

# seed madagascar

sustainable environment, education & development

## Interim Report

### **Project Malio (Year 2): A community-led approach to eliminating open defecation and facilitating sustained behaviour change, Fort Dauphin, southeast Madagascar**

**Activities conducted from November 2015 – April 2016**



**May 2016**

#### **SEED Madagascar**

Suite 7, 1a Beethoven St, London, W10 4LG, United Kingdom  
Villa Rabemanda, Ambinanikely, B.P. 318, Tolagnaro, Madagascar

Tel: +44 (0)208 960 6629

Email: [projects@seedmadagascar.org](mailto:projects@seedmadagascar.org)

Web: [madagascar.co.uk](http://madagascar.co.uk)

*UK Charity No. 1079121, Company No. 3796669*

## 1. Summary

The 130-year lag in achieving the 2015 Millennium Development Goal to halve the number of people living without sanitation is clearly evidenced in Madagascar – rated the fourth least-developed country in the world for sanitation – where just 12% of its 22 million have access to improved toilets<sup>1</sup> (WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply and Sanitation, 2014; WaterAid, 2015). Like elsewhere in the global South, widespread open defecation is reinforced by limited availability of sanitation facilities, lack of investment, traditional customs and poor hygiene awareness. Together, these issues greatly increase the risk of food and water contamination by faecal matter, contributing to high incidences of diarrhoeal diseases (WHO, 2016).

To address these challenges, SEED Madagascar's Project Malio takes a community-led approach to ending open defecation and facilitating sustained behaviour change in the urban commune of Fort Dauphin in the southeast of the country. Malio facilitates the construction of household latrines across 11 of Fort Dauphin's fokontany (village clusters), supported through town-wide health promotion around sanitation and hygiene practices.

In the second-half of Project Year 2 (PY2), much time has been invested in ensuring the benefits of Malio reach beyond the direct beneficiaries of household latrines. This has been achieved through far-reaching mass advertising campaigns and the ongoing development and distribution of Information, Education and Communication (IEC) materials. A total of 10,242 IEC materials were distributed in PY2, supported by two billboards, five signboards, and 1060 radio broadcasts. In addition, considerable effort has gone into building the capacity of Partner Associations in order to ensure their sustainability, and ongoing support of Water, Sanitation and Hygiene (WASH) goals, beyond the project timeline. While household latrine audits highlighted the internal difficulties of having Community Liaison Officers allocate latrines within their own neighbourhood, challenges did not overshadow the impressive results of the team: at the end of Project Year 2, 7336 community members were using Malio latrines. More than 7000 school students benefited from WASH education sessions, while three more schools had latrines constructed or refurbished to give students an alternative to open defecation within their schoolyard.

Although it is clear that significant progress has been made in the seven participating fokontany over the first two project years, the Malio team have had to work hard to ensure beneficiaries remain motivated and project activities continue to be sustainable. Lessons from this Project Year have informed internal operations alongside planning for Project Year 3 (PY3), have been disseminated regionally and internationally through the project's ongoing involvement within WASH committees and networks, and are outlined in the following report.

---

<sup>1</sup> "Improved Sanitation" as defined by the JMP includes: flush toilets, toilets connected to a piped sewer system or septic tank, flush/pour flush pit latrines, ventilated improved pit latrines, pit latrines with slab and composting toilets.

## 2. Activity Detail

### 2.1 Mass Advertising Campaign and Radio Broadcasts

#### 2.1.1 IEC Materials

Project Malio's branded Information, Education and Communication (IEC) materials continue to be distributed throughout Fort Dauphin, raising awareness of the project and serving as an incentive to motivated beneficiaries. IEC materials have also been distributed for a variety of other individuals including non-latrine beneficiary focus group attendees, members of the monitoring committees, CoSANs, members of partner associations and participants in Project Malio mass mobilisations, competitions and mass media events.

Sourcing billboard designers and printers has continued to be a challenge in Fort Dauphin. However after several months of negotiation with a designer located in Antananarivo, two billboards have been designed, printed and erected in busy areas of Fort Dauphin. The images portray the benefits of good hygiene and the potential negative consequences of

poor hand hygiene.

The Malio team planned to pilot the display of a controversial image as part of the IEC campaign in December for the new fokontany signboards. This image depicted a human and a dog openly defecating, making a direct comparison. As dogs are extremely *fady* (taboo) in the Anosy Region, this image raised concerns among ONG Azafady staff outside of Malio and it was decided that more research would be required to comprehend the potential community perceptions and reactions to the proposed signboards. The research was comprised of 68 anonymous questionnaires which were completed by a representative sample of Fort Dauphin, ranging from beneficiaries of SEED latrines, voluntary community agents, members of Malio partner associations and non-beneficiaries (including participants who had no previous experience of the Malio project). This research investigated individual reactions to the image and aimed to gauge whether people felt it could promote behavioural change in regards to open defecation. Reactions to this image were extremely varied, highlighting the complexity of the broader issue of marrying Malagasy traditional *fady* with CLTS best practice. Though around half of participants rejected the image outright, many other responses highlighted that this was a strong and useful awareness-raising campaign as it made people stop and think about their actions.

IEC Material	Total Number Distributed
T-shirts	413
Buckets	939
Cups	909
Hats	295
Sarongs	309
Leaflets	1080
Exercise books	2412
Pens	2648
Soap	1237
Billboards	2
Signboards	5

Table 1: Number of distributed IEC materials over PY2

Whilst research was ongoing, ONG Azafady’s Board of Trustees was informed of the project’s intention to use the controversial image; they deemed the signboards too provocative for use and subsequently banned dissemination. Although this was a disappointing outcome for the Malio team, the research was still analysed and presented to the Regional Ministry of Water, which will decide whether the images could be used without ONG Azafady or SEED’s association. To date, this process is ongoing. This experience was a good opportunity to reflect on project methodology and how to move forward with the design of IEC materials in PY3. Furthermore, the whole process was written into a report which will be presented at the Water, Engineering and Development Centre (WEDC) Conference in Ghana in July.



*Students receive IEC materials*



*Malio staff organise students in teams for handwashing games*



*IEC materials ready to be handed out to competition winners*

**2.1.2 Radio Activities**

Radio broadcasts continue to be popular with Fort Dauphin residents, especially the radio drama series depicting a family’s struggle with day-to-day sanitation and hygiene challenges. A new series, ‘Rahoviana vao tampakevitra’ (‘When you decide’), was developed in December and each episode continues to be aired twice a week. Table two shows the number of broadcasts over PY2 which have been aired across three radio stations.

To understand the reach and impact of our short slots and drama series on the radio, interviews were conducted with 345 people around Fort Dauphin in several fokontany in April. The interviews consisted of nine questions which were asked to a random sample on the street or by knocking on doors. The interviewees were 37% male (127/345) and 63% female (218/345).

The average age of the interviewees was 36 with respondents ranging from 12 to 90. Some of the key findings are as follows: 76% (263/345) of people interviewed had heard of Project Malio. 61% (209/345) of people had heard at least one short slot relating to sanitation and hygiene on a radio station. Of these 209 participants, 92% (193/209) stated that they had changed their behaviour due to the information they had heard on the radio. When asked what these changes were, the majority of participants’ answers related to improved hygiene behaviour and use of latrines. 96% (142/148) of those who had listened to the drama series identified at least one key hygiene and sanitation theme in the series. Answers included: open

Type of broadcast	Number aired over PY2
Community interview	130
Short information slot	821
Drama episodes	109

*Table 2: Total number of radio broadcasts over PY2*

defecation, latrines, improving hygiene, reducing illness, keeping areas clean. Of those stating correct themes and messages, 35% (50/143) stated one theme; for example, preventing open defecation. 65% (93/143) of people interviewed stated more than one correct theme or message from the series. 62% of those surveyed (215/345) stated that listening to the messages had changed the way they think about and their behaviour towards sanitation and hygiene issues. Figure 1 illustrates the different types of behaviour change identified.

To measure the reach of alternative Malio communication techniques, participants were asked whether they had heard of this information anywhere else aside from radio messages. 65% (223/345) of people surveyed had heard these sanitation messages from sources other than the radio, with IEC materials the leading source (43% or 150/345), including posters, billboards, leaflets and t-shirts as a source of information on sanitation messages. 13% (45/345) of those interviewed identified mass mobilisations as a source of information, while 27/345 (8%) people stated attending triggering or focus groups run by Malio Community Liaison Officers as a source of information.

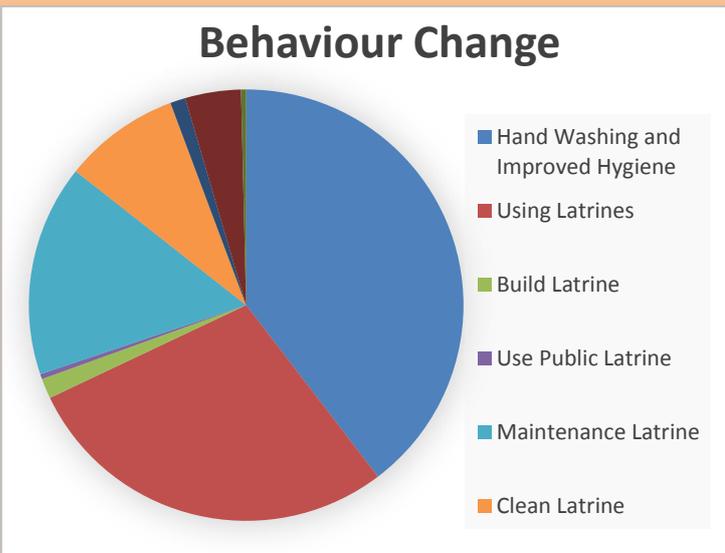


Figure 1: Reported behaviour change due to radio communication

2.2 Mass mobilisations

2.2.1 Partner Associations Mass Mobilisations

Alongside SEED Madagascar and ONG Azafady mass mobilisations, each of our partner associations were responsible for designing and implementing a mass mobilisation and activity plan as part of their final training assessments (see section 2.3).

Association des Surfeurs Avenir de Fort Dauphin (ASAF) designed and coordinated a three-day surf competition on Ampotatra beach – a well-known open defecation site – from 18th to 20th of March. The first day was dedicated to the clean-up of the beach followed by a two-day surf and dance competition. The event was attended by around 200 people on each day; mostly young people from Ampotatra fokotany. This is the second year that this event has taken place, providing ASAF with another opportunity to improve their communication and organisational skills.

*Fikambanana Ampotatra Miray Inina* (FIAMI) organised and coordinated a football competition as part of their project activities, which ran from 7th to 10th of April. The first two days were dedicated to cleaning the area of beach in Ampotatra, which saw over 30 people in the community mobilised to assist with the cleaning. This was followed by a two-day football competition interspersed with hygiene-related games. A total of nine teams from four different fokontany competed. This event was well attended, with over 250 people present on each day.

The three remaining partner associations; *Fikambananiny Tanora Ambinanikely* (FTA), *Fikambanana Ara Sosicely Tanambao* (FISOTA) and *Avotry* all chose to organise clean-up mass mobilisations within their fokontany. This involved engaging and mobilising up to 300 community members each to take part in the clean-up of each area, distribution of cleaning materials and monitoring and evaluating the impacts of the mass mobilisation activities. Sanitation and hygiene-related games were also played at each mass mobilisation to engage younger participants. Avotry Association also continued to manage and maintain the public latrine in Amparihy as part of their project activities (see section 2.7).



*Spectators gather round to watch the dance competition*



*Competitor in the surf competition*



*Children compete in WASH-related games*

### *2.2.2 National Schools' Day Mass Mobilisation*

National Schools' Day is an important event in the school calendar, held to celebrate the achievements of schools throughout Madagascar. This February, Project Malio played a central role in celebration activities and used it as a platform to raise awareness about good sanitation and hygiene practices. Celebrations were held at Tanambao CEG (secondary school) and included nine primary schools, two secondary schools and one high school. Activities included a hygiene quiz, a poster competition, handwashing games, and a puppet show. Winners of each activity were presented with Malio-branded IEC materials by Malio staff at a final awards ceremony at the end of the day.

A rapid catch survey assessing student’s knowledge, attitudes and practices (KAP) towards hygiene and sanitation was conducted with participants of the National Schools’ Day event. This survey was taken by 100 students and aimed to gauge whether Malio activities have impacted participants’ sanitation and hygiene understanding and practices. Below are some key findings:

<u>Student’s knowledge of hygiene</u>	<u>Student’s self-reporting on hygiene practices</u>
<ul style="list-style-type: none"> <li>Can flies spread germs from faeces to food? 83% said yes 17% said they did not know</li> <li>Do you think faeces contain germs/microbes? 84% said yes 16% said they did not know</li> </ul>	<ul style="list-style-type: none"> <li>Do you wash your hands after defecating? 99% yes 1% said sometimes</li> <li>When you wash your hands, do you use soap? 88% yes 6% no 6% no soap available</li> </ul>

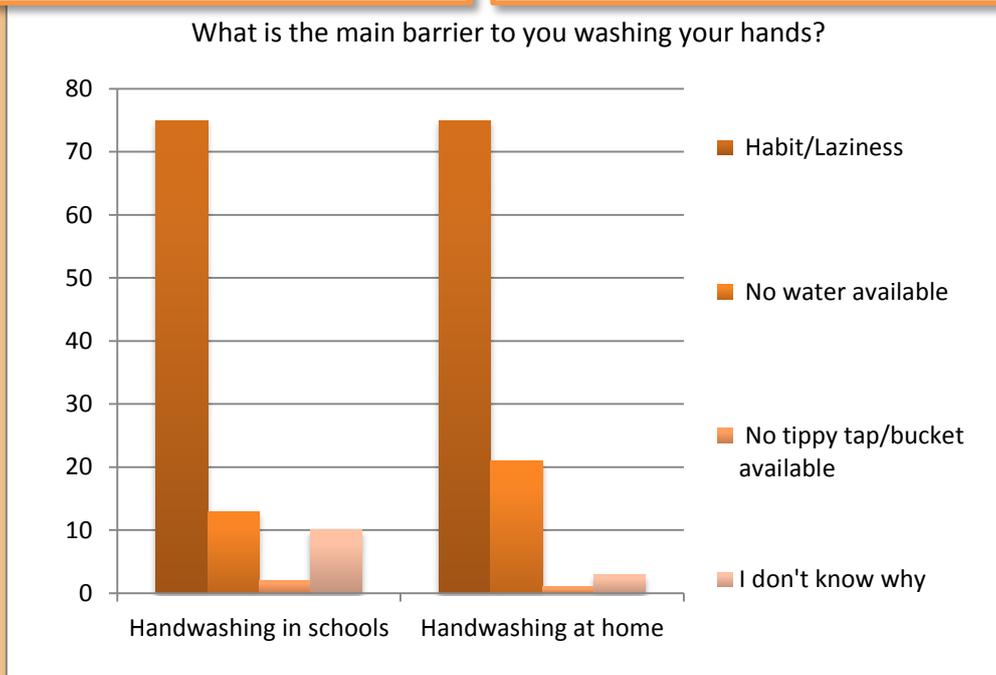
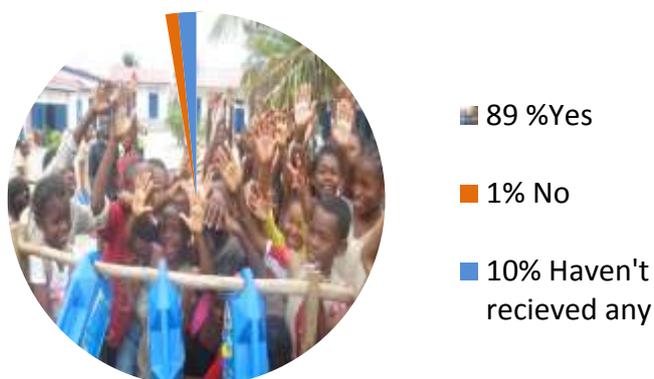


Figure 2: Student’s self-reported reasons for not washing hands

Habit or laziness appeared to be the main reason for students failing to wash their hands, yet only 1% of participants stated that they only ‘sometimes wash their hands’, and no students indicated that they never wash their hands at school. However, observations at several schools revealed that handwashing facilities were not available. Akin to international research on self-reporting on handwashing, this self-reported figure may be significantly higher than actual rates of handwashing due to the stigma attached to poor hygiene practices (Contezen et al, 2015). It is also possible that students may have felt uncomfortable identifying that their school is unable to provide basic facilities such as water for handwashing on a regular basis.

Encouragingly, 89% of students indicated that they had enjoyed Malio participatory WASH education sessions. A total of 10% of students interviewed indicated that they hadn't received any educational sessions; this may be because some interviewed students were outside of the educational session target age range.

### Did you enjoy Malio WASH education sessions?



### 2.3 Partner Association Professional Training and Evaluation

All partner associations have completed the 11 professional training sessions required of them over PY2 and, in general, have made great advances in their professional understanding and conduct. Comparable to the mid-term training evaluations, each association described themselves as 'very motivated' throughout the training, and rated the sessions as 'very useful' to the development of their associations as a whole. The Partner Association Mentor (PAM) conducted a weekly support session with each association over the 11 trainings, resulting in 55 sessions completed in total. Evaluations of each partner association completed by the PAM indicate that significant progress has been made.

Drawing on the successful structure of the PY1 evaluation of partner associations, a similar assessment session was held in January 2016 to measure partner motivation, understanding of the training and ability to transfer learning into activities within their communities. Each Partner Association was required to develop a communication plan and a detailed budget, write official letters to the commune, create weekly activity plans, explain their professional operating principles for the event, and write a report detailing the inputs, activities, outcomes, and impacts of their mass mobilisation. Each presentation was followed by detailed feedback and suggestions from Malio trainers as well as peer feedback from the other associations. Feedback was followed up by a support session from PAM and improvements to activity planning were implemented (see section 2.2.1 for details of partner association mass mobilisation activities).

Following partner association training, activities and the final evaluation, SEED Madagascar in collaboration with ONG Azafady, assessed whether it was suitable for each partner association to continue receiving project support and training into PY3. This decision was based on partner's motivation, ability to put into practice the training provided, and general professional conduct. As a result, ASAF (Association des Surfeurs Avenir de Fort Dauphin) will not be renewing their contract with SEED Madagascar. Avotry Association will have a limited contract which provides support and advice on the business unit and public latrine, but will not include financial assistance each month or participation in additional training. This is expected to

encourage Avotry towards more financial independence and reduce the reliance on SEED/ONG Azafady, allowing the Malio team to monitor and address any likely challenges surrounding the sustainability of the public latrine after project Malio has ended. FISOTA, FTA and FIAMI will continue to receive training and financial assistance each month. In PY3, Malio would like to explore the option of partnering with the Scouts; a very active group in Fort Dauphin with previous experience of sanitation and hygiene awareness-raising.

#### *2.4 Dissemination*

As Malio entered its second year, it was important that the achievements and lessons learned from the project were effectively disseminated to ensure the project could help inform both regional and international best practice. This has continued throughout PY2 with both online and conference dissemination opportunities taken at a national and international level. Within Madagascar, information and lessons from Project Malio have been shared regionally and also nationally at the annual WASH conference in Antananarivo.

At an international level, Project Malio was selected to provide a poster presentation at the WASH Futures conference in Brisbane, Australia in May 2016. SEED's Sanitation and Hygiene Specialist alongside ONG Azafady's Head of Community Health will be attending the conference to share the achievements and challenges of the project with the international WASH community. Additionally, an academic paper discussing the challenges and reflections on Malio's CLTS practices and IEC strategy (see section 2.1.1) has been accepted for presentation by the 39th Water, Engineering and Development Centre (WEDC) conference which will be held in Ghana in July 2016.

Furthermore, a selection of documents have been designed and disseminated to various WASH-related online communities and pages including the CLTS Knowledge Hub, Sustainable Sanitation Alliance forum (SuSanA), HeyZara, and IWA WaterWiki. Through these dissemination outlets, SEED has increased the profile of Project Malio and has enabled other organisations to benefit from the ideas and lessons learned from the project.

#### *2.5 School Activities*

Ongoing monitoring of each school's sanitation situation and teacher's participation in WASH activities indicated that not all staff were as motivated towards WASH in schools as hoped. For that reason, further teacher triggering and training was conducted in December to encourage and reignite enthusiasm for asserting WASH initiatives within schools. Training sessions were run by ONG Azafady staff in conjunction with the Ministry of Education, the Ministry of Water, Sanitation and Hygiene, and regional Diorano-WASH (WASH network) representatives. To assess the impact of this training, additional monitoring has been conducted within schools with a committee comprising of representatives from CISCO (the District Ministry for Education), DREN (the Regional Directory for National Education) and Diorano-WASH.

All primary schools have now received educational sessions on the three allocated topics – latrine maintenance, latrine use and hand hygiene – with a total of 7,048 students receiving Malio WASH education in PY2. Further to this, educational mass mobilisations with puppet

shows and hygiene quizzes were conducted at every participating primary and secondary school. A large mass mobilisation was also held at Tanambao secondary school to celebrate National Schools' Day (please refer to section 2.2.2 for more details on activities).

To monitor and evaluate the progress which schools are making towards the 'School Friend of WASH' status, a committee including regional and district representatives from the Ministry of Education, the Ministry of Water, Sanitation and Hygiene and the regional WASH network was established. This committee surveyed and carried out evaluations at each school, measuring against the official 'School Friend of WASH' criteria. Out of 17 schools partnering with Malio; two achieved Level II School Friend of WASH, nine schools achieved Level I and the remaining six were classified as having 'room for improvement'. All schools achieving Levels I and II were certified at a ceremony held in May.



*Students help build a tippy tap*



*Students participate in WASH education*



*Students wash their hands with a tippy tap*

## *2.6 School Latrine Provision*

Project Malio has supported the construction and refurbishment of three school latrines in the last six months of PY2. All school latrine refurbishments were chosen in line with the monitoring of the school maintenance and management plans. Schools able to demonstrate effective implementation of plans and significant improvements could be nominated and later selected for future construction activities. Lanirano Primary School, which has over 500 students, received a full refurbishment of one of their latrine blocks which was unusable due to the lack of doors, roof and general poor structural integrity. Once the refurbishment was finished, a mass mobilisation and hygiene-related puppet show was held (see section 2.7) next to the new latrine to encourage the proper use and maintenance of the building.

Tanambao CEG (secondary school) has only one toilet block with three cubicles to service its 1,599 students; it was therefore decided that, following monitored improvements to cleaning rotas, the school would receive a new toilet block with a further three cubicles and two urinals. Work commenced at the end of March and was finished by the beginning of May. Regular monitoring has shown that Tanambao CEG has significantly improved the cleanliness of school grounds since the beginning of the Malio project and open defecation is far less of a problem. The establishment of this new latrine will further support the improvements of the overall sanitation situation for the school.

The Lyceé Technique is a high school in Ampasmisay dedicated to providing vocational skills for 339 students. At the beginning of PY2, a monitoring visit indicated that the students were sharing two latrines with a busy English teaching centre next door. In December, teachers worked with the Head of Construction for ONG Azafady and the Sanitation and Hygiene Specialist from SEED Madagascar to design plans for a new latrine block. Once plans were in place, SEED provided the materials and under teacher supervision, the students constructed the latrine. This enabled students to practice building skills and have ownership over the design.



*Lanirano EPP latrine-before Malio construction support*



*Lanirano EPP latrine-after Malio construction support*



*Handwashing mural on Lanirano EPP*

In addition to these construction activities, and to support schools in achieving ‘School Friend of WASH’ status (see section 2.5), all schools were provided with lids for each latrine and waste bins for toilet paper. Lids guarantee that facilities are completely sanitised by providing a safe barrier between users and the faeces, also discouraging flies. Furthermore, the contents of the waste paper bins are burnt, reducing the potential for environmental contamination and preventing latrines from filling up too quickly. In total, 80 lids and 95 bins were distributed across the 17 participating schools.

### *2.7 Public Latrine Support*

The Amparihy public latrine continues to be managed by the partner association *Avotry Association*. Cleanliness of the public latrine is monitored twice a week and the average cleanliness rating for April was 1.5/5; with 1 representing “very clean” and 5 “very dirty”. The average score for the last six months of PY2 was 2. In total, 29,085 people have used the public latrine in PY2; the monthly user average was 2,424 with a daily average of 80. Difficulties have arisen with the business unit which supplies 50% of the rent to support the public latrine; no rent has been paid since January. *Association Fiasatagna*, who was renting the business unit, has moved out due to sand build-up at the door and difficulty of paying the rent. Fortunately, the public latrine has been well-maintained and does not require any refurbishments at the moment, therefore it has managed to sustain itself without the financial input of the business

unit. *Association Fiasatagna* is currently looking for alternative associations to rent the business unit and the committee is in talks to see how the current situation can be addressed in the coming months.

### *2.8 Sanitation Action Planning*

At the end of January, monitoring committees from each fokontany met with representatives from Diorano-WASH, the Ministry for Water and the municipal council to discuss the progress and challenges. Action plans were also presented and each committee received feedback from the ministry representatives. Each of the monitoring committees was presented with their identification lanyards, Malio-branded caps and t-shirts. This helped to bolster the visibility and motivation of the committee. Committee members found that many of the challenges they faced within their own fokontany were similar to those experienced in other areas of Fort Dauphin, and feedback revealed that the meeting was important for both morale and knowledge-sharing purposes. Progress of actions plans will be evaluated again in PY3.

### *2.9 Household Sanitation Support*

The second wave of construction was completed in the four target fokontany of Bazarikely, Ampotatra, Ambinanikely and Amboanato in February. Comprehensive audits confirm that the total number of beneficiaries using Project Malio latrines built in year 2 stands at 4571; this is broken down into 2130 people for the first wave of latrines, and 2441 for the second wave. This brings the number of people using Malio latrines to 7336 over two years; a great achievement for the project. In total, 409 out of 410 of the target latrines were constructed in PY2. Just one beneficiary had to stop construction due to disagreements with their neighbours who did not agree on the location. This social issue only came to light at the construction stage leaving little time to reallocate the latrine to beneficiaries on the waiting list. This latrine will be reallocated in PY3.

At the time of the latrine audits, 367 out of 409 latrines were fully-functioning. Although strict beneficiary criteria and household visits are in place to eliminate this issue, misunderstandings and misconduct of Community Liaison Officers (CLOs) have led to the duplication of latrines. This highlights the importance of the latrine audits which check results on the ground against collected data. Consequently, all CLOs will have an annual appraisal, which will see the termination of one contract following the PY2 appraisal. All correct policy regarding latrine allocation has been reiterated to CLOs and bimonthly management meetings are being conducted to ensure better management and monitoring of staff conduct. Since this audit, further monitoring has been completed which shows that the number of functioning latrines has increased to 397, with only 12 non-functioning latrines.

In total, 162 focus group sessions were completed with 409 beneficiaries, and 1597 household support visits were conducted by four CLOs. The process was completed over three months to consolidate learning and to give beneficiaries time to become accustomed to their new latrines and hygiene behaviour habits.

Participatory monitoring continues to be an effective way of encouraging beneficiaries to maintain and establish good hygiene and sanitation habits. As with first wave beneficiaries, participants are encouraged to rate the cleanliness and maintenance of each other's latrines over a three-month period. Beneficiaries who have maintained a rating of 'very clean' in all three monitoring visits receive a gold star rating and are presented with a small incentive in an official ceremony. This activity instils pride in the recipients and shame in those neighbours who have been rated poorly, and thus motivation is increased to either sustain habits or perform better in the following month. Although this could be completed over a shorter period of time, the three-month timescale was chosen with the knowledge that behavioural habits require at least 66 days to form (Lally et al., 2010), allowing beneficiaries sufficient time to establish positive sanitation and hygiene habits. In the second wave of beneficiaries 81/138 (58.7%) households in Amboanato, 13/39 (33.3%) households in Ambinanikely, 13/28 (46.4%) households in Ampotatra and 28/35 (80%) in Bazarikely received this Gold Standard, resulting in 56.2% of households receiving prizes in the second six months. This means that 62.5% of total PY2 (first and second wave of construction) households received peer-defined Gold Standard on all 3 components.



*A beneficiary stands next to her new Malio latrine*



*A resident shows their household latrine cleaning rota*



*A beneficiary uses his home-made tippy tap*

#### **4. Conclusion and Future Action**

Lessons learned from PY1 were extremely useful to the planning of PY2 activities and provided invaluable insight into potential problems. Activities and schedules were adjusted accordingly and it is clear that the Malio team have learnt a great deal about time management. However, construction fell slightly behind schedule again this year; this was due to adverse weather and employment changes with casual labourers which resulted in the retraining of other casual staff. This pushed the participatory monitoring sessions behind schedule, with 'Gold Star Award' ceremonies not held until mid-April. Even so, all project activities were completed before the end of the project year.

There have been some staff management issues in PY2 which threatened to have an adverse effect on project activities. Senior management understood that it was important to address these challenges quickly to ensure that morale of the whole team was not affected. As such, staff appraisals are currently underway and one staff member will not have their contract extended to project year 3. Furthermore, biweekly management meetings, in addition to more general weekly meetings, are now being conducted to ensure underlying problems are addressed. This has had a positive impact on communication and the flow of information within the team and has resulted in well-coordinated activities in the latter half of PY2.

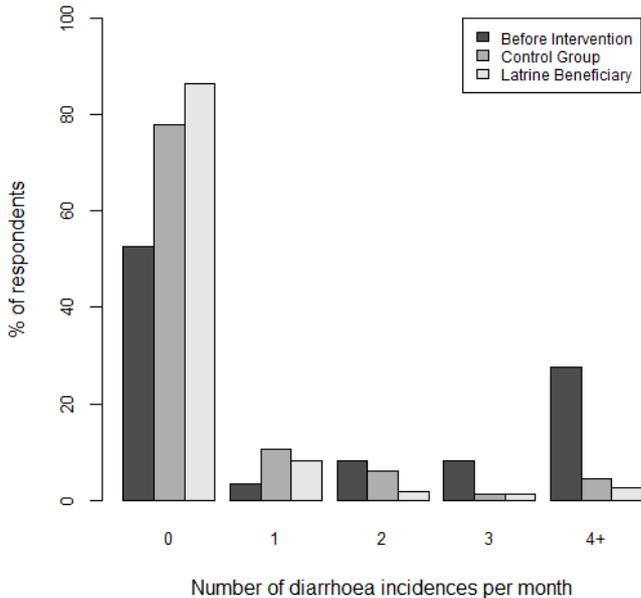


Figure 3: Self-reported incidence of diarrhoea

Figure 3 indicates the incidences of diarrhoea in under-fives; comparing data from the Malio baseline survey (before intervention), households who have not received latrines from project Malio (control group) and Malio latrine beneficiaries. It is evident that households receiving latrines from the project reported significantly less incidences of diarrhoea than participants surveyed at the baseline and those without Malio latrines and education, and were more likely to report no diarrhoea at all. The control group consists of randomly selected Fort Dauphin residents who may have benefitted from other town-wide

Malio activities such as radio broadcasts, mass mobilisations and non-beneficiary focus groups. This may indicate why the number of reported diarrhoea cases is also less in this group; a great result for the wider impact of the project.

As Project Malio enters its third and final year, the team can reflect on its substantial achievements in providing sanitation hardware, igniting behavioural change to use these facilities, and leading community discussions on the detrimental impact of open defecation. The last six months of this project year has not been without its difficulties, with some activities experiencing challenges and setbacks. However, Project Malio continues to make a significant impact on both direct and non-direct beneficiaries throughout Fort Dauphin.

## 5. References

Contzen, N., De Pasquale, S. and Mosler, H. (2015). Over-Reporting in Handwashing Self-Reports: Potential Explanatory Factors and Alternative Measurements. *PLOS ONE*, 10(8), p.e0136445.

Lally, P., Vanjaarsveld, C. H. M., Potts, H. W. W. and Wardle, J., (2010). How are habits formed: Modelling habit formation in the real world. *European Journal of Social Psychology*, 40(6), 998–1009.

Wateraid Madagascar, (2013). *Synthèse des résultats de la recherche formative: Projet Latrines PIC Fort Dauphin*. Antananarivo, Madagascar: WaterAid Madagascar. (French).

World Health Organisation (WHO), 2016. Water-related diseases. [online]. Water Sanitation Health. [viewed 9 February 2016]. Available from: [http://www.who.int/water\\_sanitation\\_health/diseases/diarrhoea/en/](http://www.who.int/water_sanitation_health/diseases/diarrhoea/en/).

World Health Organisation (WHO)/UNICEF Joint Monitoring Programme for Water Supply and Sanitation, 2014. Progress on Drinking Water and Sanitation – 2014 update. Geneva, Switzerland: WHO. Available from: [http://www.wssinfo.org/fileadmin/user\\_upload/resources/JMP\\_report\\_2014\\_webEng.pdf](http://www.wssinfo.org/fileadmin/user_upload/resources/JMP_report_2014_webEng.pdf)