



seed **madagascar**

sustainable environment, education & development



Project Tatirano

Increasing access to clean drinking water in rural southeast Madagascar via household rainwater harvesting

A progress report for The Travers Cox Charitable Foundation

December 2018

Over 2 million litres of clean water right on the doorstep!

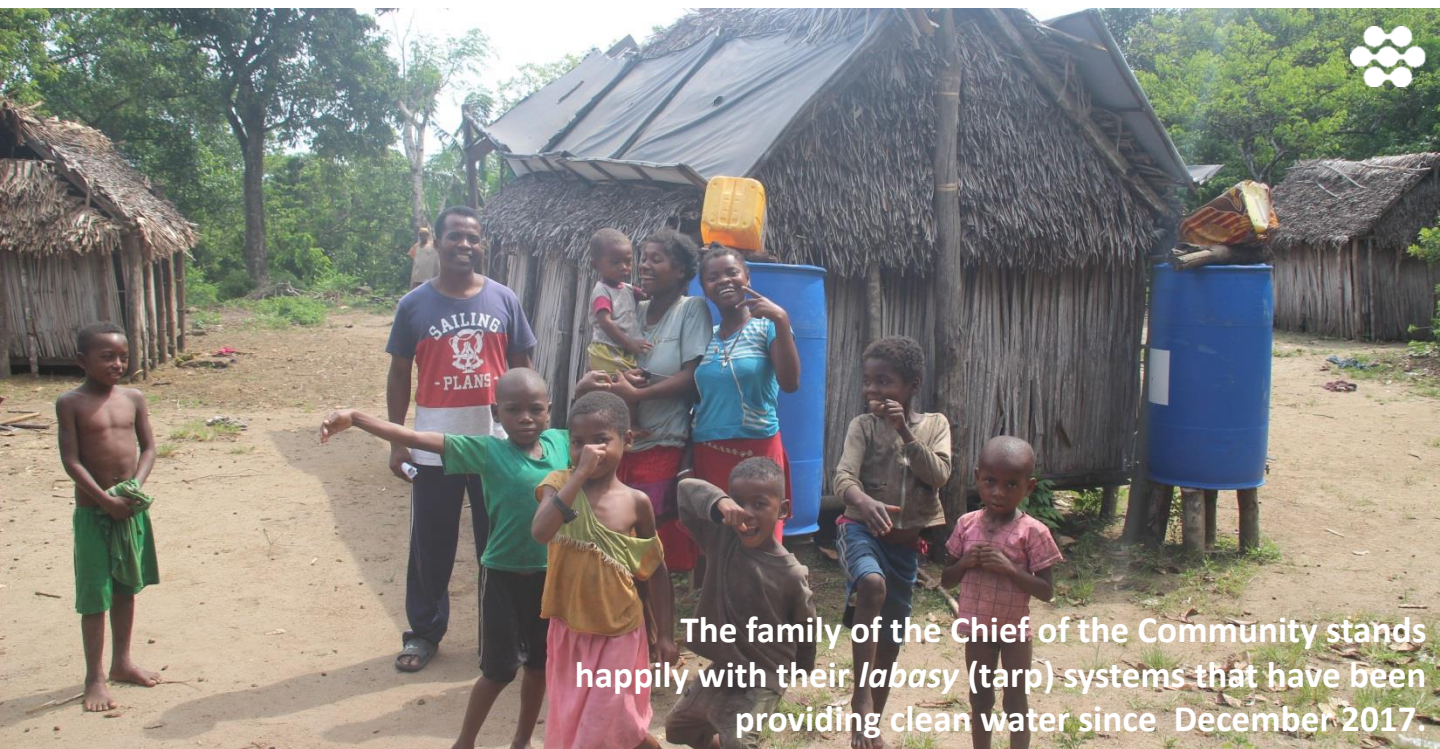
Project Tatirano has, so far, brought water to the homes of 610 people across 10 communities and delivered 191 education classes. Using an average roof area, this means that Tatirano now has a collection potential of over 2 million litres each year. Interviews and informal anecdotal evidence suggest that in reality, far more people have access to the water, as up to four families (20 people) use a single system.

To ensure long-term functionality of the new water source, two approaches have been used: education and local expertise. So far, 191 classes have been delivered to beneficiaries in system maintenance and management as well as good WASH knowledge, attitudes and practices. In 2019, beneficiaries will attend group sessions where individuals can learn from each other to adhere to, and carry out, good WASH practices. The second methodology used was the training of nine RWH Specialists in each of the communities to ensure highly skilled maintenance is available for beneficiaries to access easily and locally.

Another key result from the project to date is that recent water testing demonstrated that systems are supplying a median of CFU* 3/100 ml (WHO categorised low-risk) in contrast with alternative sources such as a stagnant river, which tested CFU>1000/100 ml (WHO categorized very high risk). The systems have also contributed to a reported improved standard of living for beneficiaries who can now conveniently access clean water at home, removing the need to walk for hours each day.

With high system functionality, positive water testing results and no defaulted beneficiaries, it is clear that the project has struck the imagination of many people across many communities. Even communities outside of the current target region have requested systems and future developments will seek to serve this demand.

*CFU is a (bacteria) colony forming unit and the WHO guidelines for drinking water suggests CFU 0/100 ml.



The family of the Chief of the Community stands happily with their *labasy* (tarp) systems that have been providing clean water since December 2017.



Brilliant (second from left) and his colleagues proudly receive their Tatirano RWH Specialist certificates on graduation day in the SEED office, Fort Dauphin.

Welcome to the team!

In order for people to have access to skilled expertise in their community, Tatirano trained nine part-time RWH Specialists in the repair and maintenance of their Tatirano systems.

Why did you agree to become a Tatirano RWH Specialist?

I wanted to help to take care of people's health in the bush and improve the access to drinking water in my community.

What are the most common problems with the systems?

The labasy (tarp) roof systems sometimes get ripped with the wind but we are replacing them with a new fixing technique. Some people also contact us because they break the tap, but we are teaching people to treat the system more carefully.

Are you satisfied with the training received?

Do you think this could be improved for the future?

I am happy with the training and so are my colleagues. Thank you SEED for the training. We haven't worked completely on our own yet. I think we have to start doing the work alone with the supervision of our trainer to find out if we need to improve any aspect of our work.

Would you consider getting a system in the future?

I also volunteer at the church and I would like to have a Tatirano system there for the community. However, I don't live in the church but far away and I am afraid I won't have time to take care of the system.

Are you satisfied with the water sources in your community?

There is a well in my community but the water is dirty. Tatirano provides cleaner water because it is from the rain. Also, with the first flush system and the lamba (cloth) around the jerrycan the water doesn't get dirty. I would really like everyone in the village to have a Tatirano system and to think about it as a system that provides clean water.



Aligine with her husband and three of her children.

“We don’t have stomach ache anymore!”

Aligine is 32 years old and lives in Belavenoky with her husband and four children. Aligine only recently signed up to the project.

Why did you buy a system?

It is good to get clean water from the rain so I don’t need to walk to the big river.

Why didn’t you sign up at the beginning?

I did not have the money but I saw Tatirano was a good thing so I saved the money from selling mahampy (straw) mats and rice and cassava when the crop season arrived.

What sort of things do you use water from the Tatirano system for?

I feel that the water from Tatirano is very clean, better than the river where I was collecting before, so I use it for drinking, cooking and washing. When it is raining a lot, my neighbours come and collect water too.

What do you do to look after the system and make sure the quality of water is good?

We wash the tank every two months and the jerrycan every week with soap and a sponge and I also make sure the kids don’t play with the tap. Mamonjy taught us how to take care of it when the system was installed. When I collect water, I cover the bucket to protect it against flies.

Do you know you have Tatirano RWH specialists in your community that can assist you with any problems with your system?

Yes, it was explained to me that I should contact Brilliant or Mara if my system breaks, I know they were trained in Fort Dauphin.

Do you feel any different, health-wise, after using the water from the system compared to your other sources?

We don’t have stomach ache anymore, the kids are healthier and they can wash their hands before eating because the system is on our doorstep.

Aligine and her family are using Tatirano since August 2018

Challenges and solutions

To date, the project has proven to be hugely successful in terms of system functionality, public perception, the zero collateral and zero interest loan repayments and future scalability. However, these successes are only a result of rigorous planning, research and in a lot of cases, trial and error.

One area that continues to provide the construction team problems is the fragility of the *labasy* (tarp) systems at certain sites. Some houses are situated in particularly exposed locations where winds can frequently gust up to 60 kph. This has caused some systems to rip away from their wooden frame, making them incapable of collecting water. As a temporary micro solution, the design has been altered to use more material at each pressure point on the frame (the nail) and using more nails to spread the load. In the future, a move towards improving access to financial services could allow families to build with more durable materials such as metal corrugated roofs, achieving more long-term functionality.

In order to ensure that problems associated with individual systems are being communicated to the team for repairs, monthly system checks are recorded. This information forms an intricate part of the knowledge gathering for the evaluation and learning to inform the next phase.

Another continued challenge has been the ownership of the school system in Ambandrika built in 2016. Misunderstanding of responsibilities coupled with problematic individuals monopolising the system for themselves has led to the benefit of the system not being maximised to its full potential. To overcome these issues, the team has motivated the local village chief to take on responsibility of delegating the system for community use. With local direct leadership and authority over the system, the previously trained committee has already begun to prepare the system for heavy rains due in early 2019. Furthermore, with a Tatirano-trained RWH Specialist living in the village, the committee are well equipped to ensure long-term provision of clean water for the entire community of 750 people.



Tatirano Community Liaison Officer, Mamonjy delivering the first education class to a family after installing the system.



A beneficiary washing the jerrycan of her Tatirano system after the rain.

The future of Tatirano

Despite significant challenges in the monitoring and collection of 864 repayments over 10 widespread communities and unforeseen technical issues, the Tatirano team remains committed to increasing access to clean drinking water throughout the Anosy region.

Tatirano Phase II is scheduled to last until June 2019. The main activities for this period will be:

- The installation of the remaining 12 systems;
- The delivery of 103 education classes on maintenance, management and WASH;
- The collection of 431 payments across 10 communities; and
- The collection of the final endline evaluation data and the accompanying analysis and publication.

The team will also be developing a new phase that will aim to build upon the success of the project to date and continue to reach the growing demand for RWH in both the rural and urban areas of the Anosy region. An improved system design and a more efficient and robust accounting mechanism will be of high importance for future scaling and replication.



Thank you!

The whole team at SEED Madagascar thanks you on behalf of everyone that Tatirano has reached and continues to impact with clean water. Without your support, rainwater harvesting would not be a solution for thousands of rural Malagasy people. As always, if you would like more information about the work that SEED does, please visit our social media and website, or reach out to Mark Jacobs at the London office.

mark@seedmadagascar.org

+44 (0) 20 8960 6629



seed madagascar
sustainable environment, education & development

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

Web: madagascar.co.uk

UK Charity No. 1079121, Company No. 3796669