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Interim Report for

Project Fatsaka

Increasing long-term access to safe drinking water though community-led water source management in the Mahatalaky Rural Commune, southeast Madagascar

May 2018

Activities conducted from November 2017 – April 2018

SEED Madagascar

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1. Summary

Contaminated water and poor sanitation account for cyclical epidemics of cholera, dysentery, hepatitis A and typhoid (WHO, 2018). Globally, around 289,000 children die every year from such diseases, caused primarily by poor water, sanitation and hygiene (WASH) practices (WASHwatch, 2017). In the chronically impoverished and isolated Mahatalaky Rural Commune (MRC) in southeast Madagascar, a lack of clean drinking water coupled with poor sanitation and hygiene practices results in frequent episodes of easily preventable WASH related illnesses.

Over the past six months, Project Fatsaka has continued to work alongside communities and local government to strengthen their capacity in independently managing and maintaining their local wells. Following innovative Community Led Total Sanitation (CLTS) inspired triggering sessions, SEED has supported communities to implement community-led action plans (CAP), repair wells, delivered training sessions and WASH-promotion activities. This has resulted in 13 wells now being categorised as functional, and 70% of sampled households now using wells as their main water source over more contaminated surface waters, up from 40% at baseline. Furthermore, a year-long coordination and training initiative with the Commune has built its capacity, enabling it to assume responsibility for rural water resource management.

2. Activity Detail

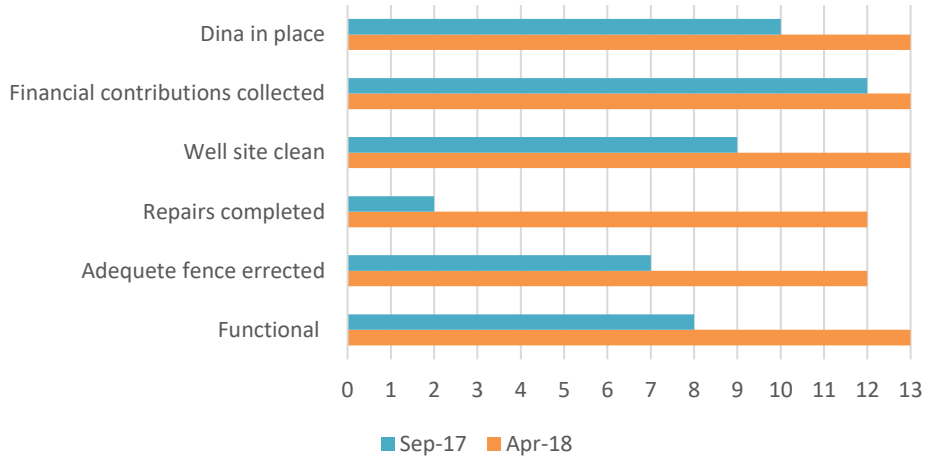
2.1 Discontinuation of Project Activities in Two Communities

In line with the project's CLTS-inspired methodology, SEED was forced to take the difficult decision to discontinue working with two communities that consistently failed to engage with or participate in the project. However, whilst SEED's numerous attempts at re-engagement were unsuccessful, Commune-led community meetings succeeded in motivating both communities to raise substantial sums for well repairs and management. This promising development underlines the importance of combing both 'top-down' and `bottom up` approaches and indicates the key role that local government can play in rural water infrastructure management. Although these two communities are no longer included in project activities, SEED will continue to try and understand why they failed to engage initially. In the event that the communities seek further assistance, SEED will offer advice and additional training.

2.2 Development and Execution of Community Action Plans (CAP)

Over the past six months, SEED's Community Liaison Officers (CLO) have supported communities to implement their CAPs. The participatory approach adopted by the project reiterates communities' ownership of their wells, motivating them to take action. All but one of the 13 communities have now undertaken some repairs on their wells. In addition, 13 committees have successfully raised money for well repair purchases and/or monthly contributions for well maintenance (see CAP progress in *Figure 1*).

Figure 1: CAP Progress since last midterm review



2.3 Well management and maintenance training

To enhance community capacity to independently manage, maintain and repair their wells, SEED organised three training sessions for well committees in each community:

1. **Session 1** comprised a role defining activity, whereby SEED emphasised its role as an independent advisor and facilitator. Well committee members negotiated and defined their roles and responsibilities.

2. **Session 2** encompassed financial management training. By assessing individual communities' needs, SEED offered well committees guidance on establishing suitable financial plans to meet maintenance and repair requirements. Well committees received training on hosting community meetings, registering well users and writing reports to update Fatsaka staff. Training was designed to ensure that, despite low levels of literacy, well committee members could clearly document well observations, repairs, financial payments and community agreements.

3. **Session 3** included both theoretical and technical well repair training. This was conducted by SEED's construction team over a two-day period. All committee members attended the sessions, empowering female members to participate in an activity that would normally only involve men.

2.4 Well Repairs

Since October, SEED's construction team has collaborated with well committee and community members to carry out essential well repairs. The repairs served the dual purposes of enabling access to safe drinking water and developing communities' skillsets in technical well repairs. 12 wells have undergone major or minor repairs and nine have since been fully repaired meaning that all 13 are now fully functional.

2.5 WASH Lessons in Schools

Over past six months, sensitisation activities expanded to WASH in schools (WinS) lessons in all four target schools of this Phase. With less awareness of cultural norms and hence less social constraints, children can be catalysing agents of change within their communities by advocating for improved WASH practices. Teachers also play an active role in this process. As such, SEED conducted two consecutive days of teacher training. 26 teachers from all four schools (Beandry (n=6), Andramanaka (n=7), Tsialanga (n=6) and Tsagnoriha (n=7) as well as the Chef ZAP (local education minister) were present. Teacher training included the following:

- A preliminary WASH sensitisation session to ensure stakeholder buy-in
- Discussion of teachers' roles in student WASH practices
- WASH lesson preparation and delivery training in six topics; handwashing, latrine use, latrine maintenance, using a protected water source, treatment methods and safe water storage
- Distribution of lesson plans

Left: Teachers from Beandry school write down what they think safe sanitation and water means as part of Water Action Month 2018. Right: Teachers developing lesson plans with guidance from SEED

Fatsaka CLOs attended a `working with children` training session before undergoing any work in schools. CLOs thoroughly went through SEED's code of conduct of working with children, covering children's rights, staff behaviour and child protection procedures. Following this, CLOs delivered WASH lessons to 545 children across the four rural schools. Handwashing lessons have been completed, with all six topics to be delivered before project finish.

Tippy taps constructed at schools following WASH sessions

*"**Now** we have built tippy taps outside the **latrine** and the children really are **washing their hands**."*

- Julian, teacher at Beandry School

2.6 Commune liaison and capacity building

Liaison with the Commune has been key in motivating regional authorities to assume a greater role in rural water resource management. After agreeing to follow the national legislation of the Water Code (*Code de l'eau*), two Commune-employed WASH Agents received on-the-job training in well maintenance and have since begun community follow-up visits with the Fatsaka team. The presence of authorities during monitoring visits has added considerable momentum to the project, with communities demonstrating increased motivation to achieve their action plans. The Commune Agent responsible for follow up support has already started introductions with all the communities in preparation for a hand-over of responsibilities to be completed in August.

2.7 Community Mobilisation for World Water Day

Recently becoming a member of End Water Poverty, SEED joined Water Aid's global campaign to advocate for improved access to safe water for all during Water Action Month in March. On the 24th of March, Fatsaka organised a large-scale public event to celebrate World Water Day and promote safe drinking water practices in the MRC. Commune representatives and over 1,000 participants were present throughout the day's activities, which included school teams and well committees competing in relay races, quizzes and handwashing competitions. These activities were themed in safe drinking water practices and reinforced key project messages.




WASH relay races

3. Monitoring, Evaluation and Learning

Objective	Activities	Outcome	Outcome indicator
To increase access to clean drinking water by working alongside 28 rural communities to develop a sustainable community management structure and build local community and regional official capacity to manage and maintain protected water sources	Water source mapping and commune-level engagement	Increased motivation, ability and action amongst community members to use and maintain protected wells	80% of communities are monitoring their well without any external influence or intervention
	Fatsaka pilot community follow-up		70% of wells are repaired within 6 weeks of breaking
	Community identification and initial meetings		85% of committees are implementing a well management plan
	Community triggering and action planning	Improved water quality in all 15 community wells	75% reduction of faecal coliforms/100ml well water amongst 80% of communities
	Well assessment and repairs		
	Well committee establishment, training and support	Broader awareness of local well conditions and increased capacity of commune authorities to carry out water source management duties	Commune authorities aware of maintenance and management issues at 85% of wells
	IEC materials distributed and cross-community learning visits	Increased long-term sustainability of community wells leading to increased sanitation and reduction in illnesses	65% of communities require no well-related assistance
	WASH education in schools		15% reduction of cases of diarrhoeal disease across all communities

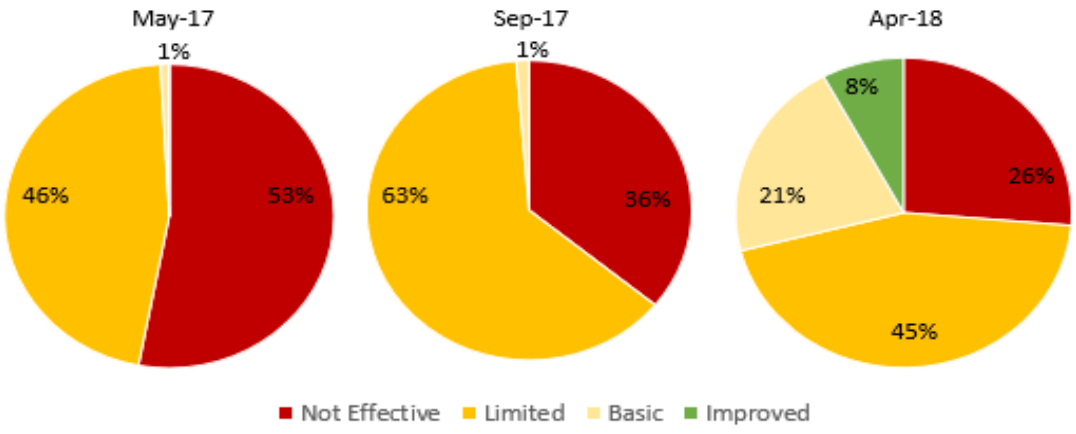
With two communities not actively participating in the project, their progression cannot be monitored on the same indicators as the other 13 communities as they will act as outliers in the data. As such, any data collected from these two communities has been excluded from the analysis, resulting in different figures from those stated in the previous midterm report (November 2017).

Methodology

Data collection was comprised of household (HH) surveys (n=76) and focus groups (n=5). Focus groups were held with relevant stakeholders from five randomly selected communities. HH surveys were comprised of randomly selected HHs of each distance group from each community.

Drinking water practices (DWP)

Figure 2: Changes to drinking water practices as per adapted WASH ladder



SEED used HH surveys and participant observations to assess DWP, measuring these using an adapted drinking water management practice level ladder originally developed by the IRC WASH (2016). The practice level ladder ranks HH drinking water practices into one of four levels: *not effective* (high risk to human health), *limited* (moderate risk), *basic* (low risk) and *improved* (no risk).

During DWP observations many HHs did not have stored water present, whilst they were able to show how water was collected and stored, SEED has not been able to observe how water was drawn. Thus, this aspect of the ladder has been removed for this review as data collected would be unreliable. However, all HHs claimed to use a cup to draw water in the HH and claimed to not use their hands.

Figure 3: Practice level ladder of safe drinking water management

Practice Level	**Safe Drinking-water Management***
Improved	Drinking water always comes from an improved source (piped or protected water source) and is: • Collected safely • Stored safely • Water is always treated
Basic	Drinking water always comes from an improved source (piped or protected spring) and is: • Collected safely • Stored safely • But not treated
Limited	Drinking water sometimes comes from an improved source (piped or protected spring), but is: • Not treated • Not collected safely • Not stored safely
Not Effective	Drinking water comes from unimproved source - surface water, unprotected spring or unprotected dug well.

**Taken and adapted from IRC WASH to fit project assessment needs*

Drinking water practice improvements have been extremely encouraging, particularly over the past six months. Over one quarter of HHs in the recent review were practicing *improved* or *basic* drinking water management, meaning no to low risk to human health. With the May and Sep-17 findings finding just 1% of HHs classified as *basic*, this achievement is especially encouraging. The biggest barrier to improving one's drinking water practices reamins the lack of treating water always before drinking it. The most encouraging increase in practices are the increase in storing drinking water correctly.

Figure 4: Barriers to safe drinking water practices

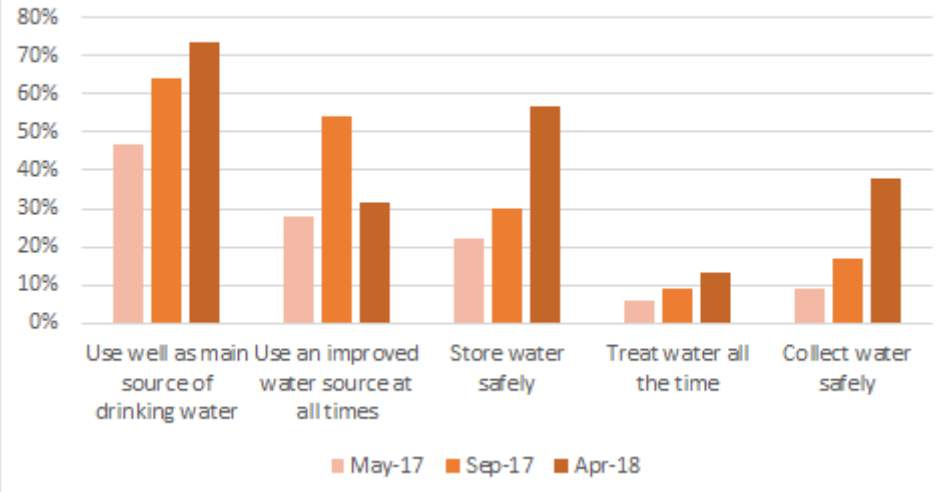
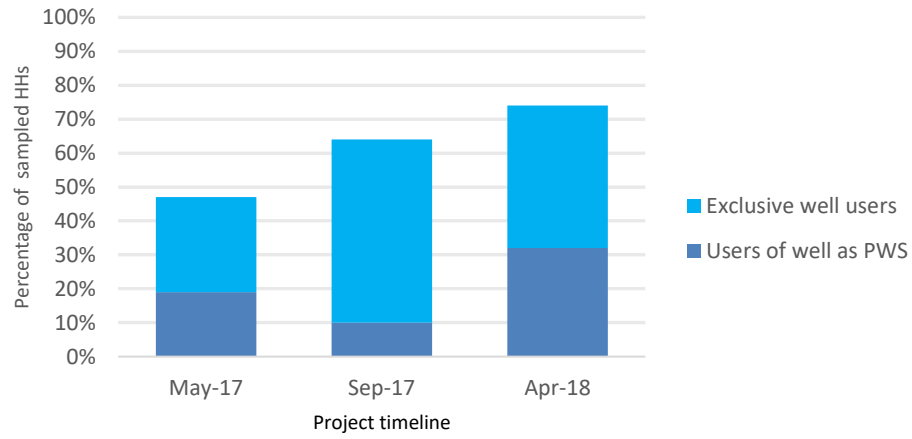


Figure 4 shows that the greatest barrier to improved DWP across the MRC is due to the lack of HHs treating water always. This is alarming considering the lack of HHs using an improved water source (exclusive well use) at all times (42%). Hence, exclusive well use (EWS) is another one of the barriers HHs face in achieving safer DWP levels. This lack of HHs practicing EWS is partly a result of well water not being available throughout the entire year. Although the region is categorised as having a tropical rainforest climate using the Köppen-Geiger climate classification (Climate Data, 2016; Kottek et al., 2006), HH surveys at baseline (May-17) indicated that all but two of the wells are dry at some point between August and December (the dry season). As a result, the percentage of sampled HHs using a well as their exclusive water source remains a relatively low proportion (30%). As such, we acknowledge that not all HHs will be unable to achieve practice levels of 'improved'. Therefore, SEED endeavours to emphasise the importance of water treatment through HH workshops to ensure that HHs have access to safe drinking water throughout the year.

Figure 5: Well user rate vs. exclusive of wells over project life cycle



Water treatment

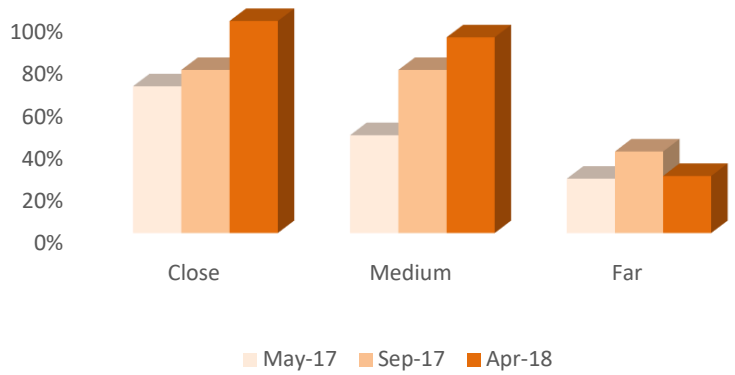
Whilst 13 out of 76 sampled HHs claimed to treat their water *always*, only 10 of these were able to explain the process correctly. Nine of these HHs were well users and used boiling as their treatment method. An additional 11 HHs claimed to boil their water before drinking *sometimes*, seven of which were also well users. Focus group participants stated they would treat their water when the well was broken as they were forced to use a local surface water source, indicating that they felt it was unnecessary to treat well water as it was perceived to be 'clean'.

Previous water testing results generally suggested that even before well repairs and treatment, most had low or no levels of faecal contamination (4/13 – low, 5/13 – none). Four of the wells fell under the medium bracket, two of which were left open to contamination. Whilst these results are rather encouraging, they still demonstrate that wells often have some level of contamination (8/13). Therefore, future efforts will concentrate on educating HHs on this topic, especially by highlighting the need to treat all water – even well water – before drinking, whilst continuing to emphasise the danger of using unimproved water sources and encouraging HHs to use the well when possible.

Distance to well vs well use

Walking distance to a well remains a barrier to well use. Throughout the project, HHs that live *close* to wells have had the highest rates of well use as their primary water source, and *far* HHs the lowest. Unfortunately, *Figure 5* (below) shows that the percentage of sampled *far* HHs using a well decreased from 38% to 27% over the past six months. To counter this, SEED will continue to attempt to motivate *far* HHs through educational workshops delivered at the HH level.

Figure 6: Well use as primary water source by distance group over project monitoring periods



Well functionality & CAPs

All 13 communities have made progress in achieving their CAPs since baseline. All wells are now functional, compared to eight in May and Sep-17. In contrast to just one well at baseline (May-17) and four in Sep-17, seven of the current wells are clean and in good condition, without need for repair or maintenance. All but one of the communities has conducted major or minor repairs with the training and support of SEED.

Figure 7: Number of functional wells over project lifecycle

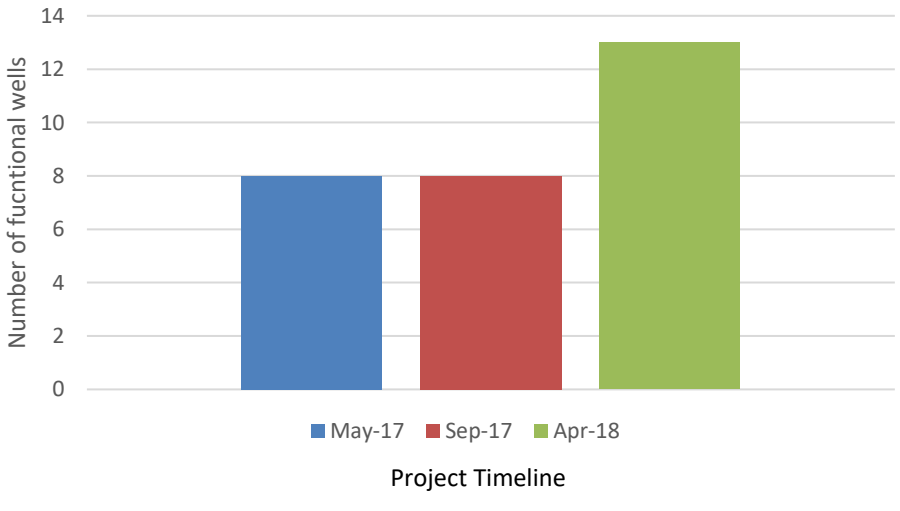


Figure 8: Midterm (Apr-18) summary of well maintenance and management achievements.

Village	Functioning at Baseline	Functioning now	Fence erected May-17	Fence erected Sep-17	Fence erected Apr-18	Repairs completed by the community	Water committee's estimated % beneficaries paid
Analalava	Yes; but no handle and many cracks	Yes; but needs inner tube replacement	No	In progress	Yes	Pipe ammended	70%
Androtsy	No; major problem with the valves	Yes; good conditon	No	In progress	Yes	Pipes ammended and cracks in surface filled	30%
Fenosoa	Yes; but no handle, lots of cracks	Yes; good conditon	No	Yes	Yes	Handle fixed	90%
North Emanahera	Yes; no handle, cracks	Yes; good conditon	No	Yes	Yes	Handle fixed	0%
Tsagnoriha Centre	Yes; problem with valves and tubes	Yes; small cracks in structure	No	Yes	Yes	Handle, inner tube replaced and valves made and replaced	97%
Ankazomasy I	No; cracked open in very bad state	Yes; good conditon	Yes; but in adequate	Yes	Yes	Community helped to empty well and cement floor	70%
Ankazomasy II	No; cracked open in very bad state	Yes; good conditon	No	No	Yes; needs improving	Community helped to empty well and cement floor	98%
Soananga	Yes; cracks in platform and no handle, ponding of water	Yes; good conditon	No	In progress	Yes	Repairs to the concrete structure	90%
Vaharinoro	Yes; but water drawn very slowly, problem with valves and pipes	Yes; needs well head replacement	Yes; but in adequate	In progress	Yes	Repairs to well head, pipes, valves	85%
Antahovary	Yes; no handle, cracks	Yes; but cracks need cement	No	Yes	Yes	Repairs to the concrete structure	91%
Antavibe	Yes; no handle, cracks open to contamination	Yes; but cracks need cement	No	No	Yes	Handle replaced	41%
Mananara Centre	No; valves need replacing	Yes; needs valves replaced again	No	Yes	Yes	Valves made and replaced & handle	No report received from water committee
Edriasy	Yes; in good condition	Yes; good conditon	No	Yes	Yes	Non conducted	72%

While Fatsaka seeks to encourage independent sustainable communities, some communities still need external support to maintain a well that is in good condition. As such, SEED's construction team will continue to offer technical advice until project finish. In addition, SEED will conduct well repair and maintenance training with the Commune Agent responsible for technical support, to ensure that the Commune will be able to offer continued support post project close.

Financial contributions

According to monthly reports from well committees, a high percentage of HHs participated in monthly well contributions (see *Figure 1*). However, focus groups (n=5) revealed that individuals may not feel a responsibility to provide financial contributions towards the wells. Many of the participants claimed that the well committees had failed to successfully mobilise and motivate community members to pay their well contributions. Alternatively, well committee members believed the scarcity of contributions were due to a lack of community member initiative. To remedy this issue SEED will conduct extra leadership skills workshops with the well committees.

Successes:

- 13 functional wells compared to eight at baseline, with seven not needing any major or minor repairs of replacements

- All but one of the communities completed well repairs autonomously with the training and support of SEED
- An increase in improved safe drinking water practices
- 13 well areas are clean and 12 have fences that prevent contamination and animal damage
- Successful Commune engagement encouraged communities to actively participate with project activities and motivated disengaged communities

Challenges:

- A limited number of HHs willing to contribute monthly towards well maintenance
- A lack of initiative and leadership demonstrated by well committees
- Inadequate record keeping and report writing from well committees
- *Far* HHs preferring closer surface waters to farther wells
- Water testing has not been completed as there has been no expected change to results, endline results will reveal if planned chlorination of wells will be effective
- SEED has not been able to record the different types of surface waters (i.e. rivers, rice paddies, lakes etc.) being consumed due to a lack of understanding between different surface waters amongst villagers. Therefore, reporting has been simplified to include just the use of a protected dug well vs. surface water source

4. Conclusion and Future Action

The most noteworthy success of Project Fatsaka in the first year of implementation has been the increase in the proportion of HHs using a well from 47% to 79%. In addition, communities have actively participated in the amelioration of their wells to ensure improved drinking water sources are managed and maintained, which in the long-term can contribute to improved standards of living.

In the final five months of Project Fatsaka, SEED will continue working with all communities to ensure that they have the skills and structures in place to provide beneficiaries with access to safe drinking water. This objective extends to conducting a full analysis of the progress made by the original 13 Phase I communities and offering them additional support where requested. Furthermore, Information, Education and Communication (IEC) materials will be distributed to all target schools to reinforce safe drinking water practices.

Activities to be completed by project end (September 30th, 2018):

- Full analysis of the progress made by the 13 original Phase I communities
- Continued support to Phase I communities
- WinS; Completing all six school WASH lessons in all four target schools
- Well committee training: continued leadership skills training with well committees
- Ongoing well repair support & well chlorination
- Commune training and capacity building
- Well signs detailing *dina* (local rules) constructed next to wells
- HH educational workshops on safe drinking water practices
- Formal handover of the project to the MRC
- IEC materials development and distribution

5. Case Studies

Case Study A.

Radj is the well technician for Tsagnoriha Well, he sits with his daughter Tasmin and tells us how happy he is with their “new” well.

*“**We** have **clean** water**!**”*

“We used to got a lot of diarrhoea and tummy cramps, but recently none of my ten children have had any problems. I am really happy, the well is constructed much better, and the water drains away effciently.”

As the technician of Tsagnoriha well committee, Radj’s role is to ensure the well is functioning and that well repairs are done within resonable time. He received two days of technical training and SEED plans to lead a recap session in July to ensure Radj is competent in undergoing technical repairs.

*“I am **proud** of **our well** and that we have **clean** and tasty **water**.”*

Case Study B.

Kaleta is a 27-year-old who prioritises clean water. Before project Fatsaka, the well Kaleta frequents was broken open and exposed to high levels of faecal contamination.

"The water didn't taste very good, but I still used the well because I knew it was better than the water from the rice paddies. Other people did (use rice paddies), and the village often had stomach ache." During well repairs Kaleta helped empty and clean the well. "I wanted to clean the well because I want my village to have clean water again."

*"**We** have **cleaned** the well and **helped** with the repairs and now we have our old well back! **I'm so happy.**"*

Kaleta prefers to collect water from the well, but had to use the rice paddy whilst the well could not be accessed.

Case Study C.

Commune representative, Arnet, closed the World Water Day ceremony in Tsagnoriha with a speech stating:

"Project Fatsaka has helped our children and families have access to safe water once more. We need to recognise that value to our well-being and ensure that we look after our wells independently into the future!"

Arnet explained to SEED that he is thankful of their help and training and adds

*"I feel **we are better equipped** to help rural communities manage their water supply".*

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