EUROPEAN COMMISSION
DIRECTION GENERALE POUR L'AIDE HUMANITAIRE & LA PROTECTION CIVILE
Regional Support Office for East and Southern Africa (Nairobi)

RAPPORT DE MISSION

Subject: **South Sudan WASH RSO Mission (*refugee's part of the mission*)**
Auteur: **Jerome BURLOT (WASH Adviser/RSO Nairobi)**
Date: **Du 31th August au 4th September 2015**

Main partners and visited sites list:

Maban:

- UNHCR : Gwenolenn Le Couster (deputy head of sub office); Mathias Ntawiha (WASH Officer)
- ACTED: Raphael Capony (Head of base), Rafael Mazarrasa (WASH amanger Kaya), Jennifer Graig (WASH Manager Gendressa); Anna Banyard (WASH Manager Doro)
- MEDAIR: james Ray III (WASH Advisor), Caroline Mriuki (WASH coordinator) and their staff

Appendices list:

- 1: CARE group approach
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1. EXECUTIF SUMMARY

The mission to Maban was conducted with Laetitia beusher and Gloria Puertas both South Sudan ECHO TA, and focus on the camp occupied by Sudanese refugees. Four camps have been visited, the oldest one like Doro, and then Batif and Gendressa and the most recent one Kaya. Kaya constitute the camp for new arrival. The capacity of the camp should enable to host about 20 000 additional refugees when the primary services will have been implemented.

Two partners have been monitored:

- ✓ ACTED in charge of the whole WASH package in Doro, Gendressa and Kaya camps
- ✓ MEDAIR is in charge of not only WASH sector but also Health and Nutrition in the camp of Batif

The main issues discussed on the field were:

- ✓ The problem of solar pumping system design, implementation and maintenance. Some of the solar asset have been oversized with no clearly express reason, most of them were dirty and full of dust (which led to a big loss of efficiency and can damage the whole electric circuit…), and some solar array have be installed in a totally improper flat configuration with a tilt at 0 degree when it should have been 20 degrees.
- ✓ The problem of monitoring and non-respect by the staff in charge to operate the pump, generator and solar system of the instruction given notably in terms of data recording and especially in terms of schedule: to open water point and to use generator or solar energy. During the visit we noticed many water point close when it should have been open, and a solar pump working with generator all along a sunny day (price of fuel: 2-3USD/L).
- ✓ In Doro mainly lack of technical documentation and information, as well as many wrong set up of the system with after 3 years: still big portion of network with collapsible pipe (only to be used in emergency normally and full of leaks today); improper storing capacity dimensioning, huge length of the pipelines non buried with pipes with big leaks lay down in pool of mud together with electrical cable…
- ✓ Problem with the chlorination equipment which is not adapted to the equipment in use. The chlorination dosing pump injects chlorine in the pipeline at a fix rate, when using solar the flow rate is changing all along the day and the chlorination should be adjusted in accordance.
- ✓ For ACTED, hygiene promotion approach too much standard and repetitive, lack of dynamic and creativity… as well as lack of involvement of the communities representative in the activities
- ✓ Need to standardize equipment like generator and pump to facilitate the spare apart supply chain and to avoid very quality equipment such as the Chinese generator bought by IOM in 2011 and 2012 and full of breakdown today.
- ✓ Need to review the system of incentive to ensure a fair and coherent system.

Despite of all those issues previously mentioned, it was also many positive points in the monitoring and especially the very positive evolving of the way the humanitarian relief is implemented with much more community contribution and less dependency.

One of the most relevant inputs from the partners and especially MEDAIR is the community approach and hygiene promotion strategy and method. MEDAIR is trying to be innovative and creative in terms of community approach in sanitation and hygiene promotion. They implement one method called the CARE group (used to be use in the health sector) which seems to have much more potential of sustainability than traditional method usually implemented and it seems by principle to be more efficient and cost effective. This method is supported by another approach called the model home which is based on motivation and aim to provide practical support to family to translate message from hygiene promotion into concrete practice and organization of habitat. The strategy developed is at least very relevant, however as it is a kind of pilot activities, it is very important to implement appropriate detailed monitoring plan to learn from it and be able to assess impact properly.

In addition, MEDAIR, and ACTED at lower level, implement also a good approach in terms of HH latrine, as they promote as much as possible local materials and community contribution. The result for MEDAIR is pretty encouraging. MEDAIR has developed a strategy which contributes to limit as much as possible the dependency from the humanitarian fund, and better ensure sustainability.

The level of performance of MEDAIR is globally quite good when the level of performance of ACTED is a bit low but with some effective potential of improvement.

2. BACKGROUND AND OVERVIEW

2.1. Capacity of the partners:

2.1.1. ACTED:

Most of the team is pretty young or with new people in humanitarian field. They have three WASH project manager, one per camp. Among them two are chemical engineer (Doro and Kaya camps) and one (Hendressa camp) is filling a gap and she is lawyer with a degree in micro biology. The one at Doro arrived recently and seems to be the weakest one, with low proficiency in hydraulic and a natural lack of experience. The one in Kaya being the most relevant and proficient WASH manager, with good potential and appreciable commitment.

There is slight different in the approach (incentive, community contribution) in the three camps which are not justified and then might highlight a lack of communication and then synergy within the team.

The team seems to be open to community approach and they foster community contribution.

ACTED took over the O&M of the WASH facilities from Oxfam UK in Kaya camp, from IOM in Doro and from Oxfam UK in Gendressa. The in heritage they got is of various level of quality, but often low. The partners need to shift their mindset from emergency setting to more sustainable, efficient and then cost effective one.

ACTED took over the WASH sector in Doro, three months ago. Doro is the place with the higher need of improvement in terms of water supply service organization and set up of the water supply system. In the meantime, it seems that a lot of information about the water supply system should have been transferred from IOM to ACTED.

The local staff needs of a lot of briefing and refreshing to handle their tasks properly. Some of them do not have the appropriate skill or understanding of the tasks they should deal with.

The overall monitoring have to be strongly enhanced, despite of the fact that they can rely on the REACH capacity for monitoring.

In general, apart for Kaya (roughly but good potential of the staff in charge)most of the partners staff did not demonstrate appropriate proficiency in hydraulic or solar pumping system but some of the staff shows good potential to improve the situation with technical support.

The capacity to think in advanced and to improve the sustainability of the water supply equipment set up and management is weak for the partners. They should benefit especially on this aspect from the technical support of a staff proficient in hydraulic.

The overall performance is close to acceptable given the context

Water supply: low

Sanitation: acceptable

Hygiene promotion: close to acceptable

2.1.2. MEDAIR:

MEDAIR is in charge of the entire comprehensive WASH package for the camp of Batil, and as well in charge of health sector. The staff for the hygiene promotion and sanitation component seems to be committed and relevant, but for water supply a lot of improvement is needed. As previously mentioned, the main lack in terms of proficiency among the field staff is hydraulic and solar pumping system. Although, they have project manager Water engineer, one responsible for sanitation with civil engineering background, the person in charge of hygiene promotion seems to have a lot of experience in such kind of project. MEDAIR have a civil engineer in charge of water supply as well but he was in leave during the visit. Their WASH Advisor seems to be enough proficient, and he is well organized. He provide a quite comprehensive bench of data in a very short time which is highly appreciate because quite rare.

MEDAIR contribute to the design and the building of the water supply system together with SI and ICRC.

The level of monitoring needs to be drastically improved, as well as briefing of pump operator. Thus, aspect is even more important that MEDAIR try to develop pilot project with innovative approach and then there is high need to capitalize on it. MEDAIR try to be creative and innovative with relevant approach, nevertheless the implementation as mentioned has to be follow up seriously.

The overall performance of MEDAIR is quite acceptable

Water supply: close to acceptable

Sanitation: pretty acceptable

Hygiene promotion: pretty acceptable

2.1.3. UNHCR:

The WASH officer in charge seems to be committed and he is trying to be supportive for the implementing partners. His way of monitoring has to be clearly improved, formalized, and capitalized.

He has some skill in WASH and understands some of the problem, but again not proficient in hydraulic and solar pumping system. He's got some potential for improvement, notably in monitoring. The coordination aspect seems to be ok, but in the meantime there are only 2 partners.

Overall performance: close to acceptable

2.2. Quality of achievement:

2.2.1. ACTED:

The quality of achievement is quite low for the latrine. ACTED still used largely plastic sheeting, but the problem is mainly related to the lay out of the floor inside the latrine shelter. In most of the case, the inside floor is not homogenous and uniform, which imply standing water around the plastic slab and necessity to pour water in the pit when washing. Although, the seeping capacity of the ground being very low, pouring water in it should avoid as much as possible to ensure longer lifespan for the pit.

Most of the latrine are elevated and with backfill on the side to improve drainage of the run-off water.

The control of the wood log use to support the plastic slab should be systematic to ensure no risk for the wood to be eaten by thermite or to get rotten and then collapsed. The level of washing of the latrine should be improved, especially in Doro camp. The local materials should be more promoted for the latrine construction. Monitoring of pit filling should also be improved. The tilt of some of the solar panel is improper (but made by former stakeholder) and panel are most of the time dirty.

The camps were in general clean, but due to the ground type (high presence of black cotton soil) some pools of mud were scatter within the camp. ACTED propose a very relevant idea to improve the drainage of the water point (see section on findings).

In Doro camp many pipe are not buried and are leaking, some borehole are open. In general in most of the site, the fencing of water point have to be systematic, so far some of them have and some not. The network in Doro is made of various types of pipe materials and diameter, including collapsible hose pipe which should be removed after the emergency, as they are not sustainable. The set-up of the system

should increase the water distribution by gravity. The water point schedule should also be reviewed to match more the habits of the people. The chlorination system has to be improved, the partner was already thinking about. The design and implementation of the storage capacity have to reviewed and calculate based on realistic assumptions. Protocol to wash the tanks has to be developed to ensure no pollution in the network.

The hygiene promotion has to be more dynamic and foster empowerment of community's leaders in identification and handling problems. Tools like awareness materials have to be developed in a participatory manner, tested with a sample of population and produced.

2.2.2. MEDAIR:

The level completion of the latrine visited was very ok with use of local materials, MEDAIR providing apart the slab the lining of the pit when necessary. The latrines are elevated and most of them using the magic slab equipped with a cover movable by feet. The camp was clean.

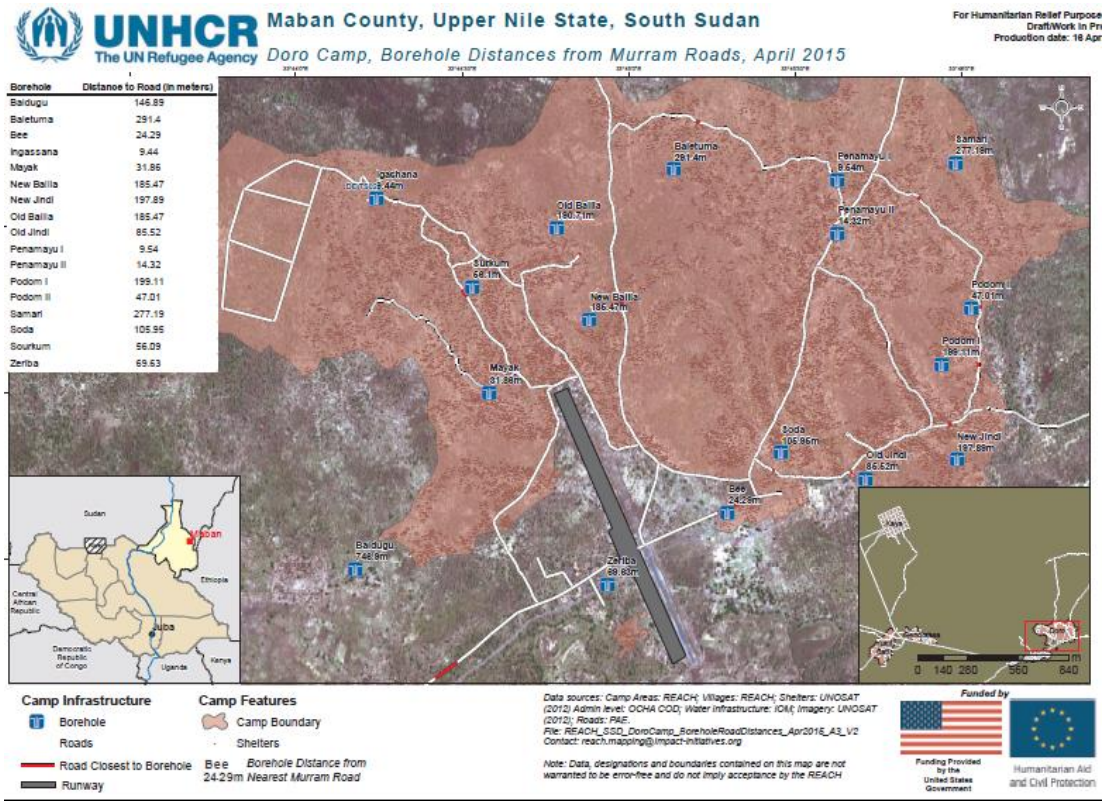
The hygiene promotion seems to be very relevant but innovative, so need to learn from it and to assess properly the impact in order to ensure dynamic of improvement and promote potential replication. However, the tools in used as the drawings box as to be reviewed in order to be sure that the drawing match the local features.

The set-up of water supply system seems to be more or less ok (apart tilt and cleanness of some of the solar array), but the management of the water supply system and especially the source of energy have to be quickly improved. The entire network is made of HDPE pipe. Protocol to wash the tanks has to be developed to ensure no pollution in the network.

3. MAIN FINDINGS AND ISSUE DISCUSSED:

3.1. ACTED:

3.1.1. Doro camp:



3.1.1.1. Water supply:

The water supply of the camp has been hand over to ACTED by IOM with ***very poor technical documentation*** (no BH[1] log profile, pump test report, map of the network, features of pump…). UNHCR has tried to collect or find back some of information like depth of BH, static and dynamic level and so on, but still the gap is huge. REACH should soon bring his team to develop the map of the camp and the WASH facilities which will ease a lot the management, fine tuning or upgrading/extension of the system and contribute to the sustainability of the service. REACH conduct a survey on waiting time and level of distribution of the service through the camp.

The total daily water supply of the camp reach 1300m3 from 17BH (3 of them equipped with solar panel and working with both generator and solar with different schedule) and distribute through 598 taps spread in about 100 water point.

The ***water supply system is still pretty much implement as an emergency setting***, with a lot of collapsible hose pipe (almost 40%), non-buried pipeline and bladders which are not at all sustainable. As

[1] Borehole

result today there is a ***huge level of leaks on the system***, and it is easy to notice those hose pipes have repaired and repairs until last limit. As a result and since the hose will not be removed and replaced by appropriate pipe materials, the ***cost of water production increased*** as you have to pump more to get same quantity of water. The type of setting of the water supply equipment should have been improved long time ago, IOM apparently mentioned to UNHCR that they could not do it because of lack of funds (??).

Few BH have been visited during the visit but the level of information about the equipment and the aquifer is pretty low. The aquifer exploit by the BH seems to be pretty shallow (about 30m depth of BH and static level around 18m) notably compare to the others camp of the area, in the meantime Doro is closer to the river and then altitude might be slightly different. However, given the lack of information we could suspect that better protected and sustainable resources could have been found deeper.

Apparently the contractor who did most of the BH if not all was only equipped with a 10m3/hrs pump to perform pump test. Moreover it seems that most of the pump tests have been performed only as continuous pumping during maximum 6hours at same pump rate.

When the partners are monitoring the water table in general in most of the borehole, strangely they ***monitor only the dynamic level but not the recovery time***. The recovery time is as important as the dynamic level to be monitored, and can give crucial information about the sustainability in time of the pumping schedule, the dynamic of the aquifer and the potential loss of efficiency at the level of the screen of the BH by clogging (for instance iron hydroxide precipitate…). Each BH is equipped with water meter. The ***monitoring of functional taps and main water leaks is not done***, so we don't know which percentages of taps are functional and how much are leaking.

In the meantime, the ***follow up of the fuel consumption should be much more improved.*** The pump operators have no log book to record the working time of generator, the water production, the fuel consumption, the time of solar use (when both resources are used) and the quantity of water pump by solar. The fuel being one of the most attractive items for diversion, it is very important to set up an appropriate monitoring and control system using several source of information to enable crossing and assessment of the reliability of the data recorded.

The FRC is measured at taps level every day when it is performs at level of household once a week or once every two weeks by hygiene promoter on a sample of 60HH per system.

During our visit, ***few water points did not get water at time they should***. The ***pump operators are not respected the instruction and schedule for pumping and water point opening***. Sometime they open the water point too late and it can stay open even at night with risk of protection issues. The pump operators do over used generator compare to solar sometime. During our visit we observed that when the generator should have been stopped at 8am, at 8h45 the operators stopped it, and then when the water point should be opened at 7am, no water were available at same time (8.45am). The schedule of water point has been set up at opening time between 7am and 12 and between 4pm to 7pm. At one water point people were waiting when the tank to supply the water point has been disconnected. There

is a serious issue to ensure respect of the schedule (water point and pump) by the staff in charge and to inform people in order that they are not waiting for nothing at water point hours and the get upset…

In all the pump station of the three camps using solar pumping there is a serious ***issue with chlorination***, as the system of chlorination used imply a fix rate of injection when using solar energy the pumping rate vary along the day according the sunshine. In addition, sometime the level of light is too weak to enable working of the pump but the dosing pump for chlorine (requiring much less energy) continues to inject chlorine in the pipeline without flow in it. As result, when the pumping will start again, the first water pumped will be over chlorinated.

There are a lot of others needs of fine-tuning in terms of water supply:

- ⇒ Replacement of hose pipe
- ⇒ Burying of the pipeline
- ⇒ Improving cost efficiency of the system
- ⇒ Management of solar and fuel energy
- ⇒ Protection of water point
- ⇒ Regulation of the network
- ⇒ Tank washing procedure
- ⇒ Development of an adapted O&M manual
- ⇒ Etc…

During the visit, we noticed serious issues with:

- ⇒ BH kept open (the cap not fix on the top) then anybody could drop anything in the BH and pollute the water resources.
- ⇒ Pipeline around pump station lay down in a pool of mud with a lot of leaks (meaning risk of contamination of the pipeline when the supplied is stopped by occurrence of negative pressure gradient- depression which will implies intrusion of dirty water)

- ⇒ Electric cable lay down in water pool in case of default of insulation all the electric installation could burn including the motor of the pump (*see pic in front*).
- ⇒ Too many different type of equipment used (generator, pump…) which undermined the efficiency of spare part supplies

The problem of respect of the schedule for the water point and the used of generator, in addition to the sanitary problems previously mentioned seems to highlight a serious problem of monitoring for the partners.

The ***washing/cleaning of the tank needs crucial correction*** as so far, when they wash the tank using soap or chlorine, and brush to remove the algae, the waste water is flowing into the distribution

network. There is no drainage pipe to dispose this water. They must implement a system (using a tee, valve and piece of pipe) to dispose the waste water in appropriate way. This practice is public health breach.

During our visit, the partner was working on the replacement of one bladder by T45 onion tank more sustainable. The partners told us that they replace the bladders as it is not sustainable and they increase the capacity of storage, they were ready to do it on another location. Then, asking question about how they ***design the storing capacity***, usually two main assumptions:

1. Based on the daily demands of the users of distribution point supplied by the tank
2. Based on the peak flow to cope with additional capacity needed at rush time, which could be between 20 and 30% of the daily demands in general

They did ***not have any clue about the real needs***, and no calculations have been performed. They were planning to connect 6 taps only with this storage tank of 45m3. The problem is 6 taps with let say 0,15L/s at each taps, will supplied about 3,5m3/day, so for 6 taps the needs to cover the daily demand should be 21m3, so let say that the 20m3 bladders was in terms of volume more than enough…and the plan to install more than two times the necessary capacity??? That's does not ***sound very cost effective or efficient*** and then hard to be confident to the partners to work on the hydraulic system notably in terms of upgrading, extension…
They could have told us that they increase the capacity of storing because the water production can be increased, and then they plan to supply more taps with this storage capacity…but no, they just did not know why they are doing this.

Once again there is an issue with the dimensioning of solar direct pumping system and size of the generator. The pump used in one of the BH visited is 2,2 kW, when the generator is 16kVA and the solar panel could supply 31*120W= 3,720Kw. Even if you want to use a 20% coefficient to major the needs (and cope with level of efficiency of the device used) for the solar panel still the ***solar system is about 25% oversized.***
The ***generator itself is oversized almost three times***, in addition if the generator could use the frequency controller used for the solar system (it is a system that enable for the pump to start at low speed and then do need to oversize the generator as the power needs is not higher at it should when starting the pump), then the pump could start at low speed without need of 2,7 times the average need of power supply.

ACTED encountered almost ***daily breakdown*** with ***generator*** because of ***16 Chineses*** (*2011-2012, so not that old; see pic in front*) very poor quality generators purchased by ***IOM*** and implemented at almost each BH location

The UNHCR mentioned that this BH can have much stronger yield and a bigger pump should be installed. That could have been a reason to oversize the energy supply equipment, but still if you want to oversize your system you should be able to

know what level of performance you can expect from the BH, which is not known so far…

3.1.1.2. Sanitation:

Solid waste: few refuse pits are spread around the camp, but the level of waste production of very low as the access to consumption society. The camp is in general more or less clean, but the organization around the solid waste management still confused.

Drainage: a lot pool of mud can be noticed around the camp. The problem is the nature of the soil (large portion of black cotton soil) which has very little seeping capacity and then water is standing in surface (*see up pic in front*). The main spot should be addressed by upgrading of the ground with maram (13m3=700SSP, so cheap for the aea) or drainage channel until lower disposal point. The problematic remains tricky to be addressed properly, but it does not mean that nothing can be done. ACTED propose in all the camp where they work in Maban to direct waste water from the water point to a fenced perimeter used to growth for instance banana trees which absorb a lot for water (*see low pic in front*). At some point those small gardens located at each water point could use by pump operator as contribution to his incentive… This idea is very relevant…

Latrine and community approach:

ACTED is trying to promote community contribution and to ensure better sustainability to the approach follow. In most of the camp, ***ACTED had built family share and HH latrin***e, and now more and more family share latrine are placed by HH latrine. The outline of the approach implemented by ACTED are:

- The future users dig their pit after a technical briefing to ensure respect of the size of the pit…
- After ACTED teams check the latrine pit, they received slab and materials such as nails, plastic sheeting and wood pole
    - *Comments 1:* the local materials are not used as much as possible
    - *Comments 2:* the stability of the pit and the slab is not systematically checked
- ACTED when pit is full (mainly informed by users and sometime by hygiene promoter) is coming for the decommissioning. They try to reuse as much materials as possible from the former structure.
    - *Comments 1:* most of the time people will show the worst materials they have to get as much as possible new materials. Then, they are still dependent on new materials supplies

  - *Comments 2:* they mainly rely on users to be informed about the need of decommission, and then sometime the pit is already too full to be safely and efficiently decommission. They should have a monitoring matrix to follow up latrine pit filling rate. Given the average lifespan, they could start systematic and regular monitoring of a bench of latrine pit after a minimum duration to get filled, to ease the monitoring
  - *Comments 3:* the users do not participate to the decommissioning so they are not learning how to do it themselves after some point.
- The pit for the most vulnerable are done by a special team getting incentive from ACTED.
  - Comment: they should as much as possible promote the existing solidarity mechanism and build their approach from the effectiveness of it

Most of the latrines get a hand washing facilities next to it, but not all. ACTED provide the water containers and the users provide the means to set it up. There is no promotion of use of ash by ACTED.

The latrines made by ACTED have very various level of achievement quality which should have been addressed through monitoring to avoid any hygienic or stability risks.

The latrine slabs are in plastic, given that the price of the cement bag in Maban is between 40 to 85 USD/bag. To compare in Nairobi, the bag of cement is about 5-6USD. The problem is there is no information about the lifespan of those plastic slabs.

The community approach developed by ACTED is very appreciable are start to show success, even they are struggling a lot due to former approach largely based on incentive.

List of workers with the ones getting incentive payment:
Sanitation:
2 national staff and 3 incentive workers

Water supply
2 national staff and 2 incentive workers

Electro mechanic
1 international, one national staff and 34 incentive workers as borehole operators

Hygiene promotion
5 national staff, 10 incentive workers and 32 in kind incentive workers as WASH Volunteers

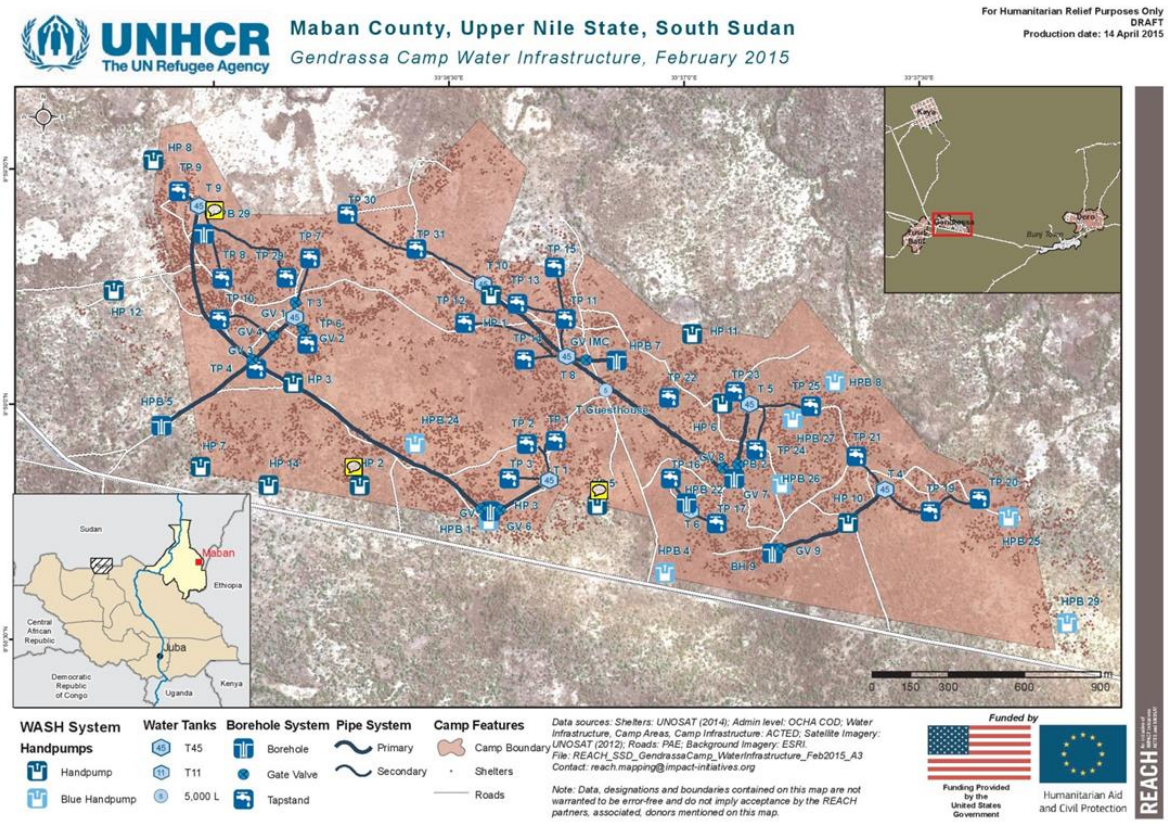
3.1.1.3. Hygiene promotion:

The ***hygiene promoters*** are paid 35SSP/day (about 3-6USD/day according the rate), 5 days a week, mean between ***735-770SSP/month***, by comparison a ***teacher in the camp get between 400-500SSP/month***. The approach is mainly based on the resort to hygiene promoter doing door by door visit (for how many years they do it??) disseminating very standard and holistic messages, and this 3days/weeks, one day for

focus group and one day various cleaning campaign but using the hygiene promoter mainly. Once every two week, jerricane cleaning campaign is organized. The approach is pretty static and repetitive, so not very attractive for the population. No awareness materials in used so far, as fixed in strategic location or by the hygiene promoter.

ACTED is trying to use less hygiene promoter entitled to financial incentive and use more what they called the ***WASH volunteers*** who ***get*** only incentive in ***in-kind irregularly.***

3.1.2. Gendressa:



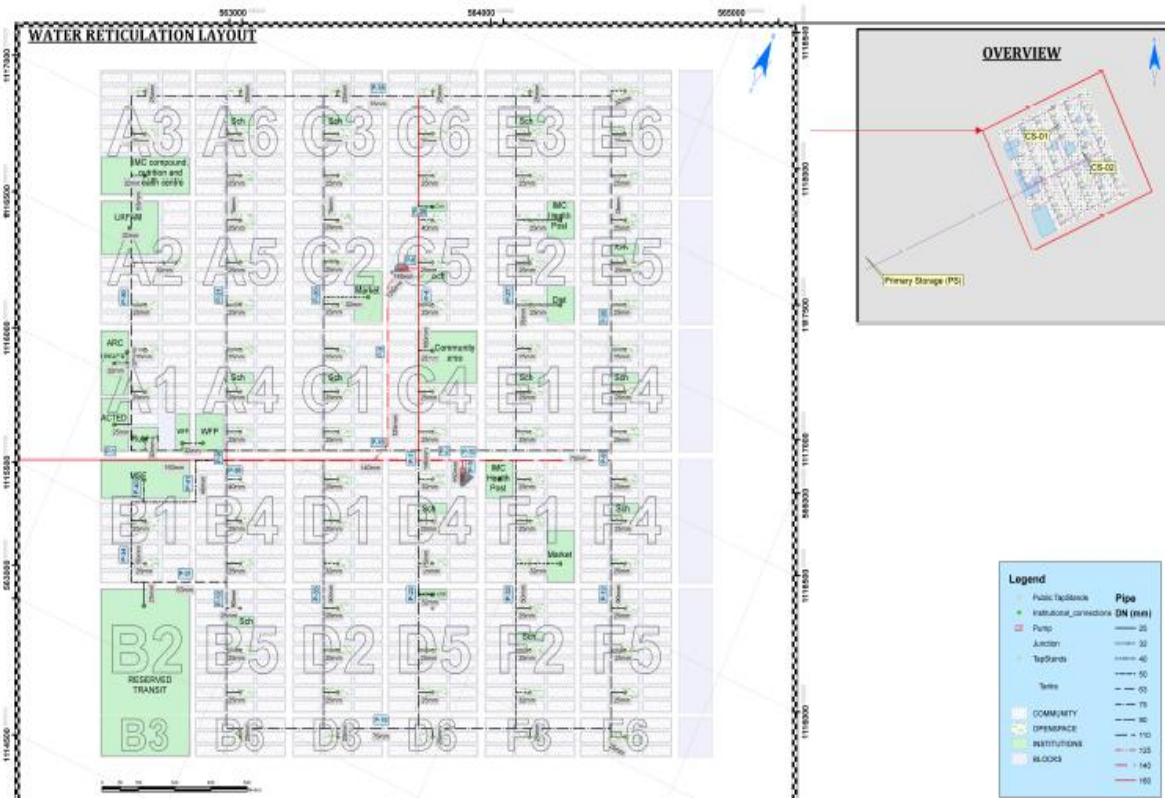
The visit at Gendressa camp had last only 30 minutes. The main problems highlights and findings were:

- ✓ The ***problem with the chlorination*** dosing pump already mentioned
- ✓ The ***problem of monitoring in general***, as recovery time of BH for instance
- ✓ One ***BH faced significant dropping*** of flow rate, apparently due to pumping of fine particles (which can broke the pump after sometime)
- ✓ Oversized of ***generator at pump station*** about two times necessary power (means higher fuel consumption than necessary). The pump is 2kW when the solar panel 2,45kW (acceptable) but when the generator is 12,6 kVA ***about 2 times over sized.***

- ✓ The ***solar panels are set up with 0 degree tilt in a flat configuration totally improper and not acceptable*** (have been set up by another partners using a company called Epicenter and based in Nairobi). The camp is at nearly 10 degrees north of equator and the tilt should be 20 degrees, ***the gap is then about 20 degrees and affect for about 7% the efficiency*** of the system.
  The second consequence is that there is no self-cleaning of the panel during the rainy season. The panels were very dirty and the partners did not give any instruction to clean them anyway.
- ✓ ***Due to the lack of fund for the camp, the users of HH latrine are doing the decommissioning themselves with technical support from ACTED staff and apparently it is working.*** So, it is interesting to note that the lack of fund can have positive impact (to be taken with caution).
- ✓ ***School:*** 4 schools are located in the camp with about 800 to 900 students. The level of access to sanitation is pretty low: 9 latrines (5 functional), 1 hand washing facilities, 1 water point 250m from the school. People are scare to use 4 of the latrines for some problem with the stability of the plastic slab (*confirm even if it seem that there is no evident risk of collapsing so far*). In the meantime, most of the latrines seem to be barely in used.

The water supply system has been designed and built by OGB.

3.1.3. Kaya camp:



3.1.2.1. Water supply:

In Kaya camp, the 23 000 refugees get about 22L/day/pp, distribute through 320 taps spread over 66 water point supplied by 460m3 of storing capacity and 5 BH, plus pump station. The supply in gravity struggles because of the flat configuration of the site. The ***design and implementation of the water supply system*** including the ***solar direct pumping*** system have been achieved by ***OGB***.

11 T70m3 tanks are planned to be installed within the camp and 4 storage tanks of 70m3 as well at main pumping station location. ACTED to implement one tank/week (***TO FOLLOW UP***).

The level of performance of ACTED in Kaya was the best of ACTED in the WASH sector in Maban. Notably, the O&M is much more formalized, with much more information about the water supply system. All the activities/approach are more formalized, methodic and clear with better monitoring than in others camps manage by ACTED in terms of WASH.

The day before our visit a sun switch (small solar panel that can be used to charge a phone) needed to start the solar energy supply, has been stolen. ACTED had a good reaction, but first asking to the leaders to find it back as they cannot deliver water without and it work out. They get back the device the day after. They already had the same strategy in a previous case with same result.

The problem of Kaya is that so far so appropriate groundwater resources have been identified in the neighborhood of the camp. Then, the water to supply the camp is coming from several drilling located about 7km from the camp close to host community.

A water point have been set up for the host community and the pump operator of the BH and main pump station are coming from this community and get incentive. However, ACTED is struggling a lot with the host community, as the level of skill of the staff they provide is pretty low and they are always complaining to get more incentive, saying that refugees get more benefit. In the meantime, it is clear that the host community benefit a lot financially from the presence of INGO etc…

As the agreement with the local community is very fragile and there is always problem, ACTED is planning to enhance groundwater investigation around the camp. Currently, there are 5 BH at about 90m depth, with static level at around 50m and with an average yield between 10 and 15 m3/hrs.

Problem is apparently the contractor of the BH did not have bigger pump than 10m3/hrs, so the real potential should be re investigate in this case. In the meantime, the contractor in the BH report put 15m3/hrs, there is need to know if they assume this yield or they had really tested it with appropriate equipment.

Most of the pumps installed in the BH are 5kW Grundfos pump connected to generator of 16kVA and 7,2 kW of solar panel (*almost two times oversized*). One of the BH gets a 3,5kW Lorentz pump connected only to solar panel ***without backup generator*** (but they have one appropriate in warehouse). The ***solar***

panels for this pump are also very ***improperly installed on a flat frame*** (*see pic in front*) ***without any tilt, and are very dirty*** (*see pic in front*).

No cleaning procedure has been set up so far and no cleaning tools available. Another solar asset has very light tilt much under what should be required.

The BH are connected to central storing capacity of 280m3 (additional 110m3 are planned to installed) from which the water is pumped to two main storing capacities located inside the camp and operate by camp people getting incentive. There are two pumps installed in series at the main pump station, but one only is used. The others could be kept as backup. There are also 3 generators at pump station: 72, 86 and 100 kVA for a pump (*Flow = 60m3/hrs and Head=40mCE*) of 22kW which is again oversized (*using only one pump*), but it could enable the resort to both pumps but the potential to use both (in terms of water availability have not been clearly investigate).

The fact is that Kaya is planned to be extend and to be the location for new arrival, so it could be understandable to have oversized generator since the partners is able to ensure that more water can be abstract from the current BH locations.

At BH location using solar and fuel energy, theoretically the pumping lasts 10hrs with 6hrs being performed by solar energy.

In the camp there is two main storing capacity locations (CS1 and CS2) built on elevated structure (made on masonry and backfill; height of the structure is about 4m). Normally, the distribution network should work by gravity. However, at CS2 (2*90m3 of storing capacity) is equipped with solar pump as, under a certain level of the water in the storage tank; they need to start the pump to ensure supply of the most remote water points. The same problem happen at CS1, but there a moto pump is used to ensure supply under a certain level in the storage tank. The pumping schedule at the CS and at the main storing location (to try to keep the minimum level in the storage tank to ensure gravity distribution) should ensure as much as possible resort to solar energy and gravity for the distribution of water to the water point.

At BH locations, we found pump of 5,5kW supply by 8,9kW and 8kW solar asset, so ***again oversized*** of about 20%, and two generators of 14 and 18kVA.

3.1.2.2. Sanitation and hygiene promotion:

1018 HH latrine (*see pic below right*) have been built ACTED and the refugees for 4 months. The monitoring of latrine pit filling is better than in Doro but still room for improvement.

For the sanitation, the situation is more or less the same as for Doro/Gendressa camp, *main difference are:*

- ✓ In Kaya, ACTED provide the first round of tools and product to clean the latrine
- ✓ In Gendressa, the users do the decommissioning of the latrine pit
- ✓ Lifespan of the latrine pit is estimate as 1 to 1,5 years. When in Doro they mentioned from 4 months to 1 year which demonstrate a not normal difference in number of user per stance.

For the hygiene promotion and community workers:

In Kaya, there are:

- ✓ 6 hygiene promoter getting 30SSP/day, 5 days a week
- ✓ 1 responsible of chlorination getting 40SSP/day, 7 days a week, so 1200SSP/month almost three times the salary of teacher in the camp (???)
- ✓ 6 garbage collector (from main collecting point to disposal) using their own donkey cart and getting 45SSP/day, 3 days / week.
- ✓ Pump operator from host communities get 900SSP for 15 days/month.
- ✓ 109 Community WASH volunteer, among those ones 60 of them are really efficient (*so they should keep only those ones*) are getting irregular in kind incentive (mainly food ration with sugar, salt, coffee, tea, riz). Those staffs used to get financial incentive from OGB so explain from time to time but it is working.

Compare to Doro the hygiene promotion is a bit more dynamic but targeting need strong improvement. ACTED analyze that the knowledge is there but the changes of practices not effective (as in most of the context; problem come also from the method/approach…).

The main hygienic problem identified by ACTED are:

- ✓ Cleaness of jerricane
- ✓ Animals sharing habitat with people

It ***could have been more relevant***. The use of ash for latrine pit or to wash hand, the cleanness of latrine, the decommissioning of latrine pit, the covering of water storage containers and way to fetch water… have been noticed as problem that should be addressed through hygiene promotion during the visit.

The dynamic is based on the day of the week:

- ✓ 1 day: general cleaning
- ✓ 1 day: focus group
- ✓ 1 day: cleaning of jerricane
- ✓ 1 day: door by door visit combined with FRC monitoring (*very relevant*)
- ✓ 1 day: transectorial walk. Problem is that during the cleaning day and the transectorial walk mainly WASH community volunteer and ACTED staffs attend and the leaders are not involved in identification and solving the problems.

40 washing platform have been built and encounter a great success within the users, the facilities become a social place. Shade is planned to be implemented.

The monitoring should be quite enhanced once again and KAP survey should be implemented.

3.2. MEDAIR:

MEDAIR was already in charge of 50% of the WASH operation in Batil and took over the remaining 50% from SI last year (2014). The water supply system have been jointly designed and implemented by MEDAIR and SI with support from ICRC.

MEDAIR is in charge of comprehensive multi sectorial package delivery in Batil and gathering nutrition, health and WASH sectors.

The general level of technical information (about design, survey and implementation); of set up of the water supply system; of quality achievement of the latrine; of method of hygiene promotion used and at some level monitoring are much higher for MEDAIR in Batil than for ACTED in all their places of intervention.

3.2.1. Water supply:

The supplied is ensured by interconnected sectorized system. The total population of Batil camp is about 48 000pp. About 400 taps supply the population through 50 water point scatter in the camp which gives a rate per taps of 120pp. 12 tanks with a total of 6242m3 of storing capacity and supplied by 10 BH are installed in the camp. 22km of HDPE pipes of mainly 3" and 4" diameter have been laid down and buried. 6 wells (25m deep) equipped with hand pumps are also existing and kept as backup in the camp.

The BH are more or less 90m deep with a static level between 40 and 45m and an average yield of about 10 to 15m3/hrs. During the field visit the UNHCR WASH officer informed us that the contractor did not had bigger pump than 10m3/hrs, so we can be wandered about the way they define 15m3/hrs in their report as safe yield.

There is almost ***no information*** as in others sites ***about the type of aquifer***, but seems to be semi confined and fracture basement aquifer.

A good point , all the distribution of water from tank to water point is done by gravity, which demonstrate that calculation have been performed.

Two BH/pump station have been visited during the visit.

The main problems highlighted during the visit are:

- ✓ As for ACTED, a ***serious problem of pump operator staff who do not respect the instruction*** in terms of schedule of generator and resort to solar. During the visit, the day was very sunny but at the first BH visited we noticed that since the morning the operator only used the generator when the pump of the BH was also connected to a solar asset, which is not the most cost effective and efficient way to operate the system and promote resort to solar system. Given the price of fuel but even out of it, this situation is not acceptable.
- ✓ Same ***problem of oversizing or wrong sizing*** of solar panel and generator have been noticed with again problem with the tilt of solar panel (about 10 to 15 degrees wrong, to be checked on all asset installed).
    - At second BH visited (PAE1), 15 solar panel of 300W (4,5kW) module were installed to supply a pump planned to be at 5,5kW (*Q=14m3/hrs and H=70m*) but temporally replaced by a 7,5kW pump after breakdown. Given those figures for sure the pump is most of time working at low rate because of the energetic deficit or it works with generator. 2 generators of 14 and 16,5 kVA (why 2??) are installed at BH location. The situation is unclear and data have to cross checked, as the 7,5kW could not work, pump could over pump or supply less water given the level of energy supply by solar.
- ✓ Most of ***solar panels are dirty*** (*but little damage on it and luting*). Problem of cleaning of solar panel…no tools and no instruction for the staff in charge. The consequence is loss in efficiency, mean energy and then water production.
- ✓ Problem with ***chlorine injection*** system when used of solar energy (*because of the changes in the flow rate of the pump according the evolving of the light along the day*) and problem with one dosing encountering breakdown.
- ✓ 1 of the BH used by MEDAIR face problem with silt pumping and then has been stopped
- ✓ Problem of drainage around BH location
- ✓ Same problem of ***absence of log book*** at pump station and control on the fuel consumption as well as monitoring of efficiency of solar system and level of performance and save reach…
- ✓ General problem of monitoring
- ✓ Problem of drainage of BH location and water points
- ✓ The needs of regulation valve to balance pressure and flow to ensure appropriate and fair supply for the most remote water point supplied in gravity.
- ✓ Needs to avoid as much as possible (unless it is purge…) 3/4round closing valve as on main line it will generate hydraulic hammer even small given the hydraulic features of the network, which as result to speed up leaks occurrence.

3.2.2. Sanitation:

The approach for latrine construction is directly supported by the hygiene promotion activities which constitute a very relevant trial of synergy among sub sectors.

The community approach is pretty developed, the outlines of the method apply are:

- ✓ MEDAIR bring the slab only and supportive wood pole (in Lalup type of wood), the pit lining (iron sheet) if problem with the stability of the ground and a water container for the end washing facilities
- ✓ The users bring all the rest of materials
- ✓ They also try to re-use as much as possible materials (mainly slab, lining are not re-usable) but in the meantime they provide much less materials than ACTED.
- ✓ Initial technical briefing is implemented by cluster and then since people finish to dig the pit they got slab and wood pole.
- ✓ The sanitation team of MEDAIR check systematically the stability of the slab installed and the pit and at the end of the whole structure
- ✓ The latrine shelter is made of local materials such as grass people use for fencing or even house construction.

- ✓ The latrine pit is between 3 to 4 m according the type of ground. The lifespan has been estimated at 1,5 to years when ground is clay (because of the seeping capacity of the ground/pit) and 3 years when the ground is sand.
- ✓ The magic plastic slab with foot handling cover are mainly used (*about 85 to 100USD/slab*)

MEDAIR shift from use of plastic sheeting for the latrine shelter to local materials (*see pic in front*) at the beginning of the year, which is highly appreciable (*more replicable/sustainable and more cost effective*).

Since January they achieved with such method about 856 HH latrines. They used to struggle to mobilize the population a lot at the beginning and still, but huge improvements have been made. At beginning the first month they achieved only 5 stances, people complaining to get incentive.

I assume that the level of quality of the achievement might vary a lot from one place to another, but the ***latrine visited*** (*see pic in front*) were ***well built, clean and roughly hygienic***. The latrines visited were all hygienic and clean ***with hand washing facilities and container with ashes.***

No aeration is used for the latrine, means that the lifespan of the pit might have to remain short.

The decommissioning still used casual worker to support users. At least users are already involved in decommissioning but their capacity to do it on their own has to be effective.

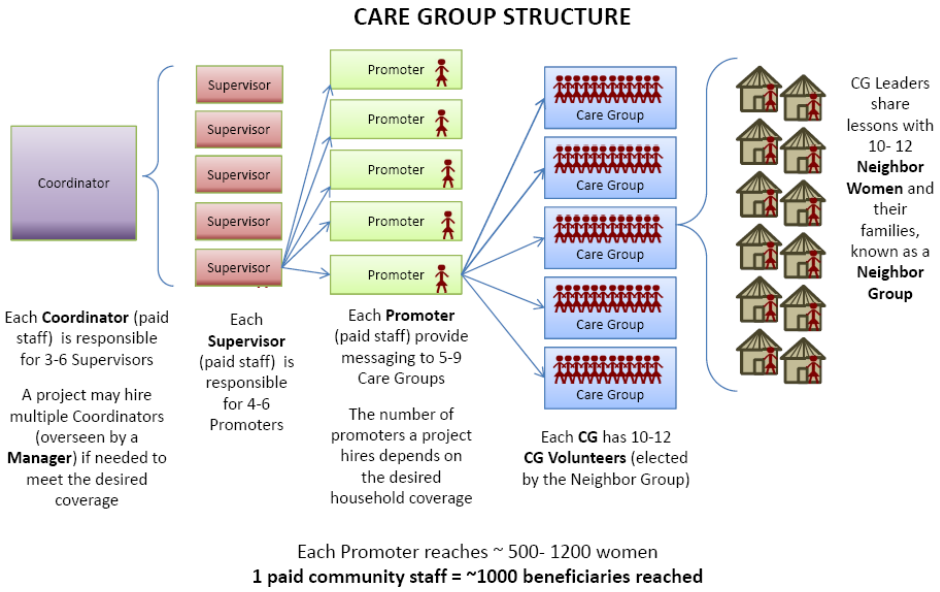
Drainage and solid waste: same comments as for Doro camp

3.2.3. Hygiene promotion:

The hygiene promotion approach of MEDAIR, for once is the most interesting activities among the sub sectors. Actually, the hygiene promotion strategy of MEDAIR is based on two "innovative" approaches: the model home and the CARE group. Both methods are planned to be merged.

For the CARE group, the method used to be mainly utilized in the health sector by MEDAIR and apparently showed relevant result in Somalia notably. It is the first time for MEDAIR that they try to use such method in a multi sectorial approach: health, nutrition and WASH. Then, the project in Batil is pilot. MEDAIR is also responsible for those three sectors in the camp.

MEDAIR is trying to be dynamic, creative and innovative in hygiene promotion which is highly appreciated. The structure of the CARE group[2] model is as follow:



The method is based on mentoring or coaching principles and using tools from adult education (*SARRAR method*). The neighbor group (*about 12HH*) will elect on woman leader to attend the CARE group. 1 supervisor will trained 1 hygiene promoter who will be in charge of facilitating the CARE group and trained a group of 12 leader women and coach them in their activities with their neighbor group.
The hygiene promoter will assist regularly to the activities implemented by the leader woman and will give a feedback at the next session of the CARE group to adjust and reinforce the initial training.

[2] See appendices folder

The supervisor do a bit the same with the hygiene promoter as he will assists to the CARE group organized by one hygiene promoter and give him a feedback as well at team meeting and refreshing training session.
The tools used are drawing box, participatory activities such as song, drama…barrier analyze and KPC survey… Instead of to learn a huge package of information and activities in once, the training is progressive and gives a large part to practices and especially real simulation. The leader women attend the CARE group every 2 weeks for 2 to 3 hours.

At every CARE group a new message and tools is taught and then message and tools/activities is applied and used by the leader woman to disseminate messages to her own neighbor group during 15 days with irregular coaching of the hygiene promoter. After 15 days, leaders' women go back to the CARE group for a refreshing and to learn about another message and others tools… The method is then dynamic but giving more time to learn to the people and the effective message dissemination is done by people not getting incentive, so it is more sustainable. The ones getting incentive are mainly trainer/coach. The difference is clear. The training attendees are maximum 12-15 persons. If the method targets all the community, the main targets (80%) are pregnant and lactating women and child under 5.

Main advantage:

- More dynamic and then more attractive
- More time for training and more time with each individual (as attendees are limited to max. 15 pp and more likely 12)
- More time for practices
- More cost effective, efficient and sustainable
- Promote and impulse of dynamic of self-learning within the community
- Built effective capacity

The method mainly relies on Volunteers who give maximum 8 hours per week of their time to visit their 12 allocated neighbor women and meet with their Promoter twice a month.
The CG must only be implemented where clean water, sanitation, health and nutrition services are available. If those are not in place, the communities are not able to change behavior and the intervention is useless.

Main problem noticed during the visit/comments:

- The tools such as the drawing box was not well adapted to the local features and need to be adapted
- The monitoring plan is weak whereas the approach is pilot and need to be consistently documented and lesson learnt capitalized. The impact must be assess in details to be able also to better under the level of performance we can expect from such approach and how to improve it, replicate etc…
- The way the leader women have been selected is a bit unclear.

- Even the number of hygiene promoter compare to the emergency set up with traditional hygiene promoter going door by door or just hanging around in the camp disseminating messages is much lower (so more cost effective), still there is incentive. The hygiene promoter get 20SSP/day during 5 days which different than the grid follow by ACTED and might need some harmonization. The good point is the incentives are more the ones delivering the training and not the messages so it ensures more sustainability since the capacity has been built.

The CARE group is supported by another method implement by MEDAIR, called the model home[3]. This method aim essentially to work with motivate member of communities to help them to transform hygiene messages into action and practice. Hygiene promoter will support the people in trying to organize their living area/habitat in a more hygienic manner. For instance: drying of dishes on the ground, open water container with no appropriate utensils to fetch water, no ash at the latrine location, dispositive to enable hand washing….
The selection of people is based on motivation, then they give more chance to the action to be successful and then to influence in time the neighborhood of the model home owner.
This the base of behavior change to work with a small motivate and already aware group of the population, to ensure success in the action led and then appropriate example which could influence in time the rest of the population and trigger behavior change in more natural, respectful and soft manner than most of the standard/traditional tools and way of implementation of the hygiene promotion activities.

4. RECOMMENDATION/ ISSUE TO FOLLOW UP:

Visibility in general: ***must be improved***

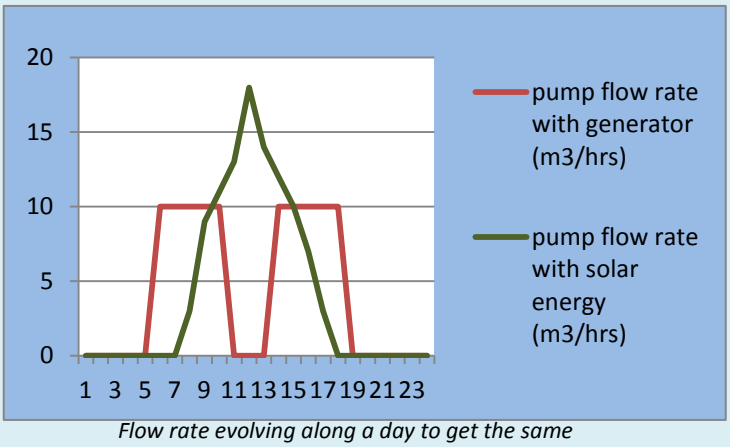
4.1. MISCELLANOUS (strategy, coordination, monitoring…)	
General	✓ Develop relevant monitoring tools which could enable cross checking by crossing source of information. The problem is when the partners collect a lot of data, they don't use it as there is too much, and so it is just stored somewhere and abandoned. The idea is to be able to have a kind of synthetic matrix automatically update when other specific data sheet are feed. The synthetic matrix could a considered as a steering matrix to enable to identify potential incoherence or problem highlighted by the data collection and record and then according the level of suspicious to check more in detailed by consulting the whole data base. ✓ The partners should think at national level to standardize the main equipment such as pump, solar panel, generators… define according the patterns and trends identified in terms of needs a certain panel of equipment two or three per category of items to ease the spare apart supply (more sustainable, less waste of time and then risk of long service disruption, more cost effective…). ✓ The system of incentive should be again more harmonized with progressive

[3] See appendices folder

	decreasing logic. The capacity of the current system to harm should be investigated/analyzed. The system should be coherent with the national salary grid in fixing level of incentive according the job category etc… *A teacher at school should not earn less than a person in charge of hygiene promotion or solid waste disposal…*
Specific to UNHCR:	⇒ Monitoring visit should be regularly organized (as what has been done during our visit) by the UNHCR WASH officer, and a technical or capitalization note should be systematically issued with lesson learnt, problem identified and solution tested/found. ⇒ Synergy among WASH actors should be effective and for instance visit to each other's site could help to build it, and to ensure harmonization of the strategy/approach, etc… ⇒ Check list with data to be monitored and recorded and in general for regular data collection should be developed to avoid gap. As well a check list of type of technical information necessary to have per camp/system like: map, design, BH log profile, hydrogeological data, waiting time at water point, detailed of equipment implemented, log book, O&M manual, pump characteristic curves, solar panel and all main equipment technical sheet…. This will ease any hand over and monitoring but also to ensure that appropriate level of information is effective to enable efficient management of the system to match current and future needs, as well as to plan maintenance…

4.2. WATER SUPPLY	
General	✓ The monitoring system should enable to ensure appropriate, cost effective and efficient management of the solar and fuel energy resources. ✓ The main BH suspected to be able to deliver higher yield should be investigated with appropriate equipment (pump…) to ensure appropriate water resources management. It will also contribute to: o better plan future upgrading or extension of the system according the evolving of the needs o a more cost effective and efficient set up, and equipment selection o For instance most of the partners do not understand what are the most suitable BH to be equipped with solar pumping system. They explain many time oversized of the solar panel to give some buffer capacity in terms of water abstraction when what they should have oversized is the pump and not the panel, especially when they don't know what could be the future needs.
	Note: The table here below show what would be typical difference between selecting a pump working with solar energy and selection a pump working with generator to get the same daily water production. As you can see the pump working with is not pumping at the same flow rate full day, it pump much more at noon as the direct sunlight is higher than at 3pm or 10am for instance. The pump working with generator is pumping at a fix rate all day long. In consequence, the pump to be selected to get the same daily quantity of water

should pump much more quantity of water during few times around noon and the BH yield should be able to match this flow rate during enough time. Then the BH yield has to be much higher that the BH yield for a pump working with generator. The pump working with solar should be 18m3/hrs at max for short time when the one working with generator will be 10m3/hrs, same for the yield of the BH.



Flow rate evolving along a day to get the same daily production according source of energy used

- ✓ The system of water tank cleaning must be hygienic
- ✓ The staff in charge to operate and maintain the system must know their tasks precisely and followed rigorously the instructions provided.
- ✓ The FRC monitoring at HH level should be enhanced and more regular
- ✓ O&M manuals have to developed and contextualized for each water supply system
- ✓ The cost efficiency of the current water supply system has to be assessed. Track of potential improvement in decreasing the running cost and ease the operating of the equipment should be identified and implemented. For instance, the size of generator used at each pump station as well as solar panel most matches the power requirement of the equipment to be supplied in energy (pump…), a certain oversized for safety could be tolerated but the equipment selection must ensure the minimum realistic running cost to make the system more affordable and then more sustainable.
- ✓ To have available at each BH location and pump station all the technical information about the drilling, eventually the aquifer, the generator, the solar panel, the chlorination equipment (*if applicable*) and the pump.
- ✓ Log book must be implemented at each BH location. Even service of generator and historic of breakdown must be recorded.
- ✓ The historic of all maintenance intervention on the water supply system should be recorded and capitalized.
- ✓ Data collection at pump station must be ensured: working hours of generator, working hours of solar, fuel consumption, chlorine consumption, water production… A system have to implemented maybe with a clock fixed at the location of the BH to be used by various staff in charge to ensure respect to pumping schedule, generator and solar energy supply schedule.
- ✓ On few BH equipped with solar system it would be very relevant to at least monitored on daily bases along one year recorded hourly power supply by the solar panel and corresponding hourly water production.
- ✓ Recovery time of BH must be monitored as well
- ✓ The tilt of every single solar array installed has to be controlled and correct if necessary
- ✓ Regular cleaning of solar panel must be ensured and appropriate tools and means have to be available to perform it.

	✓ Improve the system of chlorination when the chlorine is injected in a pressure line using solar pump. As the flow rate of pumping is not always the same, the system to be implemented should enable automatic regulation of chlorination rate to the flow in the pipe. Few systems can be considered: o The venture system but it need a minimum of pressure and flow to work and might not be the most appropriate considering the minimum flow pump by solar pump, but to check… o A regulation of the dosing pump rate by a water meter. This might be the most appropriate and safe solution o The alternative could be to perform the chlorination with a static diffusor directly at the inlet of a storing capacity.
Specific to ACTED:	⇒ The opening schedule of water point must be respected and users have to be informed about and as well in case of service disruption because of breakdown, maintenance or others… ⇒ The partners must ensure optimization of resort to gravity for the water distribution network. ⇒ Improve the level of technical information about the equipment as well as assumption and calculation about potential of extension, upgrading or to make the system more cost effective and efficient. For instance, the storing capacity to be implemented have to be calculated to be accurate and then cost effective, as well as implementation of regulation equipment on the gravity distribution network ⇒ Ensure that all pipes are buried, main leaks identified and repaired. No pipeline or electrical cable should lay down pool of mud or standing water. Cable could be fixed on stick of wood or lay down on stone plot or wall.

4.3. SANITATION	
General	✓ In general drainage should be improved and the banana plot to dispose waste water from water point implemented. Efficiency of the concept should monitored in details. ✓ The hygienic status and stability of every latrine stance must be systematically controlled, monitored and recorded at time of completion ✓ In the same state of mind, the monitoring of latrine pit filling should also be formalized and organize in an efficient manner. For instance, no need to monitor the latrine pit filling level of a 3 months old structure. The latrines to be monitored should be selected as they get closer to the minimum limit of latrine pit lifespan. ✓ Cover on drop hole has to systematically be present at every latrine. The necessity to include aeration in the design in the close future should be investigated and analyzed. ✓ The effort to decrease the dependency from the relief should continue. ✓ The user involvement for decommissioning should be increased gradually in time, for them to acquire the capacity to do it themselves at some point. ✓ The lifespan of the plastic slab in condition of use should be investigated. ✓ Local strategy to ensure appropriate latrine cleaning should be developed with the

	users and an ad hoc support could be considered.
Specific to ACTED:	✓ The latrine construction strategy should as for MEDAIR gradually increase the resort to local materials to build it. ✓ The appropriateness of the wood quality to be used as latrine slab supportive pole should be ensured and secured.

4.4. HYGIENE PROMOTION	
General	✓ Awareness materials have to be design, tested, adapted, produced and implement. Ideally if feasible posters should be laminated or in vinyl to ensure sustainability and be able to put them outdoor. ✓ Sign boards have to be implemented at each water point and strategic location to enable information of the camp communities and to be used for awareness campaign using posters etc… ✓ Jerricane cleanness campaign have to improved
Specific to MEDAIR:	⇒ Innovative and pilot approach should be properly and regularly monitored to assess the impact. A detailed monitoring plan with clear output and delivery as well as timeline should be developed. Partners have to ensure regular and rigorous data collection, analyze, recording with production of findings and lesson learnt note. To ensure a dynamic of improvement in the method/approach adaptation and implementation, should be substantially analyzed and documented: o Chronology of structure and activities implementation including assessment, o Impact, o Constraint and solution found, o Framework for adaption and capacity of replication o Any information about the population and socio-economical dynamic, the context, the environment learnt through the communities
Specific to ACTED:	⇒ The activities has to be much more targeted, dynamic and cost effective ⇒ ACTED mentioned that among the 109 hygiene promoters of Kaya camp, only 60 are efficient so they should keep only those 60. ⇒ Instead of to organized the transectorial walk with staff getting some kind of incentive, it should organized with the leaders to let them also face the problem and propose solution that could be supported by the staff capacity of ACTED. This way will contribute to keep leaders responsible in front of their community and keep them involved in the response to the problems identified. The next step could be that they mobilize community to handle some of problem identified instead of ACTED “staff/volunteer”. ⇒ The doors by doors visit activities should be limited to avoid losing interest from the targeted population and should be more formalized and targeted to avoid just people hanging around… In Kaya, they use the capacity of hygiene promoter when they do door by door visit to do the FRC monitoring at HH level. This

	capacity could be used to ensure more relevant and accurate regular monitoring. ⇒ In time the approach developed by ACTED should be oriented to stronger community approach. If relevant, according the impact assessment, the innovation tested by MEDAIR in Batif could be replicated in ACTED camp location after adaptation to the different camp and adjustment according the lesson learnt. In any way the involvement and contribution from the communities have to be increased in time.