

Province: **West Papua**

Please indicate for all program components:

**Rural  
School**

**Some of the important messages required within the reporting period:**

- *Planning and monitoring of WES sector at the province & district level (CB and Pokja, AMPL, community, committee, staff holistic training)*
- *Improving access to facilities*
- *Effective sustainable programming & management, O&M, replication*
- *Sanitation and hygiene promotion*
- *STBM*
- *Gender*
- *Partnership*
- *Challenges/constraints*
- *Ways forward*

**Achievements/Lessons Learnt:**

1. 1 monitoring & evaluation meeting and 1 advocacy planning meeting conducted in Sorong District.
2. Field visit for data collecting and monitoring conducted together with facilitators and Bappeda in 8 villages in Kab. Sorong.
3. Field visit for data collecting and data monitoring into some schools in Kab. Sorong.
4. Monitoring to villages and schools had been conducted during April in kab. Manokwari. Based on the evaluation, participation from communities in villages for constructing water facilities increased as new facilitators recruited. The new facilitator is a senior ex-DPWO staffs that already know the condition in the villages. Lesson learnt: good facilitator is key to get community attention and participation.
5. Technical achievements:
  - In Kabupaten Sorong, had been finished 20 RWT capacity 4000m<sup>3</sup> for social facilities in 5 villages (mainly: schools, churches, mosques, and village offices). The construction involved trained artisans. In 3 villages (Warmanda, Klalin II, and Makbusun) also had been finished 50 household RWH in respective villages.
  - In Kabupaten Manokwari, gravity pipe system in Meniy village had been finished with some minor finalization. Pipeline have been bringing water to houses (distribution use semi-house connection with 1 connection for 3 houses). In Wasegi Indah village, the construction had only in lying pipes for distribution.
  - In Kabupaten Raja Ampat, gravity pipe system rehabilitation in Warsamdin village also had been finished. The system is very simple with only one line in the village (only about 1 kilometer length). Dug well rehabilitation in Saporkren is on hold due to delinquency problem.

**Main Programmatic Constraints/Challenges for the Month:**

1. Lack of information from previous PUMK into new PUMK on SPJ and report (cases in Bappeda, DEO, DPWO). This will be addressed on next POKJA meeting and solutions sought.
2. Delayed cash transfer for Q2, will be disburse after May 6, 2010. This will be addressed on next POKJA meeting on submitting the next proposal of Q3 will be earlier than before.
3. Mainly, community participation is still become issue as many RWH and pipeline construction, but as RWH had been built before in neighbor villages, community easily gets the advantage of the RWH (in Sorong). Minor resistance mainly from some local Papuan villager that asked money

- for the construction/stored material (and Manokwari). Advocating through local cadres/village resource person is very essential.
4. Long-due delinquency problem in Raja Ampat (almost 9 months) shown that lack of commitment (especially from High level rank of district government) is still become a big issue, not to mention the real lack of competencies even in basic managerial side (mainly in Sorong Selatan).
  5. There are a lot of IEC materials still not distributed to villages/schools as DEO/DHO don't have budget for distributing the materials. Some backup from Unicef fund for distribution can be done, but mainly the districts had to allocate some money for it.

#### **Financial Update:**

1. 1 DCT over 8,5 months (Raja Ampat), attention to be paid, PA and CFO support is required.
2. Lack of knowledge in Unicef's financial system causing some documents for liquidation had to go back-and-forth between IPs-PO and even PA. As the liquidation clearance has to go through Sorong (certified by PO), Manokwari (reviewed by PA) and then Jayapura (inputted in ProMS by SPA), the corrections contribute in delays of liquidation reports, that caused problem in DCT management. HACT/FACE training planned in May is essentially needed to increase the knowledge and understanding of Unicef's financial system from our IPs.
3. As agreed in WASH meeting in Jayapura, the disbursement in 2010 will be focused in Q2 and Q3. There is no major disbursement in Q1 (except for WASH Jayapura meeting). The proposals of Q2 had been submitted for Sorong (end of April), and being processed for submitting for Manokwari and Province (early May), and will be submitted in mid of May for Sorong Selatan. For Raja Ampat is still waiting for the conclusion after delinquency problem.

#### **Recommendations:**

##### **Kabupaten Sorong**

1. Find ways to speed up cash transfer to Kabupaten and Provincial.
2. Hold a direct meeting with DPWO on quality monitoring and reporting.
3. Field visit for community socialization with BPM, Bappeda and the facilitators on update of the construction and their participation.
4. Lobby DPWO to help and support the funding gaps as the limited cost for construction through DAK (Dana Alokasi Khusus).
5. Lobby DEO to help and support the funding gaps as the limited cost for construction in 6 elementary schools through Bos budget.
6. Lobby DHO to help and support the STBM approach through capacity building for sanitary, health cadre, puskesmas leaders with special focus into 8 villages of Wash program in Kab. Sorong.
7. Lobby Bappeda to help and support the the funding gaps as the limited cost for construction in some subvillages in Kab. Sorong through DAK (Dana Alokasi Khusus).

##### **Kabupaten Sorong Selatan**

1. Hold a direct meeting with DPWO on quality monitoring and reporting of the un-finishing construction in Tofot and Konda villages.
2. Field visit to the village with DPWO and the facilitators on update of the construction and their participation.

##### **Kabupaten Manokwari**

1. Find ways to speed the finishing of the proposal and cash transfer to Kabupaten

##### **Kabupaten Raja Ampat**

1. Find ways to speed up the refund DTC and SPJ.

##### **Provincial Papua Barat**

1. Find ways to speed up the finishing of the proposal and cash transfer to Provincial.

#### **Next Planned Activities/Mission Planning (May 2010):**

1. Monthly Pokja meeting and monitoring report.
2. Sanitation and hygiene education for school teachers and principles from 6 schools on W-2 May in Kabupaten Sorong.
3. Training on sanitation and hygiene promotion in Sorong and Manokwari. Support visit from Jayapura (Pak Manuel) on W-3 May in Kab.Sorong.

4. Socialization STBM and advocacy to local leaders in 8 villages on W-3 May, organized by BPMD and Bappeda Kab. Sorong.
5. Support visit from Jayapura (Pak Manuel/Bu Wafaa) and Jakarta (Pak Begna) on W-3 June for Advocacy Workshop of decision makers in Kabupaten Sorong and launching the RWT in Warmanda Village by POKJA AMPL.
6. Start of construction phase for:
  - 100 RWH in 2 villages in Sorong,
  - Rehabilitation of 6 latrines in 6 schools in Sorong,
  - Finalization of 1 gravity pipeline system in 1 village, and starting of dug-well rehabilitation in 1 other village in Manokwari.
  - Rehabilitation of 6 latrines in 6 schools in Manokwari,
  - Continuing construction phase in 1 village and pushing to construct more RWH as targeted (50 tanks) in 1 village in Sorong Selatan.

### Rural Water Monitoring Sheet

Province : MALUKU																													
No	Village Name	Demographic Data				Community Preparation				Construction Preparation			Construction (cumulative numbers)											Post Construction			Remark		
		# Pop.	# House holds	Techno Option	Village Action Plan developed & legalized	# Village Cadres Trained				Pipe Design and Proposal	FRP Mold (Fully/Partly/ not received) RWT,BSF	Pipe & Fit. (Fully/Partly /Not received)	# RWT Constructed	# Dug Well Rehabilitated	# BSF Produced	Pipe System								Total # Benef's, PS,RWT, BSF	Water committee				
						Construction		Operation & Maintenance								Spring Capture (%)	Intake (%)	SS Filter (%)	Reservoir (%)	Transm. Line (%)	Distrib. Network (%)	# House Connect. Installed	Establishment & function		Members				
						M	F	M	F																Male	Female			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	
<b>Province: West Papua</b>																													
<b>District: Sorong 2008</b>																													
1	Klawana	274	97	RWT	BSF	Y	10	0	10	0		F-R'ed		50		0									300	X	0	0	Target: 50. Accomplished
2	Klamalu	5410	1240	RWT	BSF	Y	28	0	35	0		F-R'ed		153		0									918	X	0	0	Target: 150. Accomplished
<b>District: Sorong 2009</b>																													
3	Klamono	876	200	RWT	BSF	Y	5	0	0	0		F-R'ed		0		0									0	X	0	0	Target: 50
4	Warmanda	463	96	RWT	BSF	Y	5	0	0	0		F-R'ed		50		0									300	X	0	0	Target: 50. Accomplished
5	Klalin 2	287	89	RWT	BSF	Y	5	0	0	0		F-R'ed		50		0									300	X	0	0	Target: 50. Accomplished
6	Makbusun	3329	908	RWT	BSF	Y	10	0	0	0		F-R'ed		50		0									300	X	0	0	Target: 50. Accomplished
7	Katinim	860	150	RWT	BSF	Y	5	0	0	0		F-R'ed		0		0									0	X	0	0	Target: 50
8	Ninjemur	330	69	RWT	BSF	Y	5	0	0	0		F-R'ed		0		0									0	X	0	0	Target: 50
<b>District: Manokwari 2008</b>																													
1	Wasegi Indah	1434	377	PS		Y	25	5	5	0	Y		F-R'ed	0	0	0	100%	100%	50%	75%	1000%	20%	20%	1434	Y	5	0	Currently: 80% completed	
2	Meniy	219	65	PS		Y	25	5	5	0	Y		F-R'ed	0	0	0	100%	100%		100%	100%	100%	100%	219	Y	5	0	Accomplished	
<b>District: Manokwari 2009</b>																													
3	Sumber Boga	2998	668	PS		Y	5	0	0	0	Y		N-R'ed		0		0%	0%	0%	0%	0%	0%	0%	0	X	0	0	Started in Q2 2010	
4	Wariyoi Indah	291	85	DW		Y	0	0	0	0			N-R'ed		0		0%	0%	0%	0%	0%	0%	0%	0	X	0	0	Started in Q2 2010	
5	Nembowi	1275	335	PS		Y	5	0	0	0	Y		N-R'ed		0		0%	0%	0%	0%	0%	0%	0%	0	X	0	0	Started in Q2 2010	
6	Umbuy	250	150	DW		Y	0	0	0	0					0									0	X	0	0	Started in Q2 2010	
7	Mupi	324	108	DW		Y	0	0	0	0					0									0	X	0	0	Started in Q2 2010	
8	Nginibow	203	45	DW		Y	0	0	0	0					0									0	X	0	0	Started in Q2 2010	
9	Waswami	522	260	DW		Y	0	0	0	0					0									0	X	0	0	Started in Q2 2010	
10	Wamesa	400	80	PS		Y	5	0	0	0	Y		N-R'ed		0		0%	0%	0%	0%	0%	0%	0%	0	X	0	0	Started in Q2 2010	
11	Ibuau	582	194	DW		Y	0	0	0	0					0									0	X	0	0	Started in Q2 2010	
<b>District: Raja Ampat 2008</b>																													
1	Saporkren	455	81	DW		Y	30	0	5	0			P-R'ed		2									0	Y	5	0	rehabilitation of dug-well spec	
2	Warsambin	508	51	PS		Y	30	0	5	0	Y		F-R'ed				100%	100%	100%	100%	100%	100%	100%	508	Y	5	0	Water facility use semi-house	
<b>District: Sorong Selatan 2008</b>																													
1	Konda	845	176	RWT		Y	30	0	5	0			F-R'ed	5											30	X	0	0	10% completed from target 50
2	Tofot	382	165	PS		Y	30	0	5	0	Y		P-R'ed				100%	100%	0%	50%	50%	50%	0%	0	X	0	0	Currently: 50% completed	
<b>District: Sorong Selatan 2009</b>																													
3	Kamisabe	201	32	not yet		not yet	0	0	0	0	Not yet	No	No	0	0	0	0	0	0	0	0	0	0					program is not continued	
4	Moswaren	308	78	not yet		not yet	0	0	0	0	Not yet	No	No	0	0	0	0	0	0	0	0	0	0					program is not continued	
5	Unggi	297	47	not yet		not yet	0	0	0	0	Not yet	No	No	0	0	0	0	0	0	0	0	0	0					program is not continued	
6	Waigo	441	110	not yet		not yet	0	0	0	0	Not yet	No	No	0	0	0	0	0	0	0	0	0	0					program is not continued	

## Rural Sanitation and Hygiene Promotion Monitoring Sheet

Date of Report: April 29, 2010

Province : WEST PAPUA																							
No	Village Name	Demographic Data			Existing Condition			Community Preparation									Cumulative Hygiene Promotion Activities			Construction (cumulative number)			Remark
		Pop.	# House holds	# Family latrines	MCK/Public Latrine		Village committee			#Village Cadres Trained						# CLTS Triggering	# HWWS Campaign	# Hyg. group discussion	# Establish. & active Prod. Center	# Latrine Constructed	# Latrine used		
							Establishment	Members		STBM Introduction/socialized	MPA/PHAST		CLTS		Hygiene Promotion								
					M	F		M	F		M	F	M	F									
3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	24	25	26	27		
District: SORONG																							
1	Klawana	273	97	52	0	0	Y	N/A	N/A	Y	10	10	10	1	1	1	0	30	0				
2	Klamalu	5412	1240	992	0	0	Y	N/A	N/A	Y	28	28	28	1	1	1	0	81	0				
3	Klamono	876	200	108	0	0	Y	3	2	Y	5	5	5	1	1	1	0	0	0				
4	Warmanda	463	96	45	0	0	Y	3	2	Y	5	5	5	1	1	1	0	0	0				
5	Klalin II	288	89	76	0	0	Y	9	11	Y	5	5	5	1	1	1	0	0	0				

## Training at Provincial & District Level Monitoring Sheet

Date of Report: April 29, 2010

No	Province/District	Pokja AMPL			Renstra Development	# Government and NGO staff Trained																					
		Establishment	Members			Renstra Development		STBM		CLTS		MPA/PHAST		Hygiene Promotion		WASH in School orientation		Participatory Monitoring		Survey & Design		RWT Construction		Bio Sand Filter		Others, basic COMM	
			Male	Female		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
West Papua																											
1	Province	Y	7	0	N	7	0	2	1	2	1	2	1	2	1	1	1	6	0	0	0	0	0	0	0	0	0
2	Sorong	Y	10	6	Y	10	6	3	1	3	1	3	1	3	1	3	1	4	1	0	0	4	1	1	0	0	
3	Sorong Selatan	Y	6	1	N	6	1	4	5	4	5	4	5	4	5	4	0	5	0	2	0	3	0	0	0	0	
4	Manokwari	Y	9	3	Y	9	3	3	1	3	1	3	1	3	1	3	1	4	1	4	0	0	0	0	0	0	
5	Raja Ampat	Y	6	0	N	6	0	2	2	2	2	2	2	2	2	2	2	4	1	0	0	0	0	0	0	0	

- Y Completed, done and working
- N Not yet finalized, on progress
- In these yellow fields, please fill figures that are appropriate to the activity. If nothing has taken place but planned then we should put 0,
- if activity is not planned for the specific field we should color it yellow and leave it blank
- this table in particular misses lots of information that is not either captured or not documented well. Please fill all relevant information
- 26 If you have a comment, please you can add as a footnote with asterisk

School WASH

Province: WEST PAPUA

Date of Report: April 29, 2010

No	Village name	School Name	# Students			# Existing Facilities			Water Source	KAP base line survey	# Teachers trained	School Action Plan & MOU	# Regular Hygiene Education			# Facilities Constructed/Rehabilitated			O&M Committee established		Total	Remarks	
			Boys	Girls	Total	Boy's Toilet	Girl's Toilet	Hand Washing Facilities					Education session from teacher to kids	Kids hygiene monitoring session	HWWS Campaign	Boy's Toilet + Urinoir	Girl's Toilet	Hand Washing Facilities	M	F			
<b>KABUPATEN SORONG</b>																							
<b>2008</b>																							
1	Klawana	SD Inpres 55	97	95	192	0	1	0	DW	Y	3	Y	Y	N	Y	3	2	4	2	2	4		
2	Klamalu	SD Inpres 44	99	91	190	0	1	0	BH	Y	3	Y	Y	N	Y	3	2	4	1	3	4		
3	Mariyal	SD Inpres 51	106	82	188	0	1	0	DW	Y	3	Y	Y	N	Y	3	2	4	1	3	4		
4	Inamo	SD YPK Evangelion	31	40	71	0	1	1	DW/RWH	Y	3	Y	Y	N	Y	3	2	4	3	1	4		
5	Makotamsa	SD Inpres 75	100	112	212	0	1	0	RWH	Y	3	Y	Y	N	Y	3	2	4	2	2	4		
6	Makbusun	SD Inpres 54	87	70	157	0	1	0	DW	Y	3	Y	Y	N	Y	3	2	4	1	3	4		
<b>KABUPATEN SORONG SELATAN</b>																							
<b>2008</b>																							
7	Wermih	SDN 15	102	90	192	1	2	0	PL	Y	3	Y	Y	N	Y	0	0	0	0	0	0		
8	Namro	SDN YPK St.Paulus	81	84	165	0	1	0	PL	Y	3	Y	Y	N	Y	2	2	1	0	0	0		
9	Teaigolo	SD YPK Markus	130	110	240	0	0	0	X	Y	3	Y	Y	N	Y	2	2	1	0	0	0		
10	Kalbus	SD Yapis	102	90	192	0	0	0	PL	Y	3	Y	Y	N	Y	0	0	0	0	0	0		
11	Konda	SD Inpres 11	67	54	121	0	0	0	X	Y	3	Y	Y	N	Y	0	0	0	0	0	0		
12	Tofot	SD Inpres 151	38	22	60	0	0	0	X	Y	3	Y	Y	N	Y	2	2	0	0	0	0		
<b>0</b>																							
<b>0</b>																							
13	Wawiyai	SD Inpres 86	45	35	80	0	1	0	WS	Y	3	Y	Y	N	Y	0	0	0	0	0	0		
14	Sapokriem	SD YPK Getsamani	37	44	81	0	1	0	RWH	Y	3	Y	Y	N	Y	0	0	0	0	0	0		
15	Yanbeser	SD YPK Marthen Luther	40	47	87	0	1	0	DW	Y	3	Y	Y	N	Y	0	0	0	0	0	0		
16	Saonek	SDN 12	46	50	96	0	1	0	DW	Y	3	Y	Y	N	Y	0	0	0	0	0	0		
17	Waisai	SDN 28	142	127	269	0	1	0	DW	Y	3	Y	Y	N	Y	0	0	0	0	0	0		
18	Warsambin	SD YPK Evangelion	39	36	75	0	1	0	DW/WS	Y	3	Y	Y	N	Y	0	0	0	0	0	0		
<b>KABUPATEN MANOKWARI</b>																							
<b>2008</b>																							
19	Sanggeng	SDN 52 Yos Sudarso II	215	205	420	1	1	0	DW	Y	3	Y	Y	N	Y	3	2	4	3	1	4		
20	Taman Ria	SDN Inpres 66	319	228	547	1	2	0	PL	Y	3	Y	Y	N	Y	3	2	4	3	1	4		
21	Kwaw	SD YPK Elim	96	139	235	1	1	0	X	Y	3	Y	Y	N	Y	3	2	4	2	2	4		
22	Arowi	SD Inpres 70	296	349	645	1	1	0	DW/RWH	Y	3	Y	Y	N	Y	3	2	4	3	1	4		
23	Wasegi Indah	SD Inpres 59	109	107	216	1	2	0	DW	Y	3	Y	Y	N	Y	3	2	4	3	1	4		
24	Meniy	SD Inpres Meniy	124	111	235	1	2	0	RWH	Y	3	Y	Y	N	Y	3	2	4	2	2	4		
<b>KABUPATEN SORONG</b>																							
<b>2009, 2010</b>																							
1	Wamanda	SD Inpres 149	21	11	32	0	1	0	X	Y	2	Y	Y	N	Y	0	0	0	0	0	0		
2	Klamalu	SD Inpres 45	100	72	172	0	1	0	RWH	Y	2	Y	Y	N	Y	0	0	0	0	0	0		
3	Mariyal	SD Inpres 127	56	78	134	0	1	0	RWH	Y	2	Y	Y	N	Y	0	0	0	0	0	0		
4	Wasirsim	SD Inpres 148	86	85	171	0	1	0	RWH	Y	2	Y	Y	N	Y	0	0	0	0	0	0		
5	Makbusun	SD Inpres 53	148	146	294	0	1	0	X	Y	2	Y	Y	N	Y	0	0	0	0	0	0		
6	Katinim	SD Inpres 47	74	64	138	0	1	0	X	Y	2	Y	Y	N	Y	0	0	0	0	0	0		
7	Majener	SD Inpres 76	79	52	131	0	1	0	X	Y	2	Y	Y	N	Y	0	0	0	0	0	0		
8	Ninjemur	SD Inpres 120	24	36	60	0	1	0	DW	Y	2	Y	Y	N	Y	0	0	0	0	0	0		
9	Majener	SD Inpres 77	67	66	135	0	1	0	X	Y	2	Y	Y	N	Y	0	0	0	0	0	0		
10	Walal	SD Inpres 99	139	44	183	0	1	0	WS	Y	2	Y	Y	N	Y	0	0	0	0	0	0		
11	Ebenhezer	SD YPK Ebenhezer	21	28	49	0	1	0	X	Y	2	Y	Y	N	Y	0	0	0	0	0	0		
12	Maladuk	SD Negeri Maladuk	44	32	76	0	1	0	X	Y	2	Y	Y	N	Y	0	0	0	0	0	0		
<b>KABUPATEN SORONG SELATAN</b>																							
<b>2009, 2010</b>																							
13	Waigo	SD YPK Waigo	54	42	97	0	0	0	X	Y	0	N	X		X							No intervention into news school for 2010 (mainly for construction)	
14	Sungguer	SD YPK Sungguer	56	47	103	0	0	0	X	Y	0	N	X		X							Will be completed the existing school	
15	Keyen	SD YPK Eden Keyen	58	53	111	0	0	0	X	Y	0	N	X		X								
16	Moswaren	SD YPK Syaloom	38	34	72	0	0	0	X	Y	0	N	X		X								
17	Bumi Ajo	SD Inpres 133	42	67	109	0	0	0	PL	Y	0	N	X		X								
18	Bumi Ajo	SD Inpres Hasik Jaya	46	36	82	0	0	0	X	Y	0	N	X		X								
<b>KABUPATEN MANOKWARI</b>																							
<b>2009, 2010</b>																							
19	Sumber Boga	SD Inpres 43	85	78	163	N/A	N/A	0	DW	Y	2	Y	Y	N	Y	0	0	0	0	0	0		
20	Sumber Boga	SD Inpres 46	40	30	70	N/A	N/A	0	DW	Y	2	Y	Y	N	Y	0	0	0	0	0	0		
21	Wariori Indah	SD Inpres 195	57	49	106	N/A	N/A	0	DW	Y	2	Y	Y	N	Y	0	0	0	0	0	0		
22	Membowi	SD Inpres 49	65	85	150	N/A	N/A	0	RWH	Y	2	Y	Y	N	Y	0	0	0	0	0	0		
23	Umbuy	SD Inpres 64	70	79	149	N/A	N/A	0	DW	Y	2	Y	Y	N	Y	0	0	0	0	0	0		
24	Udapi Hilir	SD Inpres 25	210	191	401	N/A	N/A	0	DW	Y	2	Y	Y	N	Y	0	0	0	0	0	0		
25	Mupi	SD Inpres 42	67	74	141	N/A	N/A	0	RWH	Y	2	Y	Y	N	Y	0	0	0	0	0	0		
26	Meniy	SD Inpres Meniy	124	111	235	N/A	N/A	0	RWH	Y	2	Y	Y	N	Y	0	0	0	0	0	0		
27	Manokwari Barat	SD Yapis 1	173	179	352	N/A	N/A	0	BH	Y	2	Y	Y	N	Y	0	0	0	0	0	0		
28	Manokwari Barat	SD Yapis 2	177	178	355	N/A	N/A	0	PL	Y	2	Y	Y	N	Y	0	0	0	0	0	0		
29	Sanggeng	SD YPK 1	241	242	483	N/A	N/A	0	BH	Y	2	Y	Y	N	Y	0	0	0	0	0	0		
30	Manokwari Timur	SD YPK Padma 1	172	177	349	N/A	N/A	0	WS	Y	2	Y	Y	N	Y	0	0	0	0	0	0		

all the yellow fields to be filled with figures, again, if the activity is not planned, fill yellow color. But if the activity is planned and has not yet taken place fill 0

Y	Yes
X	No
Comment on 10	

You can not have a hand washing facilities but no water source.

DW dug well  
BH borehole  
RWH rain water harvesting  
PL pipeline  
WS water storage