



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

June 2018

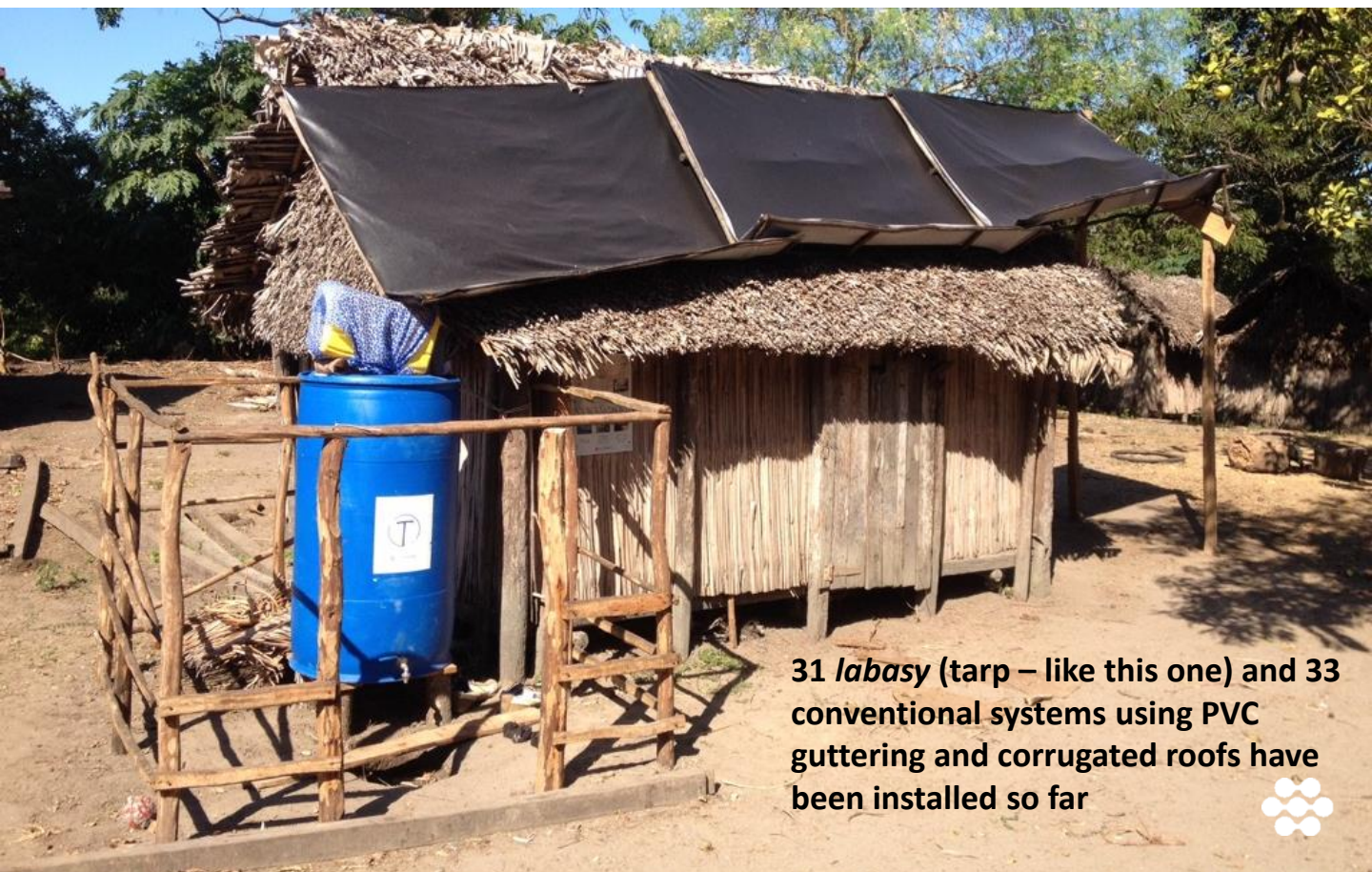
64 systems installed across 8 communities

Six months after the roll out period started in September 2017, a total of 20 rainwater harvesting (RWH) systems had been installed at 15 households. This number was significantly lower than had been originally anticipated. Reports from field-based project staff indicated that the primary barrier to sign up was the price of the systems (160,000 Ar repayable over six months without interest or collateral) and the demand for systems at this price had been met.

The pricing and repayment structure for Tatirano RWH systems had been originally designed to reflect the true costs of the manufacture and thereby indicate the feasibility of a sustainable, independent RWH business. Recognising that RWH in its current design did not represent a viable business model in rural areas, a decision was taken to redesign the pricing and payment structure to maximise the reach of the systems and more accurately test the effect of clean water at the home. This decision was informed by learning from early plans, in particular that demand for systems at a lower price was high and that the systems were functioning effectively.

The price has therefore been reduced to 75,000 Ar and 60,000 Ar for the systems with metal and *ravinala* (thatched) roofs respectively. Whilst the current price accounts for a project paid subsidy of approximately 70% in comparison with 43% before the restructuring, it is still a significant investment for beneficiaries, representing up to 27% of annual income in some villages.

Within just nine days of the change in price the remaining 44 systems in stock sold out, with each household paying an initial 10,000 Ar (~£2.50). Currently, there are 64 household RWH systems installed and 54 new families on a waiting list. Beneficiary interviews have indicated that as many as four families have been using each system for their drinking and cooking needs. This could mean that instead of the current 291 direct beneficiaries that are living with a system, a real total of beneficiaries across the 64 systems might be more than 1,300 people.



31 labasy (tarp – like this one) and 33 conventional systems using PVC guttering and corrugated roofs have been installed so far





A proud family stands with their new source of drinking water that is free from harmful contaminants that makes them ill.

Happy World Women's Day!

How long have you been collecting water from Tatirano?

"We have been using the system for a month and a half; it was a gift from my husband on women's day."

And how did you come to know about this method of collecting water?

"We saw the advert about the project and decided to get one of our own in order to contribute to the development of the town."

How long did it take you to decide?

"We decided together. We said, as we both work here as guards, why not? We will be a reflection – like the sunlight reflects on us – our system will be reflected on people – for people. [To promote rainwater harvesting.]"

When you had decided [to sign-up], what change did you expect in your life?

"We would like to benefit from the progress in technology. Also, our children are planning to get one of their own very soon; we encourage them to do so. We can use the water to do the washing up and to wash our hands before eating."

What benefits did you get by using it?

"As a result we have plenty of water that we can use and the reserve [tank] is refilled every time that it is raining."

A family in Mahatalaky, April 2018

Rainwater harvesting is the clean alternative

When you initially decided to get the system, was it a difficult decision to make?

"It was so easy for the two of us. My husband retired from Amboanato Hospital [in the local town of Fort Dauphin] and we decided to live in the bush and to leave the children in Fort-Dauphin. When we arrived here, we found Tatirano.

"First of all, drawing is tiring for old women, wells are far and water is not clean because we use a common well and there are little children who draw with us and they wash their feet. The unclean water pours into the well. My husband got upset because, as I said, he was a doctor and he does not like it.

"So I said: 'what can we do, this is life in the bush, we don't have a tap to provide water so we need to live with what exists.' And so we boil water when we want to drink. We have our grandchildren living with us and when we want to drink, it is that same boiled water that is drunk by these children."

What do other people think about your Tatirano system?

"There have already been 3 people who have discussed it with me but although they would like it, the cost is too much for them. The farmers say that it is unaffordable because it needs to be paid every month and they only get money during harvest... every year for rice and every 6 months for cassava."

How long does the use of the water last for you?

"If the tank is filled, about one week."

How do you feel about the taste of the water and its cleanliness?

"[The water is] really clean and transparent, you can't see anything in it. And now he [husband] says that we no longer need to boil the water but can drink it straight [untreated]."

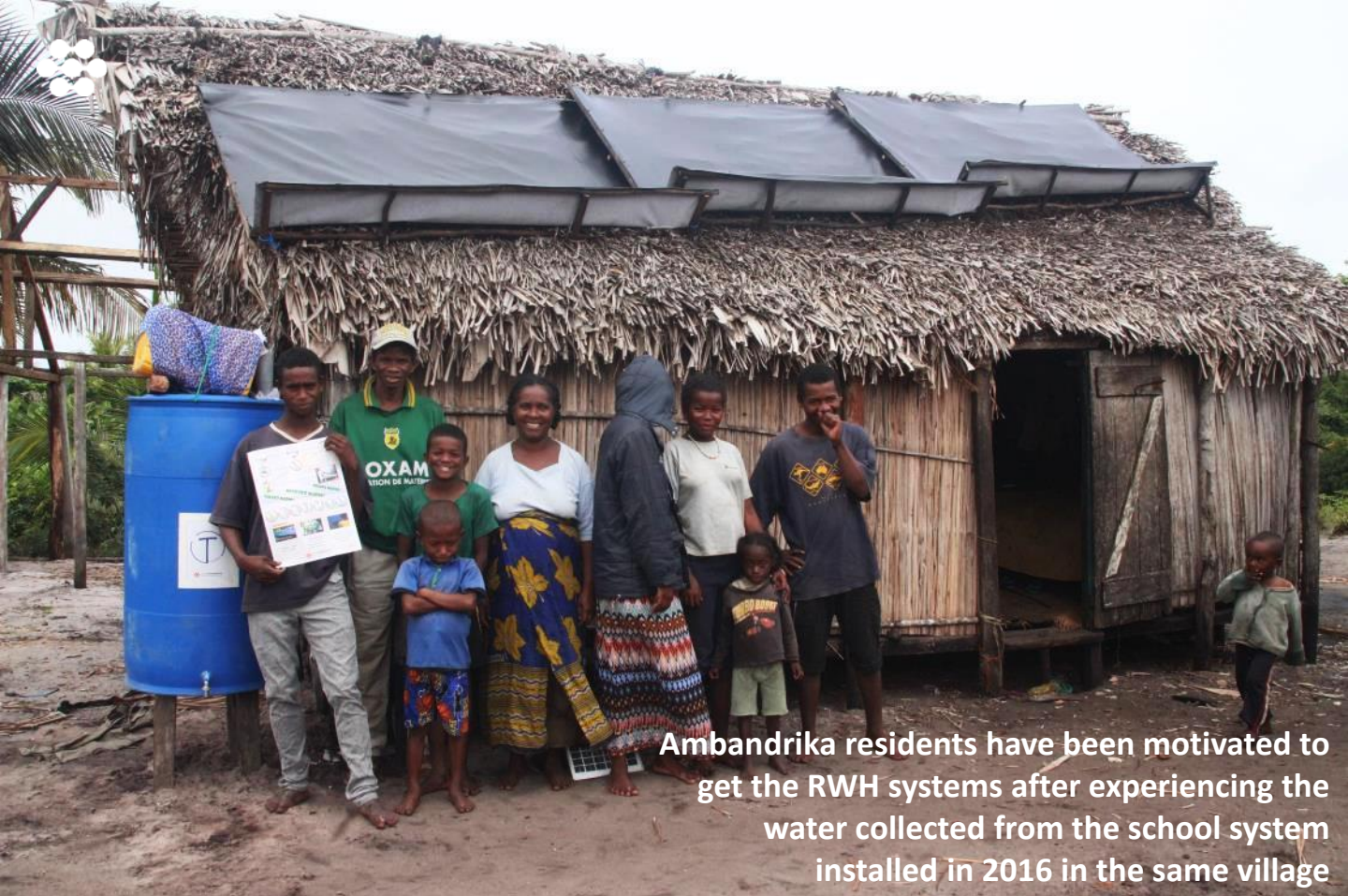
A family in Tsiharoa Ampasy, March 2018



Houses come in all shapes and sizes



and so every system is unique



Ambandrika residents have been motivated to get the RWH systems after experiencing the water collected from the school system installed in 2016 in the same village

For the children

What made you decide to get the Tatirano system?

"It was the health of our children. One of my grandsons died because of stomach ache and vomiting due to the dirty water."

How is the taste of the water from the river?

"It stinks of mud...even if this water under the bridge looks clear, it is dirty because it is from the mountain."

Didn't you lose all your money buying this?

"We don't feel like we have lost money because now we have clean water."

How many people are using it?

"Usually only us in this home but when it rains heavily and the tank is full, all of us, the three neighboured houses here collect the abundant water into cooking dishes, buckets and jerrycans to prevent the water from overflowing. Also, people are drinking from here."

How do you make sure that the water is clean?

"Every month we wash the lid and then rinse the tank. We shake it and wash the lid of the tank, the tarp and bucket. When there is residue at the bottom of the tank, we clean it out."

A family in Belavenoky, April 2018



A system in Belavenoky has been providing clean water since early December 2017

The future of Tatirano

The project was scheduled initially to last until December 2018, installing 200 household RWH systems across eight communities. The budget planned for a 100% project-paid subsidy per system for 200 systems, and whilst the real cost of the materials including labour and transport is higher than originally planned, there will still be a considerable underspend at the current end of the project.

In order to maximise the proven potential of RWH in the region, the project could seek a six-month, no-cost extension to June 2019. This would allow for the continuation of system installation to initially reach the 55 new families that have signed onto a waiting list, including two new communities. Additionally, the evaluation of the project would greatly benefit from gathering data over more households across a longer time period. Upon the completion of the project, the research will be shared through international publication to other actors in the field and inform decision making about similar interventions in Madagascar and abroad in the future. Current projections indicate that this extension could reach a total of 150 households depending on continued demand.

However, any extension of the project in its current form is dependent upon two factors:

1. The continued ability of beneficiaries to repay on their plans across different seasons which directly affect income;
2. Acceptable levels of operation and maintenance of systems demonstrated among the households who signed up at the new, reduced pricing level.

The decision on the continuation of installations and the future of Tatirano will be made in August following the successful repayment from beneficiaries in June and July.

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.

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