
Japan International Cooperation Agency	

Layout of Provisional Water Supply Plans (15/19)

Legend	
▲	New borehole
■	New reservoir tank
●	New public taps
	New transmission pipeline
	New primary distribution pipeline
	New secondary distribution pipeline
	New connecting pipe
Title	Plan view of Kenteri (WH-8)
Scale	1: 5000
The project for Groundwater Resources Assessment in the Middle Awash River Basin	
Kokusai Kogyo Co., Ltd.	
Japan International Cooperation Agency	

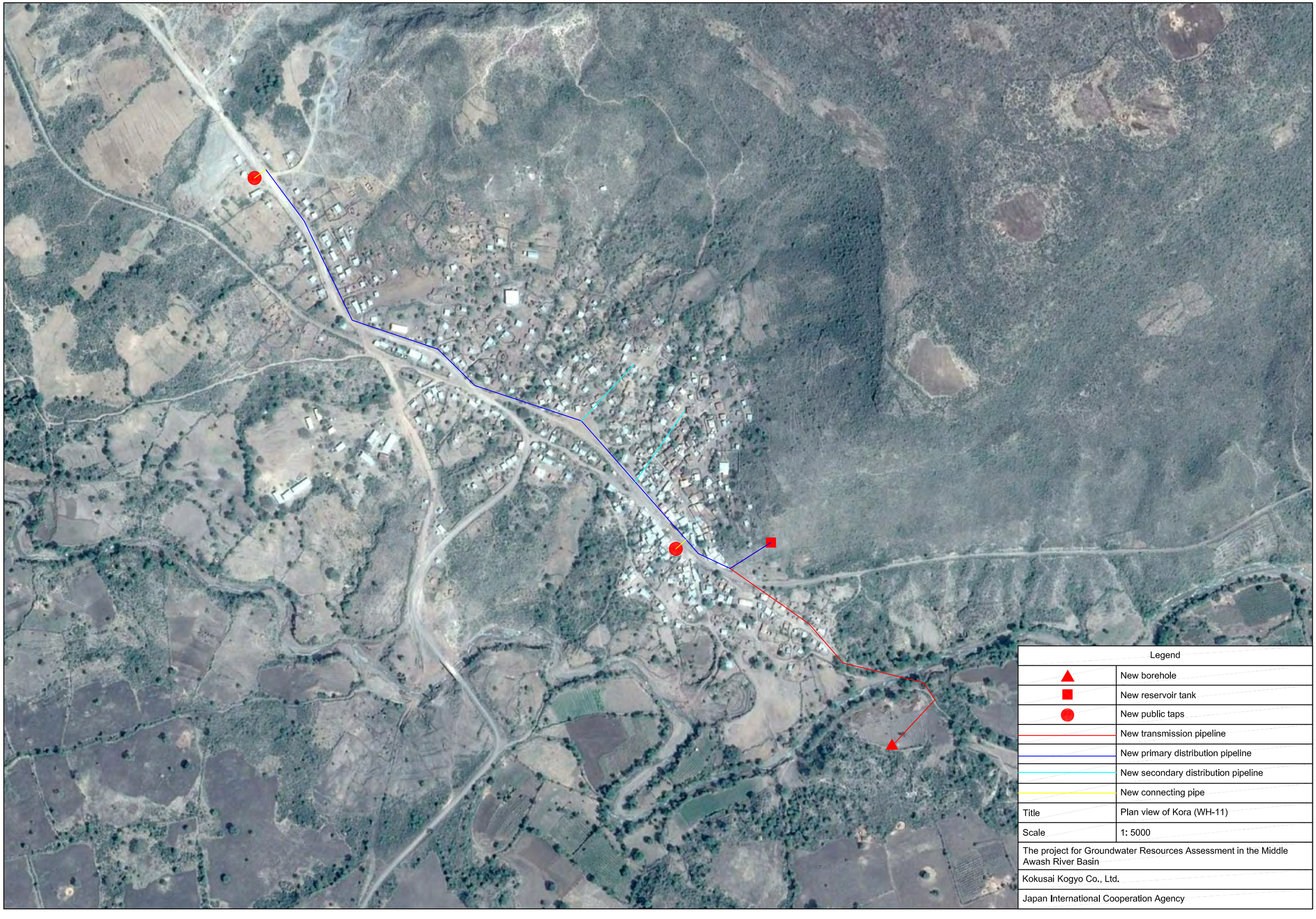
Layout of Provisional Water Supply Plans (16/19)

Legend	
	New borehole
	New reservoir tank
	New public taps
	New transmission pipeline
	New primary distribution pipeline
	New secondary distribution pipeline
	New connecting pipe
Title	Plan view of Aneno (WH-9)
Scale	1: 10000
The project for Groundwater Resources Assessment in the Middle Awash River Basin	
Kokusai Kogyo Co., Ltd.	
Japan International Cooperation Agency	

Layout of Provisional Water Supply Plans (17/19)

Legend	
	New borehole
	New reservoir tank
	New public taps
	New transmission pipeline
	New primary distribution pipeline
	New secondary distribution pipeline
	New connecting pipe
Title	Plan view of Belo (WH-10)
Scale	1: 10000
The project for Groundwater Resources Assessment in the Middle Awash River Basin	
Kokusai Kogyo Co., Ltd.	
Japan International Cooperation Agency	

Layout of Provisional Water Supply Plans (18/19)



Legend	
▲	New borehole
■	New reservoir tank
●	New public taps
	New transmission pipeline
	New primary distribution pipeline
	New secondary distribution pipeline
	New connecting pipe
Title	Plan view of Kora (WH-11)
Scale	1: 5000
The project for Groundwater Resources Assessment in the Middle Awash River Basin	
Kokusai Kogyo Co., Ltd.	
Japan International Cooperation Agency	

Layout of Provisional Water Supply Plans (19/19)