

# Agenda for Change Systems Strengthening Research

## RANO WASH



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## EXECUTIVE SUMMARY

The Agenda for Change Global Hub supports its members to deliver systems change and document and share their experiences in the water, sanitation, and hygiene (WASH) sectors. As part of this overall effort, the Hub contracted a team from the Springfield Centre and Aguaconsult to test an approach to assessing systems change by applying it to three WASH cases. This case tests the approach by applying it to the Rural Access to New Opportunities in Water, Sanitation and Hygiene (RANO WASH) project in Madagascar, which is being implemented by three Agenda for Change members – CARE, CRS, and WaterAid – and two private sector members, Sandandrano and BushProof.

### Approach

Programs that try to facilitate systems change do not solely intervene directly to improve service delivery – for example, by digging wells or building toilets. Instead, they focus on addressing the underlying factors and system actor behaviors that have prevented the system from working well. The idea is that if the performance of key system factors – things like finance, monitoring, coordination, and information – can be improved, it will lead to improvements in WASH service delivery levels.

There are two ways of improving the performance of key system factors. One is a program doing something themselves to directly improve the performance of a factor, whilst the other is trying to get permanent public, private, and civil society system actors to change their behaviors to enable better factor performance. To achieve more sustainable change, most system change programs take the latter approach. In effect, this leads to a chain reaction of performance and behavior changes: a program's support leads permanent system actors to change their behavior, which improves the performance of key system factors, which in turn triggers further behavior changes, which improves service delivery.

The approach being tested analyzes the behavior of actors and the subsequent performance of factors defined in Box 1.

It addresses five key questions which together tell the story of how effective systems change programs' work has been. It captures the **depth** of key system changes by assessing how *much* performance has changed (both in key system factors, and at service delivery level). It captures the **sustainability** and **scale** of system changes by assessing the ownership, scale and resilience of the behavior changes that drove performance changes. Finally, it assesses **attribution** by examining the relationships between changes, and by looking at what else might have caused the changes that occurred.

**Behavior changes:** changes across different actors in the system to interrogate who does what, and how they do it.

**Performance changes:** changes to the quality, quantity, price, productivity, timing, or inclusivity of the resources needed for the system to work well and services to be delivered. Here, resources are defined broadly to include things like information, relationships, and skills as well as more tangible resources like products, assets, and finance. Thus, a performance improvement means that whatever is provided is *better* in some measurable way.

*Box 1: Definitions of behavior and performance change*

### Findings

RANO WASH is a \$33 million USAID-funded project implemented by Agenda for Change members CARE, CRS, and WaterAid and two Malagasy private companies, BushProof and Sandandrano. The six-year project is organized according to three strategic objectives: 1) improved governance and

monitoring at national and sub-national levels; 2) increased access to water and sanitation through public-private partnerships, and 3) increased practice of good hygiene behaviors and use of WASH services.

This case study focuses on assessing the system changes achieved based on a subset of factors in the strategic objective area for increasing access to water, namely i) **management models for service delivery**; ii) **information and skills to procure and manage a delegated service provider**, and iii) **finance** for new water supply infrastructure development. These factors have been prioritized because an initial review of RANO WASH's work suggested that much of the system changes that have already occurred *and* can be logically mapped against a theory of change to contributing to improved service delivery levels, have resulted from these areas.<sup>1</sup> Moreover, it uses the Atsinanana region as illustrative because of the relatively high performing service delivery outcomes after several years of implementation compared to other regions in which RANO WASH operates.

According to baseline data, 13.5% of people had access to basic drinking water sources in Atsinanana<sup>2</sup>, with just under 1% having access to safely managed services. 28% of infrastructure was not functioning and payment for water services was practically nonexistent. The 1999 Water Code and ensuing decrees formally allowed for two types of management models for rural service delivery – community-based management and delegated private sector management. In Atsinanana, only 26% of water committees were considered functional, and there was no systematic support for community managed water supply schemes in Madagascar.<sup>3</sup> One strategy to address this has been to encourage private sector participation in managing infrastructure, and thus, various development partners over the last 20 years have promoted domestic private sector operators. As of 2018, the Ministry of Water and Sanitation reported that 46 of 1,695 water schemes nationwide, or approximately 3%, are operated by private service providers.<sup>4</sup> In the Atsinanana region, prior investment from RANO WASH consortium partners contributed to 10% (9 of 90) of communes having a private manager.<sup>5</sup> The ability of local government to procure and manage a delegated contract was very low and only one example of a private operator investing equity in infrastructure was found.

To increase the number of households using basic and safely managed water services, RANO WASH carried out a range of activities with public officials at national and sub-national levels, potential private operators, and future consumers to increase the number and diversity of service delivery management models for rural water services, provide information and training on how to manage such contracts, and advocate for increased private investment through a 'co-invest, build, and operate' model. All these activities led to three key behavior changes in public agencies and private companies.

Firstly, communes, or local governments, tendered for private operators to implement the new management model of 'co-invest, build, and operate'. Selected private operators then partially invested in the new infrastructure they would subsequently manage, and, with support from RANO WASH, marketed new connections. The scale of these behavior changes was found to have reached the intended number of communes with viable areas for private water operators in Atsinanana. Signs of ownership and resilience of the three behavior changes, however, were mixed.

Behaviors of key actors and the subsequent performance improvements in the factors assessed – management models, skills, and finance – have all contributed to behavior changes at the service

delivery level. Simply put, more private operators supply water services, and more customers pay for and use basic or improved water services for all their water needs. From a baseline of nine communes with private water operators, an additional eight have entered ‘co-invest, build, operate’ contracts. This has led to over 66,000 people accessing basic or safely managed services, and nearly four hundred outstanding connection requests. The behavior change of private water operators was assessed to have reached relatively good scale, whereas their technical and financial capacities to continue to supply services without further support from RANO WASH was less certain. Challenges also remain regarding the key consumer behavior change of paying to connect and use piped water, both in terms of reaching a greater number of users and sustaining the promotional processes and financing that enabled those who have connected.

We agree with the midterm review team who stated that *“there is no doubt that RANO WASH’s efforts have led to an increase in access to water supply and sanitation services, particularly with regard to water supply”*, particularly through *“popularizing and operationalizing the PPP approach.”*<sup>6</sup> However, this study indicates that RANO WASH’s influence goes beyond co-financing for infrastructure. By reconstructing a theory of change and examining the evidence available, our findings suggest the project has positively contributed to some changes in the eco-system of factors necessary to improve service delivery arrangements, information, and finance, that then led to increased access for tens of thousands of Malagasy people. Reviews<sup>7</sup> and the team itself recognize that RANO WASH capitalized on the prior work of other development partners, such as the World Bank, GRET, UNICEF, and the EU, to value continuity while also refining the contracting and procurement processes. In addition, RANO WASH’s predecessor project, RANO HP, was the first USAID investment that explored the concept of privately managed water supply schemes, albeit at a much smaller geographic scale and with less emphasis on systems strengthening. Lastly, it appears that several of the businesses benefiting from RANO WASH’s interventions leveraged skills and experience gained from earlier development projects.

A few aspects of the project approach are important to highlight as key contributors to the systems changes achieved. RANO WASH has demonstrated that working simultaneously at national and sub-national levels is feasible and delivers results, particularly in the context of a service delivery option that requires not just approvals at multiple administrative levels, but the skills and information to manage a more complex service delivery arrangement. Working at multiple levels of the water ‘system’ is a key tenet of systems strengthening as it directly addresses the inter-related nature of factors and actor behaviors that are required to be in place, not only at the level at which services are delivered (i.e., the water supply scheme run by the new private operator).

Another dimension is the time required to achieve both changes in the system factors targeted by RANO WASH and the subsequent service delivery improvements. Although RANO WASH has a six-year duration, it builds on prior work by both individual organizations on some of the key factors, even if they were not articulated as such, and past USAID investments in supporting private sector participation in managing water services. Given the extremely low levels of service delivery and challenging context in Madagascar, more time, rather than less, will be required to sustain and expand those changes. Timelines of a decade or more are in line with international good practice of how systems change evolves over time.<sup>8</sup>

The consortium structure leverages the experience of three different Agenda for Change members, as well as two private businesses, offering an example of collective action by design. Beyond consortium

collaboration, RANO WASH's approach, as mentioned above, of working simultaneously at multiple government levels has been a key success factor in this case. The limited extent of decentralization in Madagascar and the legal implications of a delegated management contract itself, requires RANO WASH to work at national, sub-national, and local government levels. Given the involvement of all three parties in the tendering, approval, and management of such contracts, coordination and collaboration is not a nice to have, but a fundamental factor that is essential to success in this case. Although commune level universal coverage was not an explicit goal of the project, RANO WASH still has devoted considerable effort at addressing overall water governance at multiple levels and trying to strengthen the relationships between different agencies at commune, region, and national level. This goes beyond supporting communes to tender and supervise private operators and seeks to equip local elected officials and technical staff with the skills and information they need to be able to budget, plan and monitor all water and sanitation-related activities in their jurisdictions.

In summary, RANO WASH's work to facilitate privately managed water services in the Atsinanana region has demonstrated that working to change behaviors of local actors to improve key factors in the WASH system contributed to improved service delivery for 66,000 people to date. The changes in management models for service delivery, skills, and information on managing a delegated contract, and finance for new infrastructure development facilitated by RANO WASH, have a clear and evidenced link to improved water services for previously unserved households.

## **1. INTRODUCTION**

The Agenda for Change Global Hub supports its members to deliver systems change and document and share their experiences in the water, sanitation, and hygiene (WASH) sectors. As part of that overall effort, the Hub contracted a team from the Springfield Centre and Aguaconsult to test an approach to assessing systems change by applying it to three member organizations' work – WaterSHED in Cambodia, Water For People in Perú and to the RANO WASH consortiums' work in Madagascar.

The approach being tested has been adapted from practices applied in other sectors measuring systems change.<sup>9</sup> The analysis includes an analysis of system changes over time including what has changed, looking at 'actor behavior changes' and 'factor performance changes', and why changes have occurred. In addition, the analysis considers the links between program activities, external influences, actors, factors, and service delivery levels. It also assesses the depth, scale, and likely sustainability of changes. This is the third of three case studies, specifically focusing on the contributions made by the RANO WASH project (which is implemented by Agenda for Change members CRS, CARE, and WaterAid), towards system change in the rural water system in Madagascar. The water service delivery system is defined as the supply of drinking water by private operators to households. However, the analysis considers which other key factors have contributed to service delivery changes and where risks remain.

The objective of the assignment is two-fold: firstly, to analyze and document the extent of systems change in the case of RANO WASH, and secondly, to assess how useful the methodological approach of the study is for analyzing program contributions to WASH system changes, by showing the links between its system strengthening efforts and improvements in service delivery levels. A further piece of work will synthesize lessons learned across the three cases and provide pragmatic guidance for

Agenda for Change members on approaches to system strengthening and how to use the methodological approach in their own programs, based on what has been learned.

### 1.1. RANO WASH project

The \$33 million USAID-funded RANO WASH program seeks to increase equitable and sustainable access to WASH services to maximize impact on human health and nutrition and preserve the environment in 250 rural communes of the Alaotra Mangoro, Amoron'i Mania, Atsinanana, Haute Matsiatra, Vakinankaratra, Vavovavy and Fitovinany regions of Madagascar (Figure 1). At the time of analysis, infrastructure investments by RANO WASH have been completed or are underway in 87 of the 250 communes of operations. The six-year programme (2017 – 2023) builds on prior investments by USAID into improved water and sanitation services. It is a large program, with over 350 staff working in six regional offices and a central coordination unit in Antananarivo.<sup>10</sup>

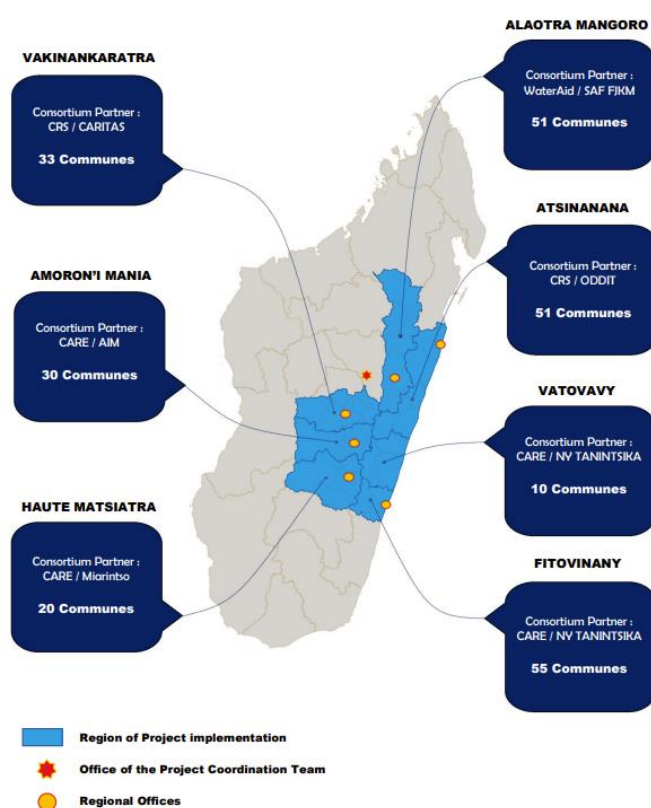


Figure 1: RANO WASH regions of operations

RANO WASH has three strategic objectives (SO):

- SO 1) To support governance and monitoring at national, regional, and communal levels for sustainable WASH services;
- SO 2) To increase access to water and sanitation supply through supporting private sector capacity and public-private partnerships for sustainable water and sanitation supply across several regions in Madagascar; and
- SO 3) To increase good hygiene and sanitation behaviors by identifying and addressing multiple behavioral determinants.

## Focus for this case study

RANO WASH is an extensive project, thematically and geographically, and thus, a first task was determining the scope of the case study. The following metrics were used to prioritize a sub-objective of strategic objective 2 – the supply of water services by private operators in the Atsinanana region:

- Highest performing region in the self-assessment of ‘systems strengthening building blocks in service delivery’,<sup>11</sup> which is reinforced by service delivery progress to date.
- Opinions of the external midterm review that the private water operator workstream has been the most influential and most attributable of the projects’ extensive activities.<sup>12</sup>

Within the SO 2 workstream, this case study will focus on assessing the system changes achieved by investigating three aspects, which are i) **management models for service delivery**; ii) **information and skills to procure and manage a delegated service provider**, and iii) **finance** for new infrastructure development. These factors have been prioritized because an initial analysis of RANO WASH’s work suggested that much of the system changes that have already occurred *and* can be logically mapped against a theory of change to contributing to improved service delivery levels, have resulted from these areas.<sup>13</sup> Systems are complex and evolve because of the interaction of changes across many actors and factors. Nonetheless, changes in some factors and by some actors are more significant than others (for instance because they are more widely adopted, or more sustainably adopted, or because they have a greater influence on other parts of the system). At this point in the process of increasing first time access to basic and safely managed water services, these three areas have yielded more significant changes than RANO WASH’s other activities, in systems change terms. They are also the ones about which the most information is available.

## 1.2. Approach

### Foundational concepts

The approach that will be tested to analyze system changes across two types of changes is as follows:

- **Behavior changes:** changes across different actors in the system to interrogate who does what, and how they do it.
- **Performance changes:** changes to the quality, quantity, price, productivity, timing, or inclusivity of the resources needed for the system to work well and services to be delivered. Here, resources are defined broadly to include things like information, relationships, and skills as well as more tangible resources like products, assets, and finance. Thus, a performance improvement means that whatever is provided is *better* in some measurable way.<sup>14</sup>

For the sake of this analysis, behavior changes and performance changes can be grouped according to the WASH system factors they relate to. For example, a performance change in the WASH system factor of *monitoring sanitation coverage* might be that better quality data is available in a timelier fashion. A behavior change in the same factor might be that a government agency starts conducting annual sanitation coverage surveys, run by appropriately trained staff members, and operating with reliable public financing to support the staff in these efforts.

Behavior changes and performance changes are related: behavior changes are desirable because they can result in performance changes. For instance, an NGO might support government to conduct better and more regular surveys of sanitation coverage precisely *because* it will result in better quality, more timely data – something that is needed for the system to work well. It may take several behavior



changes (across one or several factors) to cause one performance change, and similarly one behavior change might cause or contribute to several performance changes (in one or several factors).

Performance changes may also be caused by an NGO doing something in a system themselves. For instance, an NGO could conduct monitoring themselves, and this too would lead to better quality, more timely data. However, such a change would be much less likely to be sustainable, as an NGO would not be expected (or, likely, funded) to perform such roles indefinitely. A performance change will be sustainable if the behavior or behaviors that caused it are sustainable and will be scaled if the behavior or behaviors that caused it are scaled. It's therefore important to assess the sustainability and scale of behavior changes. This can be done by considering the following three important characteristics:

- a. **Ownership:** to what extent is the behavior change owned independently by the actor or actors in the system?
- b. **Scale:** to what extent has the innovation/new behavior been scaled across the system? How many actors are doing it or at what scale are actors doing it?
- c. **Resilience:** to what extent does the wider system resource and reinforce the new behavior? Is there evidence to suggest the change will be resilient to shocks, threats, and stresses?

There is a chain reaction between behavior changes and performance changes i.e., behavior changes can cause performance changes which can, in turn, trigger other behavior changes (see Figure 3 for an illustration of this). This means that whilst the short-to-medium term sustainability of performance changes is dependent on the ownership, scale, and resilience of the behavior changes that caused it, their longer-term sustainability and resilience is dependent on the ownership, scale, and resilience of behavior changes further down the chain.

These concepts are foundational for assessing and communicating systems change, which involves collecting and communicating information about:

- **What** has changed in the way the system works (what behavior changes, what performance changes?), including:
  - the **depth** of changes (how much has performance changed?)
  - the **scale** of changes (how widespread are performance and behavior changes?)
  - the **sustainability** of changes (how sustainable are behavior changes, and what does this mean for the performance changes they cause?)
- **Why** the system has changed (what has caused behavior changes and performances changes to occur? What is the link between behavior changes and performance changes?), including:
  - evidence that supports or undermines the member organization's theory of change (did system changes likely happen because of the member's program activities?)
  - an assessment of other causes, beyond the member organization's work (what else might have caused or contributed to identified changes?)

### Applying the concepts to Agenda for Change member organizations' work

While member organizations' implementation approaches vary, broadly speaking they all undertake **activities** to instigate changes in key **WASH system factors** (such as monitoring, policy and legislation

enforcement, finance, planning, etc.). These changes may be actor behavior changes, factor performance changes, or ideally, both. In turn these positive changes to WASH system factors are intended to effect changes in **WASH service delivery levels**, leading to improved health and livelihood outcomes. This high-level theory of change is visualized in Figure 2.

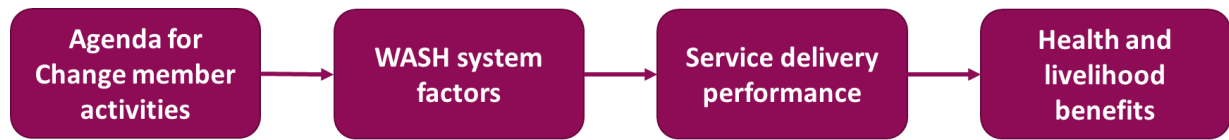


Figure 2: Agenda for Change members' theory of change, implicit in system strengthening efforts

Figure 3 provides a summary research framework which identifies what needs to be assessed at each level of the theory of change based on the questions outlined above. Note that this assignment will only go to the service delivery level, so health and livelihood benefits are not included.

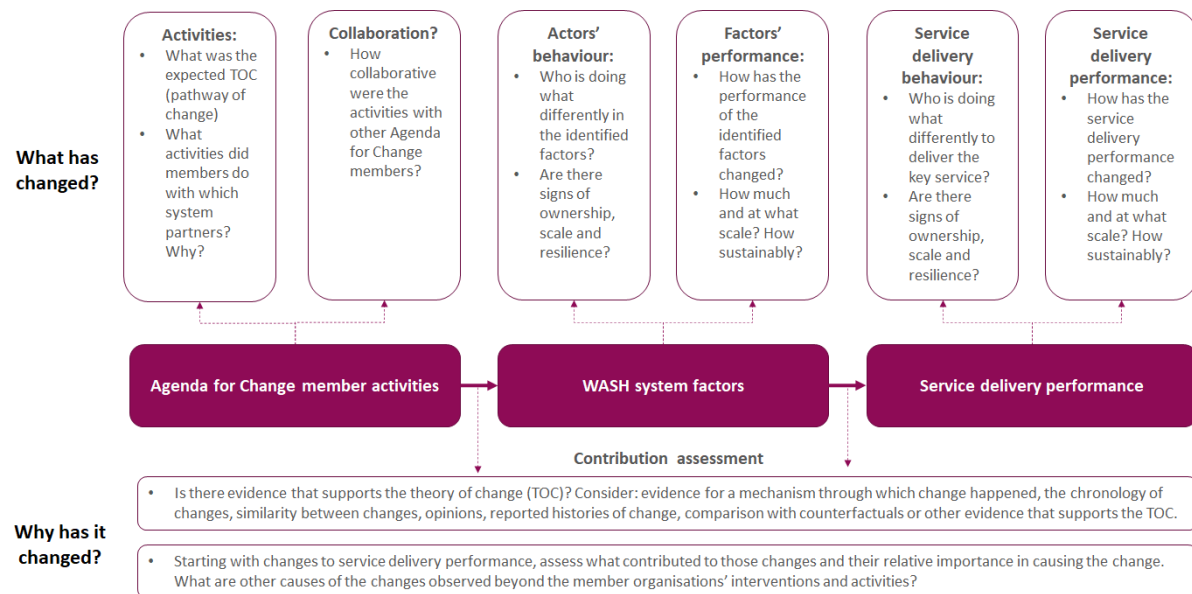


Figure 3: Research framework

The analysis carried out in this case study has been entirely based on existing data, information, and reports provided by RANO WASH. Realistically, very few organizations and programs will have robust (qualitative and quantitative) information relating to all the questions about systems change in this framework nor will every category of information be equally relevant or important in every context. However, this framework allows organizations to assess where there are information gaps, how important they are, and how feasible it is to fill them.

Figure 4, shows the theory of change for the streams of RANO WASH'S work in water developed for this study and that are included in this analysis, showing the links between behavior changes and performance changes at the activity, factor, and service delivery levels.

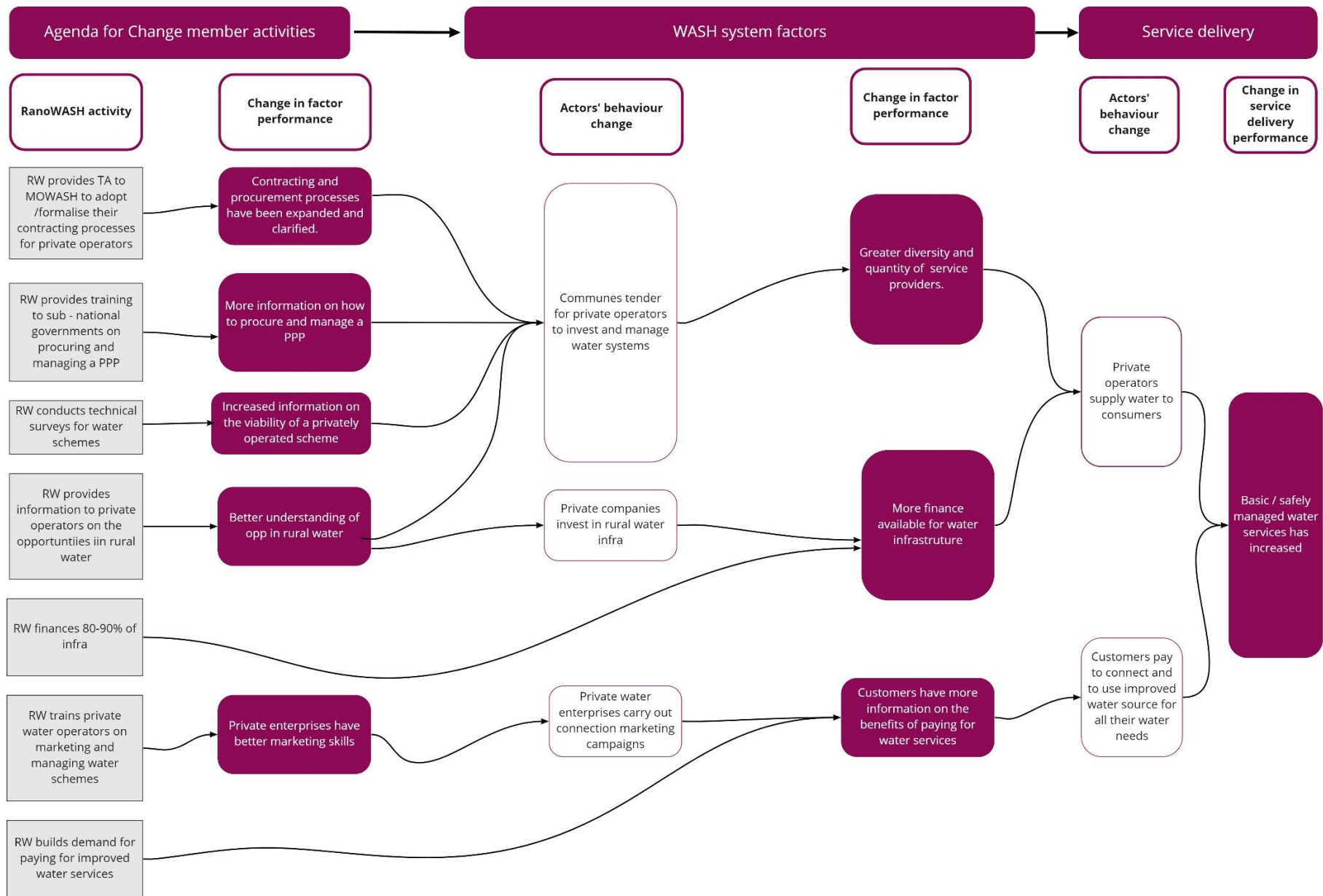


Figure 4: RANO WASH's theory of change, for the streams of work included in this analysis

## Structure of the case study

This case study starts by explaining how the water system was functioning when the RANO WASH consortium began working in 2017. The case study then goes on to examine the three focal streams of work – management models for service delivery, information / skills, and finance – in detail. In each of these sections, we present what RANO WASH did, what behavior and performance changes have been assessed as leading to changes in WASH system factors, and how sustainable and scaled the changes were, based on an assessment of the scale, ownership, and resilience of key behavior changes. The last section explores what has changed (i.e., how things are now), how sustainable and scaled changes are, and why things have changed, based on the available evidence.

For the sake of clarity, performance changes are highlighted from the main narrative in light blue boxes which describe what changed and how much it changed, and analyses of ownership, scale, and resilience are detailed in light green boxes, pointing to scale and sustainability. When assessing ownership, scale, and resilience we use traffic lights, as follows:

<b>Scale</b>	Red	Little or no evidence of innovation / behavior change spreading beyond pilot area
	Orange	Little or no evidence of innovation/ behavior change spreading to the full program area
	Green	Good evidence of innovation being adopted across the program area
<b>Ownership</b>	Red	Insufficient evidence of actor demonstrating capacity and will to continue behavior change
	Orange	Some evidence of actor demonstrating capacity and will to continue behavior change
	Green	Good evidence of actor demonstrating capacity and will to continue behavior change
<b>Resilience</b>	Red	Insufficient evidence of the system adapting or having the capability to provide the resources needed to sustain the innovation
	Orange	Some evidence of the system adapting or having the capability to provide the resources needed to sustain the innovation
	Green	Good evidence of the system adapting or having the capability to provide the resources needed to sustain the innovation

Figure 5: Traffic light criteria

## 2. HOW THINGS WERE WORKING WHEN RANO WASH STARTED

As indicated earlier, this case study will focus on the Atsinanana region, or sub-national administrative unit, in eastern Madagascar. Madagascar is divided into 23 separate regions, and the Atsinanana region includes 82 communes and 1.48 million inhabitants according to the 2018 census. RANO WASH conducted a study in three intervention regions in 2018 to document baseline figures for key project indicators. Relevant findings for this study are summarized below.

### Service level baseline

Baseline data showed that 14.5% of the population of Atsinanana had access to year-round basic drinking water sources or safely managed drinking water sources.<sup>15</sup> Only 13.5% of people were estimated to have access to basic drinking water sources,<sup>16</sup> with just under 1% having access to safely

managed services. Beyond low access levels, the baseline study also collected various indicators on the quality of service delivery. For example:

- Non-functionality: 28% of the infrastructure was not functional, although the definition for functionality was not included in the baseline report.
- Collection time: Average time to collect water was 10 minutes for basic access and 3 minutes for safely managed.
- Water quantity: Water use per day was estimated to be approximately 36 liters per person per day, well under the 50 liters per person per day that the World Health Organization recommends for living decently.
- Affordability: Water is free of charge except in the case of privately operated schemes, where the tariffs represent less than 1% of total household expenses. Systematic collection of tariffs was rarely observed and where it does occur, the amount cannot even cover the expenses necessary for basic operation and maintenance, resulting in breakdowns and non-functional infrastructure.

### ***Management models for service delivery baseline***

Like many countries, Madagascar faces challenges with voluntary community management of rural water infrastructure. Although the legal frameworks allow for local governments to delegate management to communities through the establishment of water committees, this should only apply to cases of “small rural water drinking supply systems...of simple installations intended to provide drinking water in rural areas.<sup>17</sup>” In 2018, only 26% of systems in Atsinanana had a functional water committee, and there was no systematic support for community managed water supply schemes in Madagascar.<sup>18</sup> One strategy to address this has been to promote private sector participation in managing infrastructure, and thus, various development partners over the last 20 years have promoted domestic private sector operators. As of 2018, the Ministry of Water and Sanitation reported that 46 of 1,695 water schemes, or approximately 3%, are operated by private service providers.<sup>19</sup> In the Atsinanana region, prior investment from RANO WASH consortium partners contributed to 10% (9 of 90) of communes having a private manager, although the exact number of private managers was not included in the baseline.<sup>20</sup> Some performance metrics at the operator level were also provided by the baseline study and are summarized as follows:

- Only one water service provider was found to be paying tax to the relevant authorities and most private companies stated that they preferred to reinvest the tax amounts in the extension of water services or in maintenance.
- Customer satisfaction levels were assessed using the following variables: quality of infrastructure and services, water quality, price of water, and water pressure. Results showed that 13% were not satisfied with the service provided, whereas 78% were satisfied, and 9% were very satisfied.
- Three of the nine communes with existing private water operators were in the process of replacing water service providers, but the baseline report concluded that the other six water supply schemes were being sustainably managed, although the criteria for determining this was not included in the report.

Challenges noted in the private provision of water services included the following:

- Maintenance of the infrastructure, particularly when operators do not own the infrastructure.
- Reporting and accountability: according to the management contract, water service providers need to produce a biannual financial and technical reports and a plan of expected activities, including a proposal for the investment program.
- The payment of various taxes and royalties in accordance with the decision made by local government.

The regulatory environment for private sector management includes multiple levels of government in Madagascar. By law, the national Ministry of Water, Sanitation, and Hygiene (MOWASH) is the only authority that can validate commune-level contracts related to water.<sup>21</sup> Prior to RANO WASH, MOWASH had two standard contract templates: a leasing contract model finalised in 2017 and a model of community water point management agreement for the association of water users or water point committees. Although the law provides for an independent regulatory body, no such entity operates currently in Madagascar and has not done so in the past.

### ***Information and skills to manage contracted water operators***

The baseline report showed that communes have very little experience with tendering, delegating, and managing contracted water service providers. Part of this stems from a weak awareness of the Water Code itself, but it is also affected by limited administrative and management capacity more generally. An institutional self-assessment was conducted as part of the baseline to quantify the institutional capacity at commune level. Results from Atsinanana showed very low capacities in coordination, institutional arrangements, financing, and monitoring, and slightly better capacities for planning. The overall baseline perception was that the ability to manage or delegate management contracts at the commune level requires intensive and continued reinforcement.

In addition to the commune's knowledge and ability to be able to tender and manage such contracts, this type of service delivery option is not generally well known among Malagasy enterprises. This results in a limited number of offers when tenders have gone out – for instance, no more than five companies have historically submitted bids.

### ***Finance***

The baseline report found hardly any evidence of co-investment between the private and public sector, with only a single commune (Foulpointe) having had any experience with this contract. Foulpointe is considered a model commune as the water supply scheme is managed by Sandandrano, a well-established enterprise and consortium member. As many delegated contracts were only for operations, previous contracts did not request private companies to also invest in all or a portion of the infrastructure.

## **3. MANAGEMENT MODELS FOR SERVICE DELIVERY, INFORMATION, AND FINANCE**

### **3.1. Activities**

Over the period from 2018 – 2021, RANO WASH conducted several activities related to management models for service delivery, information, and finance:

- RANO WASH provided technical assistance to MOWASH to adopt and formalize the contracting processes to be used by local governments, and validated by MOWASH, for private operators who provide partial investment in water schemes.
- RANO WASH conducted various trainings for national, regional, and commune level governments and technical staff on the 'co- invest, build, and operate' model and how to procure and manage a contract with a private operator.
- RANO WASH carried out feasibility studies and water scheme design studies for sites that were prioritized by MOWASH and the RANO WASH team as possible sites for delegated management.
- RANO WASH provided information to private water operators on the business opportunities in the water sector and the legal frameworks that demonstrate the public sector's commitment to supporting private investment and operations
- RANO WASH financed 80-90% of the infrastructure.
- RANO WASH coached / mentored selected private companies on how to market and extend connections.

Although RANO WASH saw an opportunity to build on nascent experience with private operators in Madagascar, they first had to work with MOWASH to modify the contracting process in place. This process clarified roles and responsibilities, legal mandates, and asset ownership, which were all necessary steps in promoting the model more widely. They also included specific guidance on how to terminate a contract with an underperforming service provider and what legal steps must be taken to transfer the contract to a new service provider. As part of the effort to increase awareness among private operators for this new contract option, RANO WASH and MOWASH conducted a national call for expressions of interest to pre-qualify bidders for future water scheme investment and operations.

Once formal contracting procedures had been updated and agreed upon by MOWASH, RANO WASH conducted a series of trainings for the regional representatives of MOWASH and mayors and local WASH officers to improve their ability to procure and manage delegated water systems. Prior to trainings, understanding of key sector legal documents, such as the Water Code and Public Private Partnership (PPP) regulations were not well understood, let alone applied. Trainings and other mentoring provided by RANO WASH sought to 'demystify' and operationalize the legal framework and PPP regulations for small rural communes. This process of providing information and skills to mayors and WASH officers is broader than just tendering and overseeing private water operators and is part of a wider effort at improving local water governance.

Alongside the various trainings, RANO WASH was responsible for paying for and overseeing the development of feasibility and design studies for shortlisted communes with potential sites for private water operators. Once technical designs had been reviewed and approved by the various parties involved, including a committee of local government, future customers, and regional MOWASH representatives, RANO WASH provided finance for 80-90% of the infrastructure, with the private operator investing the remaining amount, and supervised the construction process of new infrastructure. Once new infrastructure had been completed, RANO WASH continued to provide



mentoring and training to private water operators to market household connections or other mechanisms to increase access.

RANO WASH's activities at national and sub-national levels have led to several important performance changes, namely an additional management model for rural water service delivery through the introduction of the 'co-invest – build – operate' public private partnership contract model at the national level, more information on how to procure and manage a delegated contract at sub-national levels, better technical information on the viability of privately operated water schemes, increased awareness of the opportunity to bid on such contracts amongst private companies, and better marketing skills of private companies to increase connections.

#### ***Increased management model options***

Although delegated contracts to private operators are included in the 1999 Water Code and ensuing decrees, their application in Madagascar had been limited to management contracts. With the inclusion of the 'co-invest, build, operate' model, the Malagasy water sector has increased the number of official management models from two to three. In addition to community-based water management and delegated private water operator management, this third option allows for a private water operator to partially invest in the water infrastructure. The length of this type of contract is expected to be no less than 20 years, which is a longer timeframe than previous management contracts, and generally correlates with better performance as private operators have a reasonable stake in their investment.<sup>22</sup> Two specific additions to the contracting process supported by RANO WASH include the legal process for terminating a contract and transitioning it to a new operator.<sup>23</sup>

#### ***More information on the opportunity to invest / manage rural water schemes***

The baseline study noted that when past tenders were released, no more than five companies presented themselves for consideration. Although it did not quantify growing interest from private sector companies, the Midterm review found that RANO WASH *"had raised interest of players in the private sector, if we look at the number of proposals received following calls of expression"*.

#### ***Increased information on the technical and financial viability of water schemes for private management***

A key input to delegating the type of contract that RANO WASH promotes of 'co-invest, build, operate' is the technical information included in feasibility and design studies. As part of the project, two private sector consortium members have developed 113 feasibility studies of possible project sites and 81 more detailed design documents. These studies are validated by a group of commune authorities, representatives of the population to be benefited, and MOWASH regional representatives.

#### ***Improved marketing skills of private water operators***

The Midterm review and internal documents found limited effectiveness of overall training on private water operators thus far (i.e., no before / after assessment of skills or impact of skills was done), perhaps with the notable exception of the emphasis on marketing strategies for connection



rates. RANO WASH acknowledged this weakness and shifting from a basic training package to more hands-on coaching to support enterprises to effectively market household connections.

#### ***More information on how to procure and manage a delegated contract***

Commune governments had scant knowledge of the sector legal frameworks, including the Madagascar Water Code and PPP regulations, let alone the skills to be able to procure and manage a third-party operator.<sup>24</sup> A general assessment of institutional capacities at the commune level was conducted as part of the baseline study, and although it has not been repeated at the time of analysis, the external midterm review found that key informants in the sector credit RANO WASH with contributing to increased awareness of the option to delegate water services to a private water operator.<sup>25</sup>

### **3.2. Factor behavior and performance changes**

As a result of updated contracting procedures at the national level, better informed regional and commune governments, more information about the feasibility of privately operated water schemes, and a growing awareness among private companies of the opportunities, a series of subsequent behavior changes occurred.

1. Commune governments opened tenders for private water operators to invest and manage water systems.
2. Selected private water operators invested in rural water infrastructure.
3. Private water operators promoted the expansion of household and social<sup>26</sup> connections within their service areas.

These behavior changes led to the following performance changes.

#### ***Greater diversity and quantity of service providers***

A combination of clearer contracting process, better information, and ongoing mentoring has resulted in an increased number of service providers and a gradual shift from community or non-management to private operators who have partially invested in water supply schemes. The baseline study did not detail how many individual companies were supplying water to the nine communes with private operators, but at the time of this analysis, six private water operators were supplying an additional nine communes with water services. While there is no information available on the comparative performance of private operators versus community managed systems,<sup>27</sup> many countries experience a greater diversity in service providers as they extend and sustain access to services.

#### ***More finance available for water infrastructure***

Under the type of contract promoted by RANO WASH, private operators are required to invest between 10 and 20% of the costs of new infrastructure development.

RANO WASH reports its own infrastructure investment of approximately \$663,255 in the Atsinanana region at the end of 2021, which was complemented by a total investment of \$84,555 by private water operators, or just over 14%.<sup>28</sup>

### ***Customers have more information on the benefits of paying for water services***

Persuading consumers to connect and make regular payments is challenging. Marketing campaigns conducted by the private water operators, complemented with a subsidy scheme for the first one hundred connections, have generated a growing interest in connecting to the water supply schemes.

### **3.3. Scale and sustainability**

Reflecting on the scale, ownership and resilience of the behavior changes that led to the performance changes provides insights into how widespread and sustainable these changes are thus far.

#### **Scale, ownership, and resilience: Sub-national governments tender for private water operators to invest and manage water systems**

##### **Scale:**


At the end of FY21, 8<sup>29</sup> communes in Atsinanana (of 90 total in the region) had tendered for a private water operator.



Beyond the RANO WASH-supported intervention communes, there are several examples of other communes replicating the concept as documented in the 2021 annual report:


- UNICEF has taken over and is financially and technically supporting a non-operational system in Commune Betsizaraina by adopting the management model developed through RANO WASH. Additional details on the arrangement and outreach figures were not reviewed.
- The regional government used the 'co-invest, build, operate' model to win the African Development Bank's Program for Infrastructure and Development for Africa award, a \$2.2 million investment allowing seven communes to benefit from improved services.
- In the southern region of Madagascar, RANO WASH supported MOWASH in developing the concept note for the water supply project for southern Madagascar, using the 'co-invest, build, operate' model.

## Ownership

There are two considerations of ownership of sub-national governments to delegate water services to private water operators. Firstly, the Malagasy water sector has not fully decentralized in practice and regional governments play a key role in the entire delegation process, suggesting it may not be economically or politically feasible for communes to manage entire processes themselves. The example of the regional government replicating the concept for a different source of funding may be a more realistic level of government to own and replicate the concept given their larger administrative mandate. 

Secondly, and related to process rather than context, the external midterm review included a reflection that *“there was a strong sense that the RANO WASH program itself was driving a lot of the activities, along the way building capacity of the communes and the Regional Directorate for [WASH] but perceived as largely pulling the cart from upfront rather pushing from behind. This is noteworthy given the program’s intention to build local ownership and capacity to ensure long term sustained sector management once the program closes but does need to be nuanced by the fact that most people spoke positively of the importance of the roles they now played.”*<sup>30</sup>


## Resilience

The key threat to the resilience of the sub-national governments to tender and manage delegated contracts is the high turnover of government staff at all levels. For example, 80% of mayors in RANO WASH intervention communes were not reelected in 2019 and since 2018, the Minister in charge of water changed three times, resulting in delays and turnover of personnel.<sup>31</sup> Although this caused delays in project implementation, RANO WASH was able to manage the turnover by retraining new government staff. From a systems perspective, the key question is how this re-training will occur in the future, since it is likely that government turnover will continue. RANO WASH documents suggest that strengthening the skills of regional government officials would allow for more support to commune officials, but regional staff may also experience turnover. At the time of the analysis, it was too early to tell if the regional staff would be able to provide technical support to communes without RANO WASH involvement. 

A second threat to resilience is the technical nature of the contract itself and lack of contract documentation in Malagasy. To accelerate uptake by other communes, it has been suggested to further simplify the contract and ensure it is available in Malagasy.<sup>32</sup>

## Scale, ownership, and resilience: Selected private water operators invest in rural water infrastructure

### Scale:

All eight private water operators have invested in each of the water schemes they are contracted to operate in Atsinanana.<sup>33</sup> While information on the replication examples cited above was not available, it is a reasonable deduction that if the ‘co-invest, build, operate’ model is being replicated, additional private operators will be investing in those schemes as well. 

### Ownership

RANO WASH data at the end of FY21<sup>34</sup> confirms that the range of investment by private water operators was between six and twenty percent of total investment costs. The total amount of finance invested by private water operators in the region was \$84,555, complementing the \$663,235 invested by RANO WASH,<sup>35</sup> indicating nearly 13% investment by private operators. Given that the baseline investment was zero, this represents a small, but increasing amount of private finance allocated to water services.



The most common financing tactic employed by private water operators was to negotiate supplier credit, which provided construction materials and a payment grace period, rather than access commercial financing or invest from their own cash reserves. Information on repayment of supplier finance by private operators was not reviewed as part of this analysis.

### Resilience

There is a high dependency on the finance provided by RANO WASH to unlock this co-investment by private water operators.<sup>36</sup> The costs of improving access to water in Madagascar are considerable, with UNICEF reporting that the government's investment of approximately \$1 per person per year is well off track from what is needed to extend new services and maintain existing ones, and that costs of rural water alone could be \$135M per year until 2030.<sup>37</sup>



A sustainable sector financing strategy does not exist, highlighting the challenges of securing co-investment from public sources or other private investors for such a model moving forward. Additional literature echoes the need for the Government of Madagascar to invest significantly in both new and existing services, estimated to be a fivefold increase from 2016 with a focus on decentralized capacity to spend such an amount.<sup>38</sup> The private sector, whether through commercial finance for private operators or more sophisticated financial instruments, could also serve as a source of finance. RANO WASH is currently engaging with various financial and investment institutions to explore this option further.

### Scale, ownership, and resilience: Private water operators promote connections

Per the last report of FY21, RANO WASH states they are *“currently facing major challenges in increasing the users of privately managed drinking water services at the sites where the project has invested in creating or improving these services.”*<sup>39</sup> This section reviews the supply side issues and the demand side is addressed later in the report.

### Scale

All eight water companies have developed and implemented marketing strategies, such as spreading the costs of connection over time, to increase consumer connections as both connection fees and tariffs are critical to their overall profitability. This includes promoting individual connections for those who are willing and able to pay, social connections for neighbors who want to pay to use the services but are unable to connect to a private connection, and a collective water point for those households who prefer to pay daily for their water needs. All companies are reported to have developed financing plans that allow households to pay in



installments as household finances limit their ability to pay the connection cost in one payment and some continue to offer a discounted connection fee.

### Ownership

The internal midterm review found that *“Despite a robust pre- and post-construction training and support plan, private operators still face challenges in increasing their customer base due to a lack of robust marketing, affordability, and knowledge of payment options, as well as lags between receiving connection requests and installing connections<sup>40</sup>.”*



Much of the work to diversify connection options, that is, the option of social connections and standpoints, as well as the marketing done to increase the number of subscribers and the work to strengthen customer service, have been actively supported by the program, as private manager skills were lacking. Beyond skills, project reports speak to the possibility that some larger, non – local private operators may have less ‘social’ incentives to promote and extend connections, particularly social connections to more vulnerable household. However, performance data between types of private operators was not reviewed in depth to explore this further.

### Resilience

A key factor in determining how effectively and quickly companies can market and connect households is their own cash flow. Since many households struggle to finance their entire connection cost upfront, companies have offered installment plans, but have had difficulties assuming the costs needed to offer connections that are paid for over time. Many are construction businesses who do generate significant but irregular revenue, complicating their access to working capital from a formal financial institution. RANO WASH estimates that an average cost of marketing and extending connections is upwards of USD20,000, which is challenging for many companies to mobilize.<sup>41</sup> The COVID-19 pandemic has exacerbated this financial situation, threatening the commercial viability of some of the operators. Potential customers are also limited by their ability to pay, and the overall low levels of income, which have been negatively affected by the pandemic, have led to slower than expected connection rates.



Village Savings and Loan Associations (VSLAs) have been identified by RANO WASH as a complementary source of information and finance for individual and social connections. RANO WASH has linked existing VSLAs with private operators during marketing campaigns to leverage their ability to influence social norms of water behaviors, as well as providing finance for households who need it. In six of eight communes with private water operators, VSLA members have used funds for social or individual connections.

## 4. SERVICE DELIVERY LEVEL BEHAVIOR AND PERFORMANCE CHANGES

### 4.1. What has changed?

Performance changes in management models, skills, and finance have all contributed to key behavior changes at service delivery level – more private operators supplying water services and more customers using basic or improved water services for all their water needs.

### Increase in basic and safely managed water services

The eight water supply schemes operated by private operators are supplying water to nearly 66,000 people, either at home or through a social connection. Details per site are given below.

Ilaka Est	13,894
Mahatsara	11,253
Foulpointe	10,665
Niarovana Caroline	6,688
Ranomafana Est	8,060
Andovoranto Ambila Lemaitso	9,197
Ampasimadinika	5,053
Ampasimbe Onibe	1,166
<b>Total</b>	<b>65,976</b>

#### 4.2. Scale and sustainability

The scale and sustainability of service delivery performance changes is dependent on the scale, ownership, and resilience of water users and, in turn, on the scale and sustainability of the changes in WASH system factors that underlie this change.

#### Scale, ownership, and resilience: Private water operators supply water to consumers

##### Scale:

The percentage of private operators in Atsinanana managing water services has nearly doubled, from 10 to 18%, with an additional eight enterprises currently contracted or in the process of receiving their final contract.




##### Ownership

As this analysis did not review individual operator finances, we took the opinions of the internal and external review into consideration. A key finding from the external midterm review was that *“for the PPPs currently in place, the Evaluation Team considers it likely that Water Service Providers (WSPs)s will be able to sustainably provide services to the target population, especially with continued or, in some cases, improved focus on customer satisfaction and flexible options to manage fluctuating ability of households to pay the tariffs.”*<sup>42</sup>

A slightly different finding in the internal midterm review noted that *“although PPPs are functional, WSPs require support to grow their customer base and diversify revenue streams. WSPs are still not successfully tracking profits”*<sup>43</sup> which suggests that their overall profitability may remain questionable in some circumstances.



## Resilience

Generally, for a private operator to sustain services over time, there must be customers who are willing to pay for the services, a capable operator, a service authority who is able to oversee the contract, access to technical support / information for the private operator, and a supportive national framework for the sector. 

**Customers willing /able to pay:** Sustained demand for, and ability to pay, are key factors in whether enterprises will continue to provide services. Given the high degrees of poverty and availability of alternative, cheaper water resources, such as unprotected surface water, the willingness and ability of consumers to pay remains a challenge, per multiple RANO WASH documents. Willingness to pay data was not reviewed, but barrier analysis research conducted by RANO WASH suggests that ability to pay for improved water services may be more of a challenge than willingness. Potential sites for private management were selected based on their financial viability (i.e., enough potential users to be profitable for private management), but many water operators continue to experience delays in connecting new customers. A potential opportunity to increase users and extend access is what RANO WASH calls a 'Public Private Partnership Plus (PPP+)' model, which considers extensions to villages or hamlets that were beyond the initial projections, or operating water kiosks.


**Capable operator:** Beyond the challenges of demand are financial constraints within individual businesses, which report delays in connecting new consumers because of their own liquidity constraints. Although each operator managed to secure their co-investment costs, working capital constraints also appear to be limiting the speed at which they can connect new users and generate additional revenue. The long duration of the contracts and the time it will likely take for an operator to break even are additional financial risks to the model.

**Service authority oversight / regulation:** In the absence of a formal sector regulatory body at the national level, RANO WASH has worked to strengthen local accountability mechanisms. At the time of the midterm review, whilst many accountability structures were operational, there was not any information available on their effectiveness.<sup>44</sup> An additional finding was that oversight generally could be improved, as there was limited involvement of the district WASH offices in overseeing contracts (i.e., performing their Service Authority functions).<sup>45</sup>

**Technical support:** Private operators currently benefit from free advice, coaching, and mentoring from the project. The external midterm review noted that *"is too soon to tell whether PPPs and private managers will be able to provide services without external support"* and the internal review complemented that sentiment with a reflection that future training may be required to re-assess future demand, phased expansion, and planning for upgrades over time.<sup>46</sup>

## Scale, ownership, and resilience: consumers pay to connect and to use improved sources for all their water needs

### Scale

At the time of analysis, 1,531 household and social connections have been installed, with nearly 75% being private connections and another 25% of connections to date being social connections. Requests for an additional 385 connections had been received by service providers but were in the process of connecting at the time of analysis. 



RANO WASH's feasibility studies suggests that 88,000 people could be served by the 8 water systems. At the time of analysis, nearly 66,000 people are reported to be accessing basic or safely managed water.

### Ownership

Across all six regions, RANO WASH is experiencing challenges with two scenarios: 1) people within the service area of private operators who have not yet connected to the newly constructed water supply scheme; and 2); people with access to private water supplies do not use them for all their water needs.<sup>47</sup> Barrier analysis was conducted in another region to understand the key drivers of non-use or continued use of alternate sources. The research confirmed that actual cost and perception of costs of connections remains a key challenge, and that health benefits motivate users to choose piped water over other alternate sources. Water quality issues also demotivated people to connect, so greater investment in improving water quality and marketing its benefits is one possible pathway to increased connections and use of piped water.

However, an encouraging sign of drinking water use was noted in the 2021 annual survey.<sup>48</sup> Although the data was not compared to a baseline situation, nearly 60% of surveyed members of VSLAs in Atsinanana reported using a private or social connection. For those that still relied on a collective water point or borehole, none mentioned using river water or rainwater for drinking water.

RANO WASH provided a partial subsidy for the first 100 households to sign up, which likely accounts for over half of the connections to date in the eight systems and raises questions of the feasibility and preferences for households to connect.

Tariffs are set as part of the bid for the management contract. Commune officials and the regional water office can negotiate with the operator during this process. Tariff amounts vary from scheme to scheme but range from \$0.20 to \$0.60 per cubic meter. Payment compliance was not reviewed as part of this analysis.

### Resilience

Persuading people to shift from a strong social perception that water should be 'free' requires intensive communication and marketing of the benefits. Underpriced water in cities and a legacy of development projects that have created dependencies further complicate this shift. This currently is a joint effort between the commune, the service provider, community groups and savings and loan groups, supported by RANO WASH. As the project is still active, it was too early to tell how this will work in the future without RANO WASH. From a technical perspective, it will be important to maintain a level of water quality that is acceptable to consumers since water quality appeared to be a key driver in the barrier analysis of why consumers choose to connect or not.

### 4.3. Why did these changes happen?

An additional 66,000 people are now being supplied with safely managed water services. We agree with the midterm review team who stated that *"there is no doubt that RANO WASH's efforts have led to an increase in access to water supply and sanitation services, particularly with regard to water supply."*<sup>49</sup> Moreover, RANO WASH's influence goes beyond co-financing for infrastructure and



examining the evidence available suggests the project has positively contributed to changes in service delivery arrangements, information, and finance, that then led to increased access for tens of thousands of Malagasy people.

With service delivery arrangements, the midterm review found that *“the ministry leans heavily on RANO WASH to inform its private sector policies and strategies, taking into account the unique nature of the type of PPP model promoted by RANO WASH”*<sup>50</sup> of co-invest, build, and operate. And regarding information of why and how to engage a private operator, the review recognized that RANO WASH is a key contributor to a *“paradigm shift that is now noticeably underway, from a situation based mainly on community management and the principle of ‘free’ water services to one of private sector management of paid for (and therefore higher quality) and sustainable water supply services.”*<sup>51</sup> The significant financial contribution of RANO WASH towards new infrastructure development triggered investment from numerous private companies, often through supplier credits from materials providers representing another financing mechanism.

However, reviews<sup>52</sup> and the team itself recognize that RANO WASH capitalized on the prior work of other development partners, such as the World Bank, GRET, UNICEF, and the EU, to value continuity while also refining the contracting and procurement processes. In addition, RANO WASH’s predecessor project, RANO HP, was the first USAID investment that explored the concept of privately managed water supply schemes, albeit at a much smaller geographic scale and with less emphasis on systems strengthening. Lastly, it appears that several of the businesses benefiting from RANO WASH’s interventions leveraged skills and experience gained from earlier development projects.

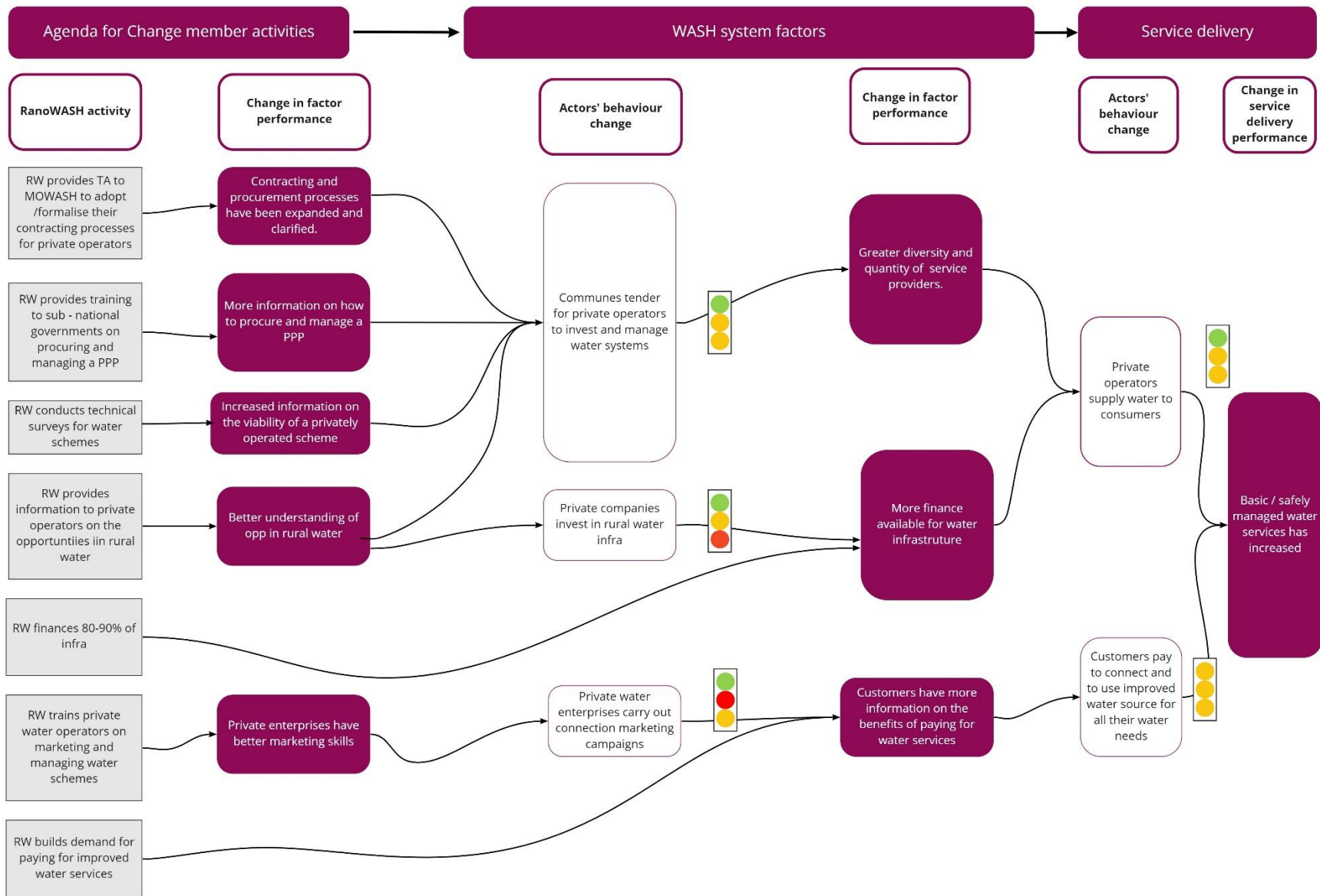


Figure 10: RANO WASH's theory of change, for the streams of work included in this analysis, with traffic light summaries of scale, ownership, and resilience

## 5. HOW RANO WASH FACILITATED CHANGE

The focus of this report is on whether – and to what extent – systemic change was achieved by RANO WASH’S work in rural water service delivery in Madagascar. Having established that a series of changes have occurred, it is worth examining how RANO WASH achieved these successes.

### 5.1. RANO WASH’S approach

RANO WASH maintains a detailed public [website](#) with extensive information on its overall approach, which is much greater in scope than sample of work that this case study has explored. That said, there are several key facets of its approach that merit mentioning in the context of reviewing the system changes in the service delivery, information, and finance factors thus far.

Firstly, the scale of work is important to mention. On the one hand, RANO WASH has demonstrated that working simultaneously at national, sub-national, and local levels is feasible and delivers results, particularly in the context of a service delivery option that requires not just approvals at multiple administrative levels, but the skills and information required to manage a more complex service delivery arrangement. Because of its focus on privately supplied water, initially the project did not target full coverage of any given administrative unit, often a key pillar of systems approaches to water service delivery. Working at multiple levels of the water ‘system’ is a key tenet of systems strengthening due to the inter-related nature of factors and actor behaviors that are required to be in place, not only at the level at which services are delivered (i.e., the water supply scheme run by the new private operator). Another factor is the time required to achieve both changes in the key system factors targeted by RANO WASH and the subsequent service delivery improvements. Although the RANO WASH project itself has a six-year duration, it builds on prior work by individual members on some of the key factors, even if they were not articulated as such. It also expands upon past USAID investments into supporting private sector participation in managing water services, although the scope of private sector engagement in these programs were much narrower than what RANO WASH has done. The midterm review provided opinions from many key informants who considered the five-year timeframe too short to meet the project’s objectives, and whilst work is still underway at the time of this analysis to be able to further comment on the suitability of the timeframe, given the extremely low levels of service delivery and challenging context in Madagascar, more time, rather than less, will be required to sustain and expand those changes. Generally, timelines of a decade or more are in line with international good practice of how systems change evolves over time.<sup>53</sup>

Lastly, an important aspect to consider is the cost of achieving system change. Beyond the infrastructure investment costs by both RANO WASH (approx. \$660,000) and private operators (approx. \$80,000), it was not readily apparent from reports reviewed that the total cost of the activities and personnel required to enable the key changes allowed infrastructure investments to go ahead. RANO WASH provides detailed financial reporting to USAID but extrapolating those figures to the systems change factors prioritized in this analysis was not feasible beyond the infrastructure figures.

### 5.2. How important is collective action?

Agenda for Change promotes collective action as a central pillar of achieving strong WASH systems.<sup>54</sup> The assumption is that achieving positive system change requires collaboration and coordination between numerous independent actors, each with their own incentives and capacities. There are at least two different ways in which a member organization might engage in collective action, as Agenda

for Change defines it. Firstly, they may work with permanent system actors – the public and private organizations that will remain in the system long after their activities have ceased.<sup>55</sup> Secondly, they may work with other NGOs also funded by donor actors. The RANO WASH case provides an interesting example of these two different ways, in that three Agenda for Change members are involved in the consortium, as well as experience of working with diverse public and private permanent system actors.

### **Collective action among Agenda for Change members**

The consortium includes three Agenda for Change members and involves national staff in Madagascar and to some extent, headquarters staff of consortium members. A self-assessment conducted as part of an internal review reiterated the shared view that the consortium members all have extensive experience related to different aspects of private sector participation in water services that complements each other. For example, WaterAid has worked for many years on improving national governance, sector coordination, and monitoring; CRS and CARE implemented the predecessor RANO HP project, and CARE brings additional expertise in gender, social inclusion, and individual behavior change; and Sandandrano brings practical experience of operating water systems and advocating for changes to the legal framework.

The internal midterm review self-assessment was generally positive<sup>56</sup> regarding the consortium's approach to the following components:

- Organization (how the consortium is structured and led)
- Operational implementation (how activities are implemented within the consortium)
- Resources management (use of resources, including HR, financial, etc.)
- Capacity building (using and building the expertise of organizations and individuals)
- Monitoring and Results (how information is collected, analysed, and used)
- Process (the coordination and synergies of the different stakeholders)

In contrast, the external review noted some differences regarding shared interpretation of a systems approach across multiple organizations and sub-awardees. While the move to using the building block analysis has generally been deemed positive by both internal and external reviews, it is *“still considered highly complex and not yet universally understood.”*<sup>57</sup> With such a large project team, it is perhaps inevitable that a shared understanding of systems strengthening concepts will be challenging and require regular reinforcement as it is a fundamentally different way of working that more traditional approaches to improving water service delivery.

### **Collective action with WASH system actors**

In some ways, the limited extent of decentralization in Madagascar and the legal implications of a delegated management contract itself, requires RANO WASH to work at national, sub-national, and local government levels. Given the involvement of all three parties in the tendering, approval, and management of such contracts, coordination and collaboration is not a nice to have, but a fundamental factor that is essential to success in this case.

Although commune level universal coverage was not an explicit goal of the project, RANO WASH still has devoted considerable effort at addressing overall water governance at multiple levels and trying to strengthen the relationships between different agencies at commune, region, and national level. This goes beyond supporting communes to tender and supervise private operators and seeks to equip

local elected officials and technical staff with the skills and information they need to be able to budget, plan and monitor all water and sanitation – related activities in their jurisdictions.

This case has focused on factors enabling the ‘co-invest, build, operate’ model, which has meant not only does it demonstrate collection action with a wide range of public authorities, but also private water service providers, who can play a wide range of roles in supporting overall sector development.<sup>58</sup>

## 6. CONCLUSION

As the aim of this case study was twofold – to test a process for measuring systems change and to apply it to the context of the RANO WASH project’s work – this section includes a summary of what was learned about RANO WASH’s contribution to systems change in the rural water system, as well as reflections on the approach.

### 6.1. RANO WASH’S contribution to systems change and improved service delivery

RANO WASH’s work to facilitate privately managed water services in the Atsinanana region has demonstrated that improving key factors in the WASH system with local actors has contributed to improved service delivery for nearly 66,000 people. ***The changes in the service delivery arrangements, skills, and information on managing a delegated contract, and finance for new infrastructure development facilitated by RANO WASH have a clear and evidenced link to improved water services for previously unserved households.***

The performance of these factors improved because of behavior changes made by local and sub-national government agencies with mandates for various aspects of water services and private water operators. These behavior changes were, in turn, triggered by a chain of WASH system factor performance changes and behavior changes that can be traced back to RANO WASH activities, reflecting the theory of change visualized in Figure 11 below and expanded up on in Figures 5 and 10, above.

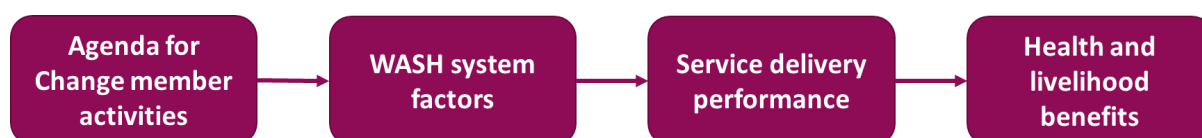


Figure 11: Agenda for Change members’ theory of change, implicit in system strengthening efforts

As the service delivery results achieved were caused by changes to actor behavior and factor performance in key WASH system factors, the scale and sustainability of those service delivery performance improvements are also dependent on the scale and sustainability of the changes in WASH system factors. While this is inherently more sustainable than being directly dependent on RANO WASH, a more nuanced analysis of scale and sustainability can be done by analyzing the scale, ownership, and resilience of the key behavior changes. Although the intended scale of changes was widely met, the analysis highlighted some challenges in the ownership and resilience of behavior changes, raising questions about how long some of the changes may last.

The consortium structure leverages the experience of three different Agenda for Change members, as well as two private businesses, offering an example of collective action by design. Beyond consortium collaboration, RANO WASH’s approach of working simultaneously at multiple administrative levels has

been a key success factor in this case, given the reality of decentralization in Madagascar and the coordination required to operationalize the ‘co-invest, build, operate’ model.

## 6.2. Reflections on the approach

Having previously applied this approach to an institution that had already existed (WaterSHED) and a program operational for nearly ten years (Water For People), there were some additional learnings when applying this to a project that is still ongoing.

Like the first two cases, this approach enabled us to map the links clearly, systematically, and comprehensively between one part of RANO WASH’s system strengthening efforts and improved service delivery outcomes. Systems change is notoriously complex and analyzing a program’s contributions to system change is complicated by the numerous factors that affect the way systems work and the complex ways in which elements of the system influence each other. With a focus on one specific area of work, this approach again provided a way of breaking down the changes that happened in the system into actor behaviors and factor performances so that we could systematically analyze each of the changes and each of the links between them, as well as assessing what other factors might have contributed to each of the changes.

A large amount of information was available and reviewed, including program progress reports, annual plans, monitoring data, and more. This was complemented in this case with two useful reviews, one conducted by the RANO WASH team, and one done by a third party. Both reviews provided helpful perspectives beyond what was available in internal reports and contributed to the depth of findings in the case. Semi-structured interviews were held with project staff to document additional tactical knowledge and follow up queries over email provided more detailed information where available.

An important difference between this case and the previous two was the timing. RANO WASH conducted a detailed baseline of service delivery metrics and key factor performance in Atsinanana in 2018, but not all the baseline information has been updated at the time of analysis, rendering some comparison between baseline and the current situation difficult.

Challenges of implementing the approach in this case were similar to the first two. Firstly, applying an analytical framework retrospectively requires resources and interpretation of existing information. There are tradeoffs in terms of the resources needed for an external consultant to understand and analyze the information versus an Agenda for Change member doing this themselves. It inevitably uses more resources for an external consultant to do this analysis than an internal M&E team, for example. Secondly, relying on member-generated reports and information to explore contributions between activities, system changes, and service delivery outcomes was insufficient. In this case, an external midterm review provided useful third-party reflections that were valuable for this type of analysis. Lastly, any approach that uses simplifiers, such as the traffic light system are necessarily somewhat subjective. To mitigate this, it is important to have criteria for making the assessments and to treat the conclusions (e.g., red, orange, green) as indicators rather than absolutes.

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<sup>1</sup> These were also prioritized using the external midterm review’s assessment of the priority areas in which the reviewers felt that RANO WASH had contributed to more substantially than other parts of its portfolio.

<sup>2</sup> See JMP data for service ladder information: [Service ladders | JMP \(washdata.org\)](https://washdata.org)

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- <sup>3</sup> Carter, Richard and Ryan, Peter, 2016. 'Financing requirements and management approaches for sustainable rural water services for all in Madagascar.' UNICEF. Available at: [F & M Madagascar RWS draft final \(unicef.org\)](#). Accessed 4 March 2022.
- <sup>4</sup> SIMS / MSIS, 2018. 'RANO WASH: Baseline study'. Unpublished.
- <sup>5</sup> Ibid
- <sup>6</sup> CARE International Madagascar, 2021. 'RANO WASH: Midterm review report'. Available at: [RANO WASH Rural Access to New Opportunities in Water, Sanitation, And Hygiene Mid-Term Review Report – CARE | Evaluations \(careevaluations.org\)](#)
- <sup>7</sup> TetraTech, 2021. 'Midterm performance evaluation of Madagascar Rural Access to New Opportunities in Water, Sanitation, and Hygiene Activities.' Available at: [Mid-term performance evaluation of Madagascar rural access to new opportunities in water, sanitation, and hygiene \(RANO WASH\) activity, October 2021 - Madagascar | ReliefWeb](#)
- <sup>8</sup> <https://www.ircwash.org/resources/all-systems-go-background-note-wash-systems-symposium>
- <sup>9</sup> See especially A. Miehlebradt, R. Shah, H. Posthumus, and A. Kessler, (2020), *A Pragmatic Approach to Assessing System Change: How to put it into practice*; J. Lomax, (2020), *The antidote to systemic change frameworks: six practical steps to assess systemic change (and improve your strategy)*; R. Shah, (2020), 'Is the "antidote" for MSD?', Available at: <https://www.springfieldcentre.com/unpicking-system-change/>.
- <sup>10</sup> For more information about the project, readers may wish to visit [Accueil - RANO WASH \(care.mg\)](#)
- <sup>11</sup> CARE International Madagascar, 2021. 'RANO WASH: Midterm review report.' Available at: [RANO WASH Rural Access to New Opportunities in Water, Sanitation, And Hygiene Mid-Term Review Report – CARE | Evaluations \(careevaluations.org\)](#)
- <sup>12</sup> TetraTech, 2021. 'Midterm performance evaluation of Madagascar Rural Access to New Opportunities in Water, Sanitation, and Hygiene Activities.' Available at: [Mid-term performance evaluation of Madagascar rural access to new opportunities in water, sanitation, and hygiene \(RANO WASH\) activity, October 2021 - Madagascar | ReliefWeb](#)
- <sup>13</sup> These were also prioritised using the external midterm review's assessment of the priority areas in which the reviewers felt that RANO WASH had contributed to more substantially than other parts of its portfolio.
- <sup>14</sup> Note that changes to services levels are performance changes, as are changes to other resources provided by the system. For example, a change in the quality or affordability of latrines is a performance change; so too is a change in timeliness of monitoring data, affordability of finance or quality of planning information.
- <sup>15</sup> SIMS/ MSIS, 2018.
- <sup>16</sup> See JMP data for service ladder information: [Service ladders | JMP \(washdata.org\)](#)
- <sup>17</sup> RANO WASH, 2020. 'The Water Code and Its Usual Application Decrees'. Unpublished.
- <sup>18</sup> Carter, Richard and Ryan, Peter, 2016. 'Financing requirements and management approaches for sustainable rural water services for all in Madagascar.' UNICEF. Available at: [F & M Madagascar RWS draft final \(unicef.org\)](#). Accessed 4 March 2022.
- <sup>19</sup> SIMS/ MSIS, 2018.
- <sup>20</sup> Ibid
- <sup>21</sup> Carter and Ryan, 2016.
- <sup>22</sup> Carter and Ryan, 2016.
- <sup>23</sup> RANO WASH, 2020. '2020 Annual report annexes: Annex 14, PPP Procurement process'. Unpublished.
- <sup>24</sup> RANO WASH, 2021. '2021 Annual report annexes'. Unpublished.
- <sup>25</sup> TetraTech, 2021.
- <sup>26</sup> The baseline study uses income and expenses interchangeably.
- <sup>27</sup> Carter and Ryan, 2016.
- <sup>28</sup> RANO WASH, 2022. 'Suivi Water System Construction'. Unpublished.
- <sup>29</sup> Ibid.
- <sup>30</sup> TetraTech, 2021.
- <sup>31</sup> CARE International Madagascar, 2021.
- <sup>32</sup> TetraTech, 2021.
- <sup>33</sup> Suivi Water System Construction. RANO WASH internal document, 2022.



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- <sup>34</sup> Ibid
- <sup>35</sup> Ibid
- <sup>36</sup> TetraTech, 2021.
- <sup>37</sup> Carter and Ryan, 2016.
- <sup>38</sup> Carter and Ryan, 2016.
- <sup>39</sup> RANO WASH, 2021. '2021 Annual report'. Unpublished.
- <sup>40</sup> CARE International Madagascar, 2021.
- <sup>41</sup> RANO WASH, 2022. 'FY 2022 Quarterly Report Annexes.' Unpublished.
- <sup>42</sup> TetraTech, 2021.
- <sup>43</sup> CARE International Madagascar, 2021.
- <sup>44</sup> CARE International Madagascar, 2021.
- <sup>45</sup> CARE International Madagascar, 2021.
- <sup>46</sup> CARE International Madagascar, 2021.
- <sup>47</sup> RANO WASH, 2022.
- <sup>48</sup> RANO WASH, 2022.
- <sup>49</sup> CARE International Madagascar, 2021.
- <sup>50</sup> Ibid.
- <sup>51</sup> Ibid.
- <sup>52</sup> TetraTech, 2021.
- <sup>53</sup> <https://www.ircwash.org/resources/all-systems-go-background-note-wash-systems-symposium>
- <sup>54</sup> See <https://washagendaforchange.org/glossary-term/collective-action/>
- <sup>55</sup> The three consortium members have been in Madagascar for decades: CRS since 1962, CARE since 1992, and Water Aid since 1999.
- <sup>56</sup> CARE International Madagascar, 2021.
- <sup>57</sup> TetraTech, 2021.
- <sup>58</sup> Overseas Development Institute. 2021. 'Private sector water supply, sanitation, and hygiene.' ODI. [Private sector and water supply, sanitation and hygiene - - Research reports and studies \(odi.org\)](#). Accessed on 22 April 2022.