Agenda for Change Systems Strengthening Research

Water For People

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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 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 WASH cases. This case tests the approach by applying it to Water For People's work in the rural water sector in Perú.

Approach

Programs that try to facilitate systems change do not intervene directly to improve service delivery levels – for example, by digging wells or building toilets. Instead, they focus on addressing the underlying issues 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 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. It assesses **attribution** by examining the relationships between changes, and by looking at what else might have caused changes that occurred.

- **Changes:** what has changed?
- **Depth:** how much have things changed?
- **Scale:** how widespread are changes?
- **Sustainability:** how sustainable are changes?
- **Attribution:** why did changes happen? Did the programme credibly contribute to the changes? What else in the system contributed to changes?

Box 1: the five questions used to assess systemic change

Findings

Water For People has carried out diverse activities addressing various underperforming factors in the water system in Asunción, Perú, over the last nine years. However, this case study will focus on assessing the system changes achieved through its work on ***planning and financing*** universal services, ***finance*** for operations and maintenance (O&M), and ***skills*** of both district WASH offices and service provider operators. These factors have been prioritized because an initial assessment of Water For People'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. 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 achieving sustainable water services, these three areas have yielded more significant changes than Water For People's other activities, in systems change terms.

Water For People has been working in the predominantly rural district of Asunción, in northern Perú, since 2013. Baseline analysis showed that 17% of rural households did not have access to improved water services. Water committees existed for most rural water schemes, but only one third had a trained operator, and, although tariffs existed in 98% of systems, they did not cover basic O&M costs. The district government had one person allocated to water management and planning for extending services or supporting service providers was limited and reactive.

To extend services to households who remained unserved, Water For People advocated for the district to collect information on unserved households and to plan and finance for extending services to them. Having already reached relatively high levels of coverage, leaders in Asunción were interested to close the coverage gaps and invested in understanding where unserved households were located, why they remained unserved, and what technological solutions were most appropriate. This behavior change at the district level led to better information on unserved households and was used in allocating more finance for closing the coverage gaps. Signs of ownership by the district are strong, as it invested its own funds in the data collection exercise, allocated funding for new infrastructure, and secured additional public finance to extend services. Having demonstrated this process at district level, Water For People is now in the process of scaling up this process with 13 additional districts in the Cajamarca, Lambayeque, and La Libertad regions of northern Perú. How resilient these changes will be remains to be seen, in particular in the scale up districts, which are testing replacing the role of Water For People staff with regional government support.

Increasing the knowledge and skills of both service authorities and service providers have been other factors targeted by Water For People, as well as advocating for increased finance for sustainable services through higher tariffs and ongoing support to service providers. These activities – management and technical training and mentoring to the district WASH office personnel, training and mentoring to service providers, and sharing information with SUNASS (the national regulator), on setting rural tariff regulations – contributed towards increased knowledge and skills of the district WASH personnel and evidence-based rural water regulations.

These changes then led to a series of other improvements in the WASH system, such as the district providing better technical support to service providers; representatives from SUNASS and the district providing better information on why and how to adopt revised tariffs; communities and service providers agreeing to increase tariffs; and paid, trained operators carrying out O&M. These changes have reached good scale in the district of Asunción but are still underway in the scale up districts. Signs of ownership are also strong, with various indicators of community and district investment. The greatest threat is in the resilience of these changes and if or how Water For People's eventual exit will have a material impact on planning, finance, or skills to support sustainable service delivery.

Performance changes in planning, financing, and skills – of both district WASH offices and service providers – have all contributed to key behavior changes at the service delivery level – more people accessing sustained services. There are two important distinctions at this level; firstly, previously unconnected households access improved services and secondly, previously connected households continue to access improved services.

By the simplest metric, more water services are being delivered to more people. From 2013 to 2019, the percentage of unserved households decreased from 17[1]% to 3%. Overall service delivery levels have been maintained at either an intermediate or high level. 100% of communities had either intermediate or high levels of service in 2021, up from 12% basic in 2017, 64% intermediate, and 23% high. Households with intermediate service decreased from 41% to 9%, whilst households with high levels of service increased from 35% to 85% over 2017 to 2019.

Exogenous factors, such as Perú's national policy of universal coverage and a performance -based incentive scheme for local governments to deliver ensure quality and sustainable services that provides various sources of public finance for direct support, capital maintenance, and capital, have created conditions in which a focus on planning, finance for O&M, and skills has led to better service delivery outcomes. Put another way, pre-existing political will at national and sub-national levels, manifested in regulations that specify institutional arrangements and sufficient finance to implement that will, have been important contextual factors in this case.

In addition, Water For People's approach has been a contributing factor to the results achieved. Committing to support local actors to manage and provide sustainable access to water services has had important implications for how Water For People has chosen to work and evolve over time. Recognizing that their own exit is based upon service authorities and service providers having the requisite knowledge, skills, and finance to ensure water services continue to provide adequate levels of service over time has guided their interventions and subsequent monitoring efforts. Monitoring changes in both service authorities, service providers, and levels of WASH services has provided Water For People key data over the years. Lastly, the district wide approach that Water For People implements, as well as the scaling up efforts underway at regional level, demonstrate active collective action intent with the diverse government agencies responsible for various aspects of service provision. In this case alone, there is evidence of collective action between the district WASH offices, the decentralized regulator's office, and water committees.

In practice, committing to supporting first a district[2], and then multiple regions to implement such an approach has important timing implications. Water For People signs multiple year memorandums of understanding to demonstrate their commitment to partners and document how changes in district behaviors contribute to universal and sustainable services. Underlying the institutional commitment over at least a decade is an organizational business model that by necessity prioritizes unrestricted funding.

Two key positive service delivery results have been assessed in this case: an increase in the number of people with access to an improved water service and sustained service delivery levels for previously

[1] 2013 baseline access figure.

[2] Water For People currently works in three of the 1,869 districts in Perú.

connected consumers. Reconstructing the theory of change and examining the evidence available confirms that Water For People has significantly contributed to changes in the planning and finance functions that enabled previously unserved households to access water. Similarly, reconstructing the theory of change for the skills and finance for O&M, and examining the evidence alongside it, shows that Water For People's system strengthening efforts are contributing to sustained services over time.

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. [1] The analysis includes an assessment of system changes over time including what has changed, looking at 'actor behavior changes' and 'factor performance changes,' and why changes have occurred, looking at 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 second of three case studies which documents and communicates the contributions Water For People has made towards system change in the water system in Perú. The water system is defined as the supply of drinking water to households in the district of Asunción, Perú, which for the purpose of this case study, we take to be the system boundary.

The objective of the assignment is to assess how useful the approach is for analyzing a program's 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 how to use the approach in their own programs, based on what has been learned.

1.1. Water For People

Water For People is an international water and sanitation non-governmental organization (NGO) that has been implementing its Everyone Forever model in 40 districts across 9 countries since 2011. The Everyone Forever model aspires for universal access ('everyone') to sustainable water and sanitation services ('forever'). In their own words,

> *"The Everyone Forever model is a system-strengthening approach to water, sanitation, and hygiene (WASH), implemented at the district level with strategic influence to scale nationally. It predates but aligns with and reinforces the more recent Sustainable Development Goal (SDG) 6 and Sanitation and Water for All's Collaborative Behaviors."* [2]

Water For People aims to leverage its learning, evidence, and experience at district levels to wider impact beyond the 40 districts in which it currently implements the Everyone Forever model through influencing or supporting other district, sub-national, or national governments to adopt its model.

The overall model is summarized in Figure 1 below and includes four phases of work towards the end goal of universal access to sustained services and Water For People's exit[3].

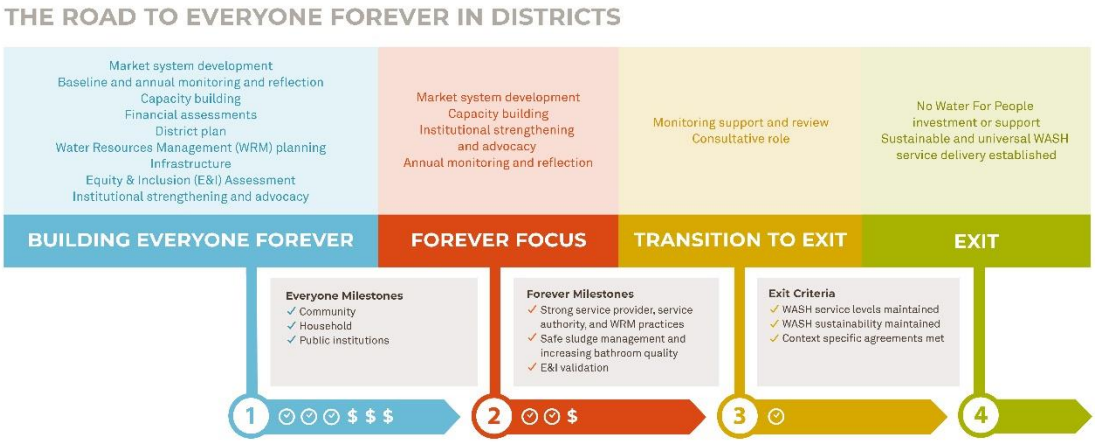


Figure 2: Summary of the Everyone Forever process and phases

- Building Everyone Forever: Prior to entering a multi-year cooperation with a district government, a district assessment is done to determine the feasibility of intervention. Once this is done, a wide range of activities are conducted. Baseline water and sanitation levels of service at households, communities, and schools are monitored, training or mentoring is provided to the district WASH office personnel to plan, manage, and finance new infrastructure and support to service providers. Annual monitoring of service delivery metrics using Water For People's monitoring protocol is carried out and service authority and service provider capacity is documented using the Sustainable Services Checklist (SSC)[4] and reflected upon by key actors.
- Forever Focus: Having reached its service delivery milestones across the district, Water For People invests further in the service authority and service delivery capacities, as well as water resource management skills and practices to optimize future availability of water. It is important to mention that although there is a distinction between 'everyone' metrics and 'forever' metrics, in practice, Water For People does not follow a linear process of investing in infrastructure to reach everyone and only then begin to work with service authorities and providers on sustaining that infrastructure investment. Rather, the foundations for sustained service delivery are laid during the 'Building Everyone Forever' phase through, for example, developing infrastructure asset registries, or providing training on calculating tariffs that cover O&M costs. Monitoring of levels of service continues to be done annually, as does the SSC.

[3] For more details on the overall approach, the following document may be of interest to the reader: Everyone-Forever-Model-Summary-Jul-2021.pdf (waterforpeople.org)

[4] More information on the checklist is available here: https://thewashroom.waterforpeople.org/resources/2021-sustainable-services-checklist-analysis/, https://thewashroom.waterforpeople.org/resources/sustainable-services-checklist-tool-uganda-sample/.

- Transition to Exit: Once levels of service delivery have been reached and maintained, and the metrics included in the SSC have been met, Water For People shifts into a more consultative role and begins actively planning its exit from the district.
- Exit: This is the point at which Water For People is confident services will be sustained by service providers and supported by a service authority with the capacity to continue to plan, manage, and supervise high quality water services. At the time of writing this case, Water For People has not yet exited any districts.

Focus for this case study

Although the overall implementation model is roughly the same, important nuances exist in different country and district contexts. For this case, a district in rural Perú, Asunción, has been selected. Water For People has been working in Asunción since 2013, conducting a wide range of activities to support reaching the Everyone milestones of every community, household, and public institution having access to an intermediate or high level of service[5] in 2018 and 2019. It is currently in the 'forever focus' phase of implementation[6] so was deemed an appropriate test case for the research.

Water For People has conducted diverse activities addressing various factors in the water system over the nine years that it has been working in Asunción. However, this case study will focus on assessing the system changes achieved through its work on ***planning and financing*** universal services, ***finance*** for O&M, and ***skills*** of both district WASH offices and service provider operators. These factors have been prioritized because an initial assessment of Water For People'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. 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 achieving sustainable water services, these three areas have yielded more significant changes than Water For People'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 to 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. Here, resources are defined broadly to include things like information, relationships, and skills as well as more tangible

[5] Additional information on how Water For People calculates service delivery levels and how this map to the Joint Monitoring Programme's categorisation can be found here: SDG 6 changed the game: Now let us agree how we should measure it - The WASH Room (waterforpeople.org)

[6] As of 2022, the Water For People Perú team and district government plan to move to the "Transition to exit" phase in 2024 and fully exit Asunción in 2027.

resources like products, assets, and finance. Thus, a performance improvement means that whatever is provided is *better* in some measurable way.[7]

For the sake of 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.

Behavior changes and performance changes are related: behavior changes are desirable because they can result in performance changes. For instance, an Agenda for Change member organization 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 stressors?

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:

[7] 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.

- 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**.**

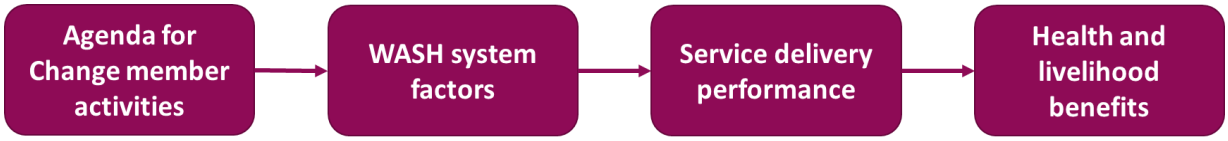


Figure 2: Agenda for Change members' theory of change, implicit in system strengthening efforts

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.

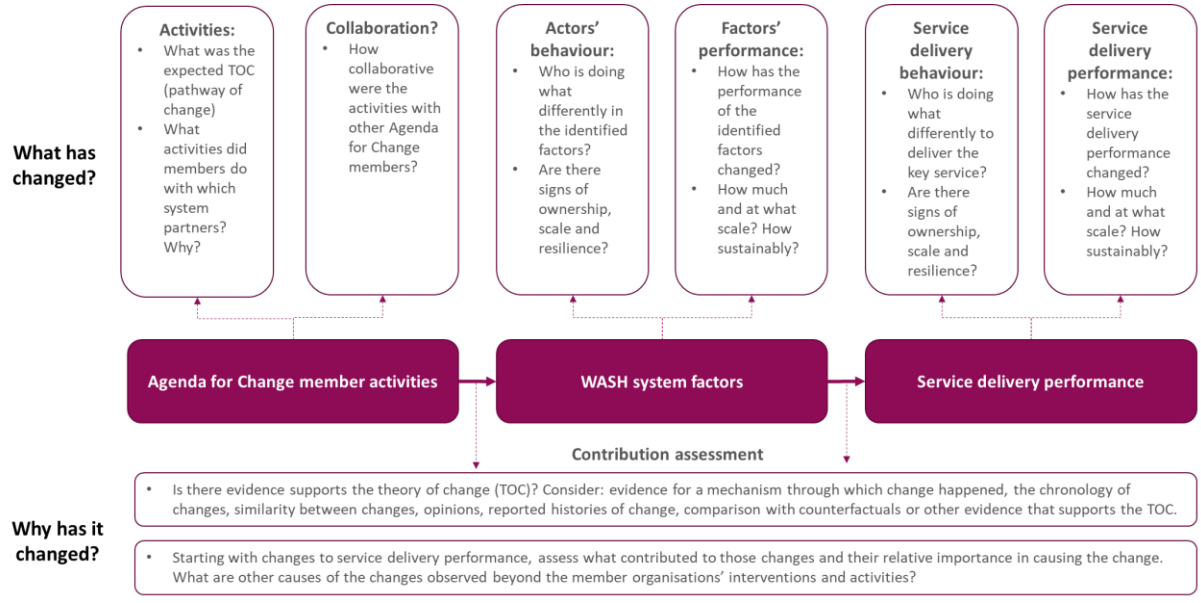


Figure 3: Research framework

The analysis done in this case study has been entirely based on existing data, including internal Water For People water level of service data, SSC information, and publicly available government data; progress reports; financial data; and follow up discussions with Water For People staff. Realistically, very few organizations and programs will have robust (qualitative and quantitative) information relating to all the questions about systems strengthening 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 Water For People's work in water that are included in this assessment, showing the links between behavior changes and performance changes at the activities, factors, and service delivery levels.

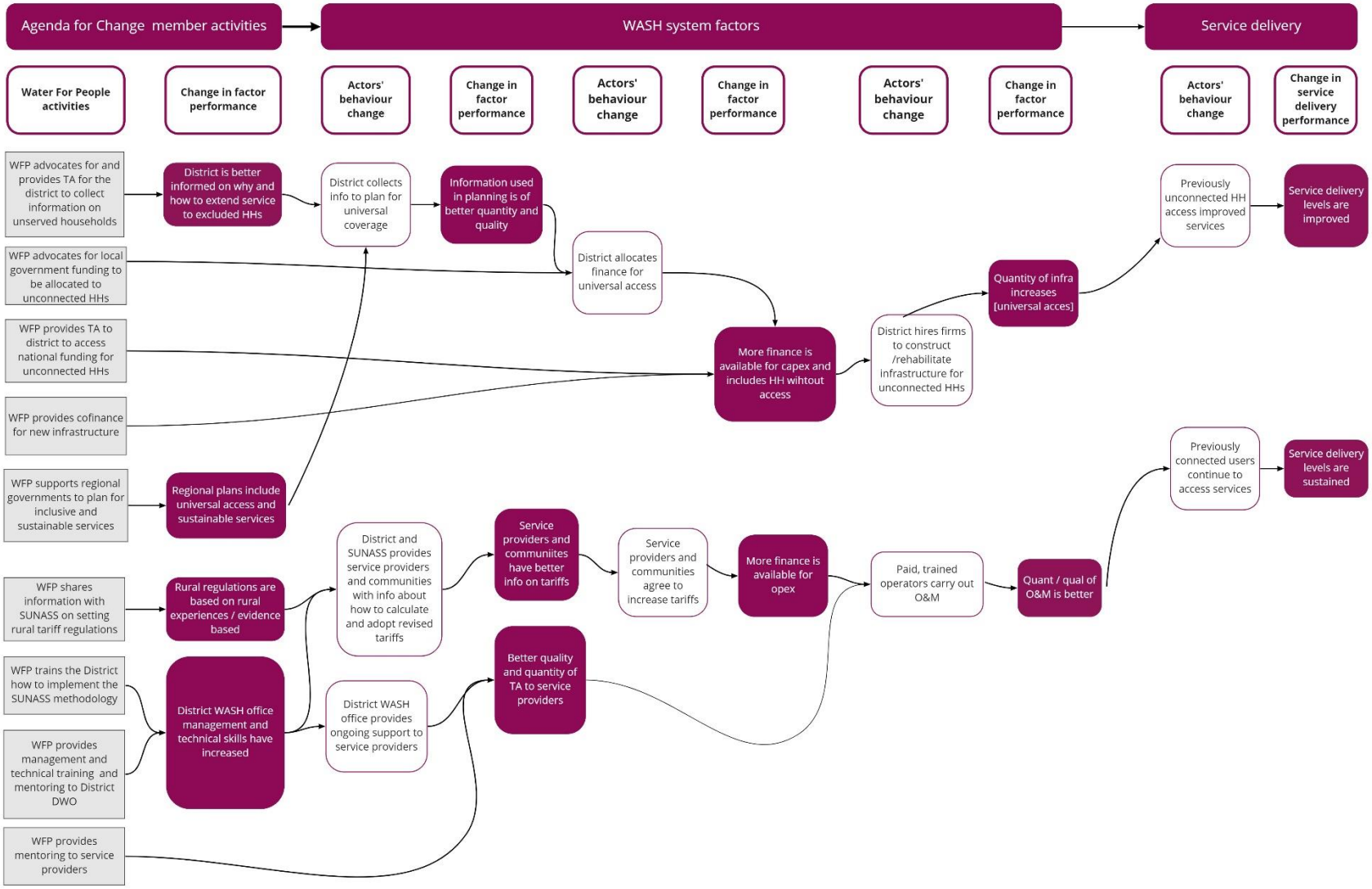


Figure 4: Water For People's theory of change, for the streams of work included in this assessment

Structure of the case study

This case study starts by explaining how the water system was working when Water For People began working in Asunción, including information about who was doing what in the system (behavior) and what the effects of that were (performance). The case study then goes on to examine the three focal streams of work – ***planning and financing*** universal services, ***finance*** for operations and maintenance (O&M), and ***skills*** of both district WASH offices and service provider operators– in detail. In each of these sections, we present what Water For People did, what behavior and performance changes this led to 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:

Scale	Red	Little or no evidence of innovation spreading beyond pilot area (district in this case)
	Orange	Little or no evidence of innovation spreading to the full program area (regions / replication districts in this case)
	Green	Good evidence of innovation being adopted across the program area
Ownership	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
Resilience	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 WATER FOR PEOPLE STARTED

Perú is divided politically and administratively into 26 regions, 196 provinces, and 1,869 districts. Asunción, a predominantly rural district, is in the northern province of Cajamarca, which is in the Cajamarca region (see Figure 6). Of its nearly 11,757 inhabitants, 92% live in rural areas, making it the second most rural district in the Cajamarca province. [3] As of 2013, 55% of its population was living in extreme poverty, higher than the provincial figure of 19% and the regional figure of 22%. [4]

Figure 6. District location

Service level baseline[8]

Official 2007 census figures stated that access to water in urban areas in the district stood at 95%, and access in rural areas was just over 71%. Water For People's baseline conducted six years later in 2013, corroborated the urban access and suggested a 12% increase in rural water access over the period from 2007-2013. [5] Approximately 5% of urban inhabitants and 17% of rural inhabitants did not have access to any improved water source in 2013.

Population		Access to water 2007 census data (WFP 2013 baseline)
Urban	940 (8%)	95.0% (94.48%) *
Rural	10,817(92%)	71.2% (83.21%) *
TOTAL	**11,757 (100%)**	**73.7% (84.41%) ***

Figure 7. Baseline access levels [6]

Prior public and development partner investment in infrastructure contributed to all communities within Asunción having at least one water supply scheme, sometimes more than one depending on the size and topography of the village. However, very few of these provided services to all users located in the community. Most water supply schemes in the district are gravity fed with household connections. Generally, water sources are mountain springs or rivers. Distribution systems can be quite expansive, as rural communities of Asunción are highly dispersed with households at least 300m apart.

[8] Water For People's measurement has changed over the years. For the purposes of this case study, both the 2013 baseline report, which used a slightly different methodology for some indicators, and the data sets from 2017-2021 were reviewed. Where the consultants felt it was appropriate to use 2013 values instead of 2017, we have done so and made that explicit.

Although the initial baseline provided a useful benchmark for access to any water service at all, over time Water For People's measurement, like that of the overall water sector, evolved to look at levels of service. In addition to access, levels of service composite indicators include metrics on availability, affordability, seasonality, and distance, which are collected and combined to assess the overall household level of service. In 2017, when this methodology was updated, the state of water services – not just access – was as follows in Figure 7.

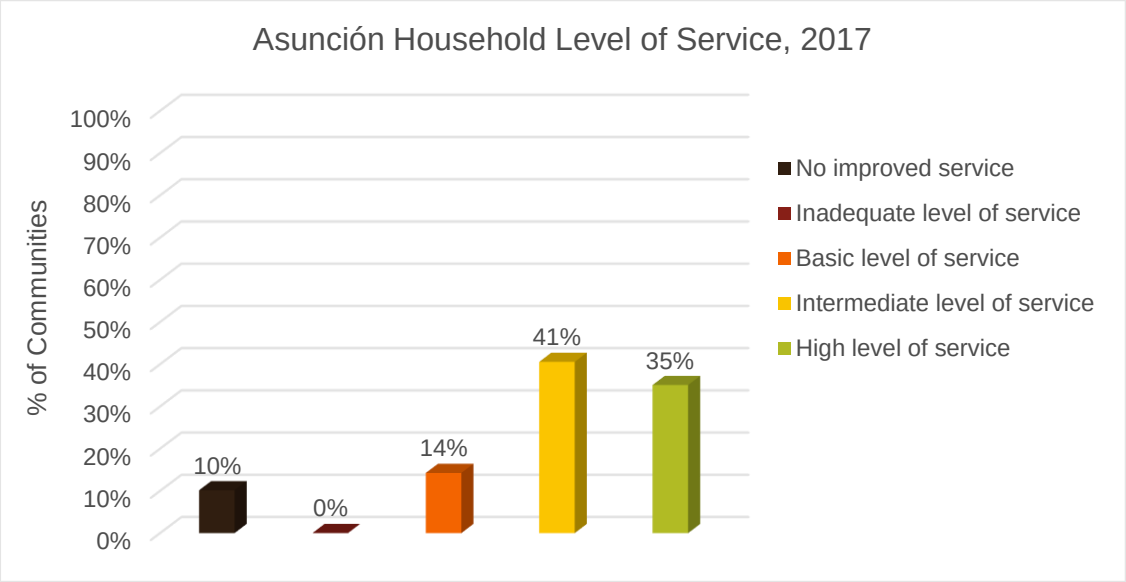
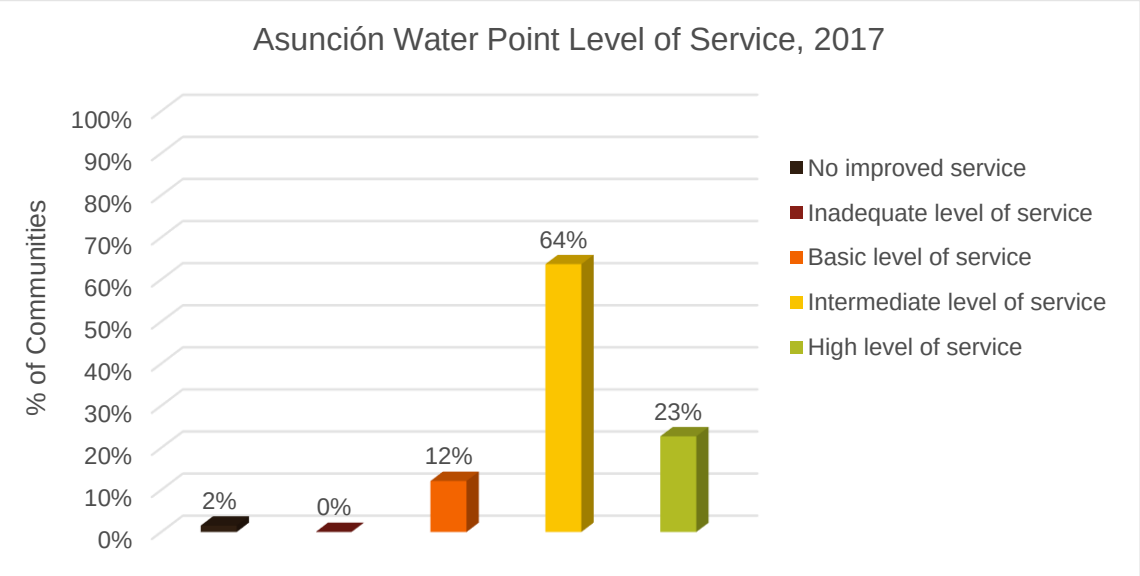


Figure 7. 2017 household level of service

In addition to collecting information on household water services, Water For People also measures eight indicators at the level of the water scheme itself, to provide an overview of the level of service a scheme supplies[9]. Figure 8 below gives an overview of the level of service each scheme supplied. Like the household level of service monitoring, this composite indicator includes metrics on water availability, continuity, reliability, quality, quantity, number of users, and distance.



[9] More information on Water For People's monitoring methodology is available here: monitoring-framework.pdf (waterforpeople.org)

Figure 8. 2017 water point level of service

Key factor baseline information – planning, finance for O&M, skills

The district government created a District WASH Office (DWO) in 2012, formalizing what had been limited, district support linked to external projects when other development partners requested district counterparts to provide this. At the time of the 2013 baseline, this was staffed with one person with a budget of USD 15,468. [7] Planning was reactive in nature and limited to responding to either federal government programs or development partner opportunities. Support to water committees was ad hoc and unstructured. Health departments are statutorily responsible for monitoring water quality, but due to financial, human, and technical resources, were not regularly monitoring water quality.

Water committees existed for 98% of the water supply schemes, although only 23 of the 50 were formally registered and recognized as service providers[8]. Tariffs were being charged in 98% of the water supply schemes, and although they generally did not cover the costs of operations and maintenance, their existence suggested a nascent culture of payment for water services upon which to build. Close to one third of the water committees had not received any sort of administrative, technical, or managerial training. Two thirds of water committees did not have a designated, trained water operator. Those that did have an operator tended not to compensate them for their services. Most water committees reported chlorinating their water, with 43% doing so every 15 to 30 days, and an additional 51% doing so every three months.

3. PLANNING AND FINANCE FOR UNIVERSAL SERVICES

3.1. Activities

Over the period 2013 to 2018, in the 'Building Everyone Forever' phase, Water For People undertook several key activities to support the district government to plan for, and finance, universal services.

Water For People:

- Advocated for and provided technical assistance for the district to collect information on unserved households.
- Advocated for local government funding to be allocated to unserved households for self-supply or multi-family water schemes.
- Provided technical assistance to the district to access national funding for unserved households to be included in new or rehabilitated piped networks, where feasible.
- Offered to partially finance new infrastructure for unserved dispersed rural households.

As mentioned earlier, one of the first tasks that Water For People completes in a district is a baseline assessment of coverage and service levels. This baseline data collection in 2013 confirmed each community had some level of water service, but that 17% of households remained unserved. With its own institutional goals of universal coverage, and aligned with the Sustainable Development Goals, Water For People advocated for the district of Asunción to better understand where these unserved households were, why they remained unserved, and to determine possible technical options to supply water services. Having already reached over 80% of its population with water services, the district government was interested in extending services. Water For People's offer of

technical assistance to collect this information and potential co-finance to fund infrastructure for dispersed households, once identified, were important triggers to this district decision.

In 2018 – 2019, having met their internal universal access milestones[10] by demonstrating the concept that a local government was willing and able to invest in planning and extending services to unserved households, Water For People moved into its 'Forever Focus' phase. As part of its scale efforts, which Water For People considers a separate work stream to 'Forever Focus', they expanded the geographic scope from the district level to working with regional governments to help them support districts under their jurisdictions to extend access to unconnected households.

In practice, this has meant both documenting the process of reaching universal access in Asunción through videos and leaflets and inviting representatives of the regional governments of Lambayeque, La Libertad, and Cajamarca to visit the Asunción district and speak with involved parties. Having shared basic information on how the process unfolded in Asunción, Water For People began convening meetings between various regional government authorities to develop a comprehensive multiannual plan and strategy to reach universal and sustainable services. Site visits were then held to prioritize 'scale up' districts in each of three regions. This is a live work stream area and activities are now underway to facilitate agreements between regional and district governments, begin collecting detailed information on unserved households, and eventually design and finance technical solutions.

Water For People's activities at district and regional levels have led to two important performance changes. In their 'Building Everyone Forever' phase, because of the various advocacy and technical assistance provided, as well as the offer to co-finance, the district was better informed on how and why to extend services. And in the scale up phase, one of the first changes that has been documented is a change to the planning process at the regional level, in which a district-wide approach to closing coverage gaps is underway.

District is better informed as to how to extend service to excluded HHs

A precondition to the districts' willingness to invest in extending service to the remaining 17% was relatively high levels of coverage across the district. In this context, advocacy, technical assistance, and an offer to co-finance infrastructure by Water For People resulted in a district more willing to invest in understanding where the coverage gaps were geographically, possible technical ways to close them, and the financing implications of closing the gaps.

Having been convinced of the 'why' to invest in doing this, the 'how' was straightforward. Collecting this type of information – georeferenced household location, water source identification, and indicative technical options – does not require specialist expertise, and Water For People had been previously working with the district to collect slightly different household monitoring data before, so it is built on prior experience and knowledge.

[10] More information on how Water For People calculates its milestones is available here: Everyone Forever Tracker | Water & Sanitation Data | Water For People

Regional plans include universal access and sustainable services

Regional, or sub-national, governments in Perú have produced water planning documents before. What was different about this process and the outcome, was a focus on universal, sustainable services in an entire district, rather than a more dispersed approach to closing coverage gaps. Prior regional plans did not include an emphasis on 'closing the coverage gaps' or extending universal services at a district level The planning process led to a prioritization of districts within each respective region that were relatively close to reaching universal access. With the goal of regional governments eventually replacing the advocacy role that Water For People initially played in persuading Asunción to prioritize its resources in understanding the locations, reasons, and possible solutions.

3.2. Factor behavior and performance changes

As a result of a better informed and more willing district government, a series of subsequent behavior changes occurred:

1. District WASH Office collected information to plan for universal coverage.
2. Subsequently, the District WASH Office coordinated with the Project Development Office, the Office for Rural and Urban Development, and the Planning and Budgeting Office to extend first time access to unserved households, leveraging finance from Water For People and national government sources.

These two behavior changes led to performance changes in planning and finance factors.

Better quantity and quality of information for planning

Prior planning for water infrastructure in the district did not include detailed information on unserved households. Once the district decided to carry out this activity, this led to an increase in the quantity of information available for planning as more information was available and used, as well as an increase in the quality of information. The detailed assessment of unserved households was separate to annual monitoring that verifies levels of services and took place over four months and included such information as the numbers of households per community without access, georeferenced locations of unserved households, identification of possible water sources for infrastructure development and, where relevant, suggested non-traditional technical options.

More finance is available for new infrastructure and includes unserved households

The quantity of finance available to reach universal access has increased because of better planning and information. A blend of national government, district government, community, and Water For People contributions all supported first time access investments.

National government infrastructure investments used to require a minimum of fifty household connections to qualify for funding. Whilst that minimum connection level no longer formally exists, investments that will reach larger numbers of people are prioritized for federal funding.

That said, in the case of Asunción, several project proposals for national investment programs were modified over the years to include some of the unserved households. In other instances, the scale of the investment was simply too small to be able to access federal funding. In these cases, which were spread out across sixteen communities, investment costs were shared amongst users, district government, and Water For People.

3.3 Scale and sustainability

The district of Asunción had never collected such information before and reconstructing the theory of change and reviewing the evidence along it shows they used this to fulfil their mandate of ensuring their citizens have access to drinking water. To understand the extent to which they were systemic changes, it's important to also assess the **scale** and **sustainability** of these changes by assessing the scale, ownership, and resilience of the behavior changes that underlie them.

Construction of new infrastructure is logically required to ensure that better planning and increased finance do indeed lead to better services. Given that construction firms will do what they are paid to do, this step in the process is included in the theory of change but assessed together with the behavior of increasing finance.

Scale, ownership, and resilience: district WASH office collects information to plan for universal access

Scale:

The information, planning, and financing of new infrastructure for households who were previously unserved has covered the entire district of Asunción. All thirty communities were visited, as were the hundreds of unconnected households.

A scale up phase is currently underway in northern Perú, targeting five additional districts in the Cajamarca region, where Asunción is located, four additional districts in the Lambayeque region, and four additional districts in the La Libertad region. The cumulative population of these 13 'scale up' districts is nearly 90,000 households, although information is currently being collected on how many people still lack access to even a basic water service.

Ownership

The district government invested in the personnel costs to collect this information. Although the exact figure was not available, it was the equivalent of hiring two external consultants for a four-month period. The scale up districts where this has task has already begun have also borne the costs of this information gathering exercise.

Resilience

The initial advocacy to instigate this process came from Water For People persuading the district to invest in understanding where unserved households were located and the reasons for their exclusion from improved services. Should it be necessary to conduct a similar exercise in the

future, or in additional districts, this initial advocacy would need to be performed by somebody else. Efforts are underway in the scale up process to transfer this task of advocating for districts to collect this information to the regional government, but it is too soon in the implementation of the scale up phase to determine how viable that approach will be.

Asunción managed to cover the costs of the information gathering / planning exercise themselves, and should it be necessary to collect additional information in the future, federal funding is available to support *non-infrastructure* related costs, such as monitoring or information gathering.

Scale, ownership, and resilience: District allocates finance for universal access

Scale:

These activities covered the entire district of Asunción and are the logical next step in the 13 other districts once the information gathering and planning exercises have been completed.

Ownership

Of the infrastructure projects planned with the information collected on unserved households, the district financed an estimated 42%. [9] This 42% is equivalent to 10% of its annual public works budget, which was deemed to be a feasible amount for a rural district of that size to invest. Additional investment came from users (16%) and Water For People (42%). Additional finance was secured from complementary national government infrastructure programs, in which unconnected households were included in the project designs following the planning exercise.

Resilience

Finance from national government is available for water infrastructure, but many of the investments needed to ensure universal access are too small to access federal funding. Strategies for sustainably funding universal access being tested in the scale up districts aim to replace the relatively small contribution of Water For People through advocating for investing of district funds, leveraging other sub-national (i.e., regional and provincial funds); or planning to invest district resources in phases. It will be important to monitor how scale up districts decide to fund their investments in universal access as Water For People will not provide additional finance in the 13 scale up districts.

There is a potential risk that the national government priorities, and thus funding, could change, but Perú has had several central government transitions and this funding has remained intact, suggesting that the water sector remains high on the national political agenda.

Information on technical options is needed, but the type of information required is fairly basic engineering, which consultants in Perú can provide.

4. SKILLS AND FINANCE FOR SUSTAINABLE SERVICES

4.1. Activities

Increasing the knowledge and skills of both service authorities and service providers has been a key area of work for Water For People since the start of their interventions in Asunción in 2013. In addition, advocating for increased finance for sustainable services through higher tariffs and ongoing support to service providers has complemented the knowledge and skill building activities. A summary of key activities undertaken in these joint, but complementary work streams is as follows:

- Water For People providing management and technical training and mentoring to the district WASH office personnel as well as 'how to' comply with sector - wide planning, budgeting, and monitoring processes.
- Water For People providing training and mentoring to service providers.
- Water For People sharing information with SUNASS on setting rural tariff regulations.

Water For People's approach to training[11] district WASH staff has evolved over the last eight years and as such, its activities have evolved over time. Initially, Water For People provided training to district WASH staff themselves. These trainings included a wide range of topics important to the functionality of the district WASH office, but the perceived added value was the inclusion of strategic management practices in addition to technical aspects of water management. For example, the early (2014) training modules were framed as "The Application of District WASH Office Management Tools" and included information and good practices on developing a water and sanitation strategic plan, preparing annual operations plans, planning and costing universal services, securing operating costs for the district WASH office, asset management, the institutional framework for water and sanitation, and water and sanitation service monitoring. [10]

As the sector evolved over time, and support to district governments became a more formalized responsibility of the regional (sub-national) governments, Water For People's approach to supporting skills at the district level evolved. Rather than continue to upskill existing staff or train new staff itself, Water For People shifted to providing lighter touch technical assistance to the regional government to fulfil their mandate of training and retraining district WASH staff. Although formal training is conducted by regional governments currently, Water For People provides ongoing and bespoke mentoring to the district WASH office in this 'Forever Focus' phase.

An important part of Water For People's mentoring to the district WASH team has been through providing advice on "how to" implement some of the wider sector planning and monitoring processes. For example, federal funding under the Sector Institution Budgeting Program is available for district WASH office operations, but various plans must be developed, implemented, and monitored to secure transfers from national government. Specifically, Water For People has supported the district WASH office to develop, implement, and monitor its annual WASH operational plan, create and implement

[11] The guides themselves are available here: Guias para Gobiernos Locales y Regionales - The WASH Room (waterforpeople.org)

a specific plan for supporting water scheme operations and maintenance, as well as using the government monitoring system (DATASS).

At the level of service providers, narrative reports suggest that Water For People took a more active role during the 'Building Everyone Forever' phase, leading trainings of service providers themselves, whereas currently, the district WASH office provides ongoing monitoring, re-training when necessary, and mentoring to service providers. During this 'Forever Focus' phase, Water For People continues to provide some mentoring to service providers, as well.

One of the training inputs that Water For People initially provided directly to the district WASH office and service providers was the use of a financial planning tool called AtWhatCost[12]. AtWhatCost was designed to help communities, service providers, and service authorities understand the full costs of operating, maintaining, and eventually replacing a water supply scheme. During the latter stages of the 'Building Everyone Forever' phase, changes in the regulatory environment led to the national regulator, SUNASS, assuming responsibility for rural water regulation in addition to urban water provision. As part of this change in mandate, Water For People collaborated with SUNASS to develop a methodology for determining household tariffs in rural areas.

In practice, this meant inviting representatives of SUNASS to visit Asunción and other districts to better understand the reality of dispersed rural water management, sharing the AtWhatCost tool with SUNASS, and testing a revised tariff calculation in Asunción. The methodology was formally approved in July 2018 and Water For People, the district WASH office, and local SUNASS offices continue to roll it out in Asunción.

As a result of the various capacity building efforts through formal training and informal mentoring, two key performance changes occurred: better management and technical skills of the district WASH office (DWO) staff and evidence-based regulations for rural water tariffs.

DWO knowledge and skills have increased

There has not been an explicit assessment of capacities before and after training and mentoring, but the Sustainable Service Checklist includes some useful proxy measurements such as the development of water resource and asset management inventories, the completion of district WASH strategic plans and three-year operational plans, monitoring, and support visits to service providers costed and scheduled. The formal training conducted by regional governments assessed capacities by testing DWO staffs' knowledge at the end of each module, although this data was not reviewed for the district WASH office personnel who participated.

Internal reports dating back to 2013 suggest that an increased focus on management skills – the abilities to negotiate, persuade, and interact with the number of actors present not just in a district, but linked to regional actors as well, has increased over time.

An interesting reflection of these improved management abilities is that over 80% [11] of the projects submitted for federal funding have been approved in Asunción compared to the regional figure of 30%. [12]

[12] For more information on the AtWhatCost tool, a manual is provided here: Manual-3-AtWhatCost.pdf (waterforpeople.org)

Rural regulations are based on rural experiences / evidence based

Before the change in regulations in 2017, SUNASS's mandate was limited to regulating urban water service providers. Formal regulation of rural water service providers was a gap in the sector and with the updated mandate, it was necessary to review both how tariffs were calculated in rural areas and how that information could be best transmitted and shared with rural water users and service providers.

4.2. Factor behavior and performance changes

As a result of those prior changes, better skilled district WASH staff and evidence-based rural water regulations, a series of additional behavior and performance changes took place:

- DWO provides ongoing support to service providers.
- Paid, trained service providers carry out O&M.
- DWO and SUNASS provide service providers and communities with info about how to calculate and adopt revised tariffs.
- Service providers and communities agreed to increase tariffs.

Better quantity of quality of technical assistance by the district WASH office to service providers

A more informed and skilled district WASH office has contributed to improved technical assistance (TA) to service providers. The quantity of people providing technical support has increased to a total of 4 staff members up from 1 in 2013. The Cajamarca regional plan states that 74% of districts in the Cajamarca region only have one person in their district WASH office, so the number of staff Asunción manages to employ stands out.

The composition of the team is important to mention, too. The four staff members include a Director, responsible for setting the strategy and plans, liaising with other district departments, and managing the team. One staff member is responsible for training and mentoring service providers, another provides ongoing hygiene education to community members, and a third staff member is responsible for monitoring and information management.

Costed plans are available, and the activities needed to be able to fulfil their technical assistance mandate are funded through a federal budget for district WASH office activities and monitoring. In addition, the quality of technical support has likely improved as the approach to mentoring or troubleshooting problems with service providers has evolved over time from more centralised, classroom-based training to practical trainings and bespoke follow up when needed. This is reflected in the government database, DATASS, which measures the quality of TA to service providers and shows that in the Cajamarca region, 87% of service providers do not have access to adequate TA. In Asunción, however, quite the opposite situation is found, with 73% of service providers having good or regular access to TA.

Paid, trained operators carry out O&M

There has been an increase in the quantity of water supply schemes being managed by trained operators, up from approximately 30% of schemes in 2013 to 90% in 2021 according to Water For People's annual service provider survey. Furthermore, regional benchmarking suggests that in the entire Cajamarca region, only 50% of operators have received any training, so Asunción - with 90% of trained operators - outperforms the regional figures.

Service providers and communities have better information on tariffs

The technical regulation is written from a legal perspective and whilst important, not easily translatable to facilitate reflection and consensus building. Rather than a regurgitation of what the updated norm is, Water For People has worked with SUNASS and the district WASH office to package the information in a more accessible and relatable format that is more appropriate for rural water service providers and users.

More finance is available for O&M

Whilst tariffs do vary from scheme to scheme, the overall quantity of finance for O&M has increased from an average tariff of USD 0.45 in 2016 to USD 0.90 in 2021[13] following the workshops on revised tariff regulations. The SSC tracks several indicators relevant to this factor. Default payment rates have stayed similar over time, with 80% of service providers having less than 10% [14] default

rates in 2017 and 2021. Regional average default rates are nearly 20%, suggesting Asunción outperforms regional averages again. SSC data showed also showed that in addition to the tariffs themselves increasing and users paying their tariffs, the number of service providers that charge a tariff that covers O&M expenses has increased from 37% in 2017 to 75% [15] in 2021.

4.3 Scale and sustainability

The scale and sustainability of these key performance changes – better quantity and quality of technical assistance to service providers, better information on tariffs, better quantity of trained service providers and increased finance for O&M – depends on the scale, ownership, and resilience of the behavior changes that underpin them.

Scale, ownership, and resilience: DWO provides ongoing support to service providers

Scale:

The team of four people in the district WASH office allows them to cover the entire district, which is an extensive area with dispersed communities and households.

Information was not available as to whether the quantity and quality of support to service providers in the scale up districts has changed yet.

Ownership

Direct support costs have been covered entirely by the district for the last four years. Baseline investment in direct support was an estimated USD 15,000 in 2013. and has increased to over USD 72,000 in 2020, per the SSC.[16] Benchmarked against global figures for direct support costs [17], Asunción comes out at the high end of USD 4 per capita, suggesting that direct support costs are sufficient to support sustainable services.

Resilience

The district WASH office initially received training and information from Water For People and still benefits from ongoing mentoring. Evolving institutional arrangements in the sector led to Water For People working more closely with regional government to replace their role of supporting district WASH offices in the districts with ongoing training or upskilling. Whilst a possible solution to the challenge of supporting district WASH offices, questions remain on the feasibility of the region to do so in practice. For example, the 2020 Regional Water and Sanitation Plan states that there are only 16 regional staff to provide backstopping to 127 district WASH offices. [18]

Because of these regional capacity limitations and the reality that district (and other levels) personnel rotate frequently, efforts are also underway in the sector to certify district WASH office staff. The Regional Government has been promoting a certification for professional rural water and sanitation services management, aimed at the professionalization of workers who work in the district WASH offices, based on a profile aligned with the functions established in the regulatory framework, in alliance with labor competency certifying entities such as SENCICO.

Finance for operations of the district WASH office is also another potential risk, but it is currently available from various national government sources.

Scale, ownership, and resilience: DWO and SUNASS provides service providers and communities with information about how to calculate and adopt revised tariffs

Scale:

As of Water For People's 2020 monitoring reports, 78% of the service providers and communities in the district have received training on calculating and adopting tariffs from the district. The scale up districts have not yet begun this exercise.

Ownership

This function is carried out by the district WASH representative responsible for supporting service providers in coordination with a representative of the decentralized regulator (SUNASS). This position has been fully financed by the district for the last 4 years, including over changes in government administration.

Resilience

Should retraining of the district WASH office in the tariff-setting methodology be necessary due to personnel changes, the regional government is being positioned to play this role. In addition, a certification process is underway to persuade district governments to hire DWO staff with key competencies, although it is unclear if this methodology itself is part of the competencies required.

Scale, ownership, and resilience: Service providers and communities agree to increase tariffs

Scale:

75% of the service providers and communities in Asunción have agreed to increase their tariffs after participating in the training workshops. The scale up districts have not yet begun this exercise.

Ownership

Once a revised tariff has been calculated, the ultimate decision of whether to pay the updated tariff lies with the users themselves, rather than the service provider or the regulator. Indicative ownership signs are the formal agreement and documentation of community decisions following specific meetings to agree or disagree with the proposed tariff increases.

Users in Asunción appear to be paying their tariffs, with Water For People monitoring showing that 80% of service providers having less than 10% default rates, benchmarked against regional average default rates of nearly 20%.

Resilience

SUNASS has only recently taken on the role of rural service regulator, and although their mandate does include ensuring compliance with tariff changes, in practice there are no sanctions should users decide to not pay proposed increases in tariffs that better cover O&M costs. Thus, the final decision is a negotiation between the service provider and the users, with the goal that better informed parties will decide to increase their tariffs if they are not already covering the costs of O&M.

The goal is that communities and service providers will continue to review and update their tariffs annually, or as needed, but it is unclear whether this process has been repeated without support from the district WASH office of Water For People.

Raising tariffs to meet O&M costs requires acceptable levels of service to ensure consumers are willing to pay. 2019 data from the government monitoring system states that 91% of water supply schemes in Asunción are in 'good' shape, suggesting there are no immediate replacements or major upgrades needed.

Scale, ownership, and resilience: Paid, trained operators carry out O&M

Scale:

The quantity of trained operators has increased across the district from in 31% in 2013 per the baseline assessment to 90% in 2021 per the SSC. In addition, all operators are now paid something for their labor, which is a significant change from the baseline situation in which very few were paid at all.

It is too early to assess the extent of these changes in the scale up districts.

Ownership

Operator payments vary from service provider to service provider depending on the size of the scheme and the complexity of management required. At the high end of the range is the operator in the town of Asunción, who earns approximately USD 145 per month, which is half of the national minimum wage. In smaller communities, the figure is closer to USD 20 - 25 per month. A day's wage in northern rural Perú is approximately USD 11, so operating a small, rural water scheme at the lower end of the payment spectrum is more of a supplemental income rather than a full-time job.

Resilience

Operators move on and retraining may be needed, although the district WASH office is currently playing this role with continued support from a Water For People colleague. In addition, as the complexity of O&M increases, in particular regarding more sophisticated water treatment methods, this raises questions in the wider sector on feasibility of community-based water management.

Trained operators need to be paid and have access to funds to carry out O&M, so finance for O&M must continue to be available.

5. SERVICE DELIVERY LEVEL BEHAVIOUR AND PERFORMANCE CHANGES

5.1. What has changed?

Performance changes in planning, financing, and skills – of both district WASH offices and service providers - have all contributed to key behavior changes at the service delivery level – more people accessing sustained services. There are two important distinctions at this level; firstly, previously unconnected households access improved services; and secondly, previously connected households continue to access improved services.

Services are extended to previously unconnected households

Water For People's baseline data collection in 2013 estimated that approximately 17% of households in Asunción did not have access to an improved water source. By 2017, measurement changed, both within Water For People, and the sector as a whole, to account not just for access, but the quality-of-service provision[13]. As Figure 9 below shows, 2017 data estimated that 10% of households remained unconnected to water services, but that number gradually reduced over the next three years to just 3%. [19] Surveys confirmed this 3% of households chose to continue their water practices as is, and that they did not belong to any disadvantaged segment of the population.

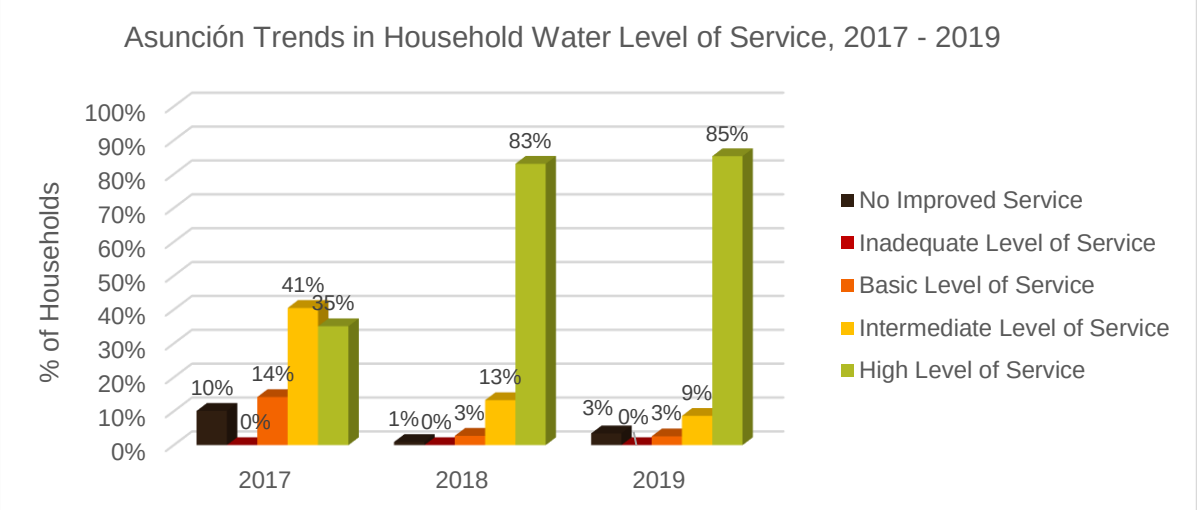


Figure 9: Trends in households' level of service. [20]

[13] For more details on how monitoring changed both within Water For People and the Joint Monitoring Programme to align with the SDGs, see this blog: https://thewashroom.waterforpeople.org/sdg-6-changed-the-game-now-let-us-agree-how-we-should-measure-it/.

Services are maintained for connected households

Ongoing provision of high-quality water services remains a challenge in the sector, and Perú is no exception. As the above graph in Figure 9 suggests, households continued to access improved water services over time. In line with sector measurement, Water For People no longer just counts access to water services, but its levels of service metric include indicators on water quantity, quality, reliability, and affordability.

A closer look at the metrics that make up a given level of service paint a more nuanced picture. In addition to collecting information on household water services, Water For People also collects information on eight indicators at the level of the water scheme itself. [21] Over the four-year period shown in Figure 10, specific service delivery metrics improved or remained high in water quantity, water availability, and reliability. Challenges remain in water quality, in which 31 of 66 schemes do not meet government water quality standards and worsened during the pandemic which is why the number of water points providing high (green) levels of service reduced in 2021.

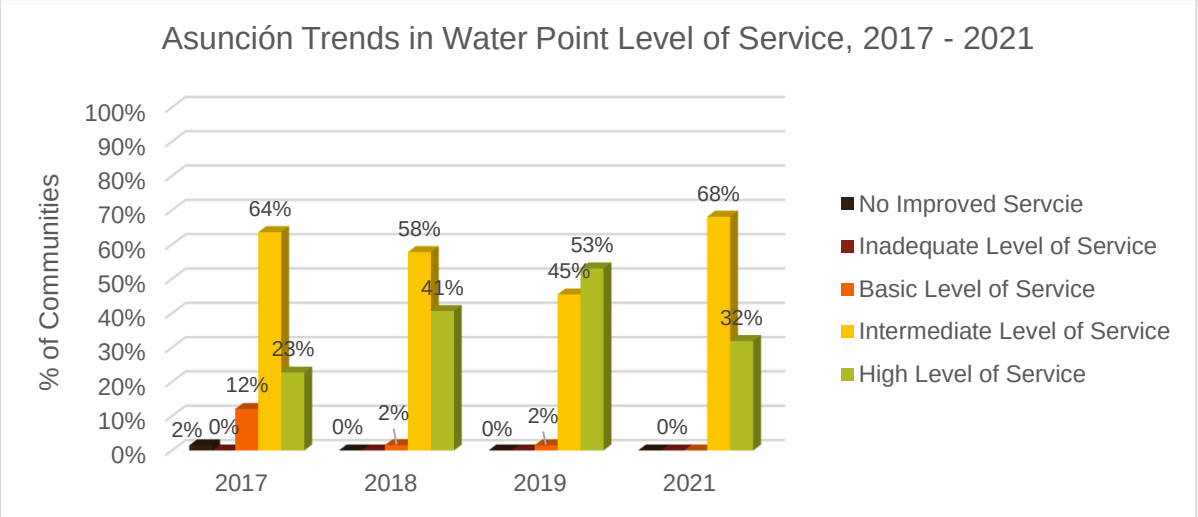


Figure 10: Trends in water point levels of service [22]

5.2. 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. As the evidence for both extending and sustaining services is quite similar, we have assessed the scale, ownership, and resilience of them together.

Scale:

By the simplest metric, more water services are being delivered to more people. From 2017 to 2019, the percentage of unserved households decreased from 10% to 3%. Going back even further, the gains are more impressive as the 2013 baseline noted 17% did not have access at all.

Overall service delivery levels have been maintained at either an intermediate or high level. 100% of communities had either intermediate or high levels of service in 2021, up from 12% basic, 64%

intermediate, and 23% high in 2017. Households with intermediate service decreased from 41% to 9%, whilst households with high levels of service increased from 35% to 85% over 2017 to 2019.

Quality remains the weakest indicator of the key service delivery metrics with nearly half of systems not meeting government water quality standards in 2021.

It is too soon to tell how system changes in the replication districts will contribute to improved service delivery levels or not.

Ownership

Community contributions to infrastructure development in for new users was USD 6,529.

Tariffs are not only being paid but appear to have doubled from approximately USD 0.45 in 2016 to USD 0.90 in 2021, whilst remaining affordable[23]. Additional revenue generating tactics have been noted, including "extraordinary" tariffs or loaning funds from water accounts with interest.

Resilience

Infrastructure is currently considered to be in good condition according to the government monitoring system and must continue to provide an acceptable level of service to ensure consumers continue to pay. Finance for minor and major upgrades is available through other government programs and districts are incentivized to invest in upgrading schemes from 'regular' status to 'good' and receive a bonus for doing so from the Ministry of Economy and Finances Incentive program. Water needs to be available and seasonal shortage problems mitigated.

Water quality challenges remain, from treating water itself to monitoring water quality and taking corrective action.

5.3. Why did these changes happen?

Two key positive service delivery results have been assessed: a decrease in the number of people without access to any water service; and sustained service delivery levels for previously connected consumers. Although Water For People has not established a counterfactual through its own analysis or through external evaluation, reconstructing the theory of change and examining the evidence available suggests they have significantly contributed to changes in the planning and finance functions that enabled previously unserved households to access water. Government was not collecting this type of household information before Water For People advocated for such practices, neither at the district level in Asunción, or at the regional level. The Ministry of Economy and Finance funds a results-based payment scheme for district governments, and whilst many key water and sanitation indicators must be met to trigger payments, planning for and financing universal service provision is not one of them, further suggesting the contribution of Water For People to these factors.

Exploring contribution to sustained levels of water services is more complex. With first time access, an increase in users is a clear outcome which can be assessed. In terms of ongoing service delivery, maintaining high service delivery levels becomes the goal. Many factors contribute to whether services are sustained such as a reliable water source, infrastructure continuing to function

technically, service providers that can manage the infrastructure adequately, and that households value and use the service. That said, evidence in the wider sector confirms the importance of skilled operators, tariffs being paid that cover O&M, and in the case of community-managed water systems, ongoing support to service providers. Again, reconstructing a detailed theory of change and examining the evidence available suggests that Water For People's activities to improve the skills of district WASH personnel to be able to provide ongoing support to service providers has contributed to maintained levels of service.

However, several factors beyond Water For People's interventions have enabled their support to be effective and resulted in sustained services for more people; it is not possible to separate the impact of these factors on the results. Firstly, the institutional arrangements in the water sector are relatively clear, with specific roles established for national, sub-national, and district governments, and across disciplines, such as health and education sectors.

More specifically, and a critical, positive contributing factor in the case of the results in Asunción, is that public finance is available and accessible for both capital expenditure for new or rehabilitated infrastructure and ongoing service provision. Since 2010, The Ministry of Finance (MEF) and the National Rural Sanitation Program (which includes water) have implemented a payment by results (PBR) scheme designed to improve the quality of public services provided by local governments nationwide. For water, this includes demonstrating progress towards goal 5 of the PBR scheme – "ensuring the quality and sustainability of the provision of water services for human consumption." This Municipal Incentive scheme incentivizes local governments to implement planning and budgeting processes, ongoing support to service providers, and the use of the government monitoring system. It is clearly a key driver of district practices, in that to receive the PBR payment, they must comply with planning, budgeting, service provision support, and monitoring. Put another way, pre-existing political will at national and sub-national levels, manifested in regulations that specify institutional arrangements and sufficient finance to implement that will, have been important contextual factors in this case.

Another factor that enabled Water For People's work to be successful was the relatively high levels of existing infrastructure financed and previously built by government programs, complemented by some prior investment from development partners. Advocating for reaching the last 10% of the population and planning and investing to do so was likely to be more feasible in a context with relatively high baseline levels of access.

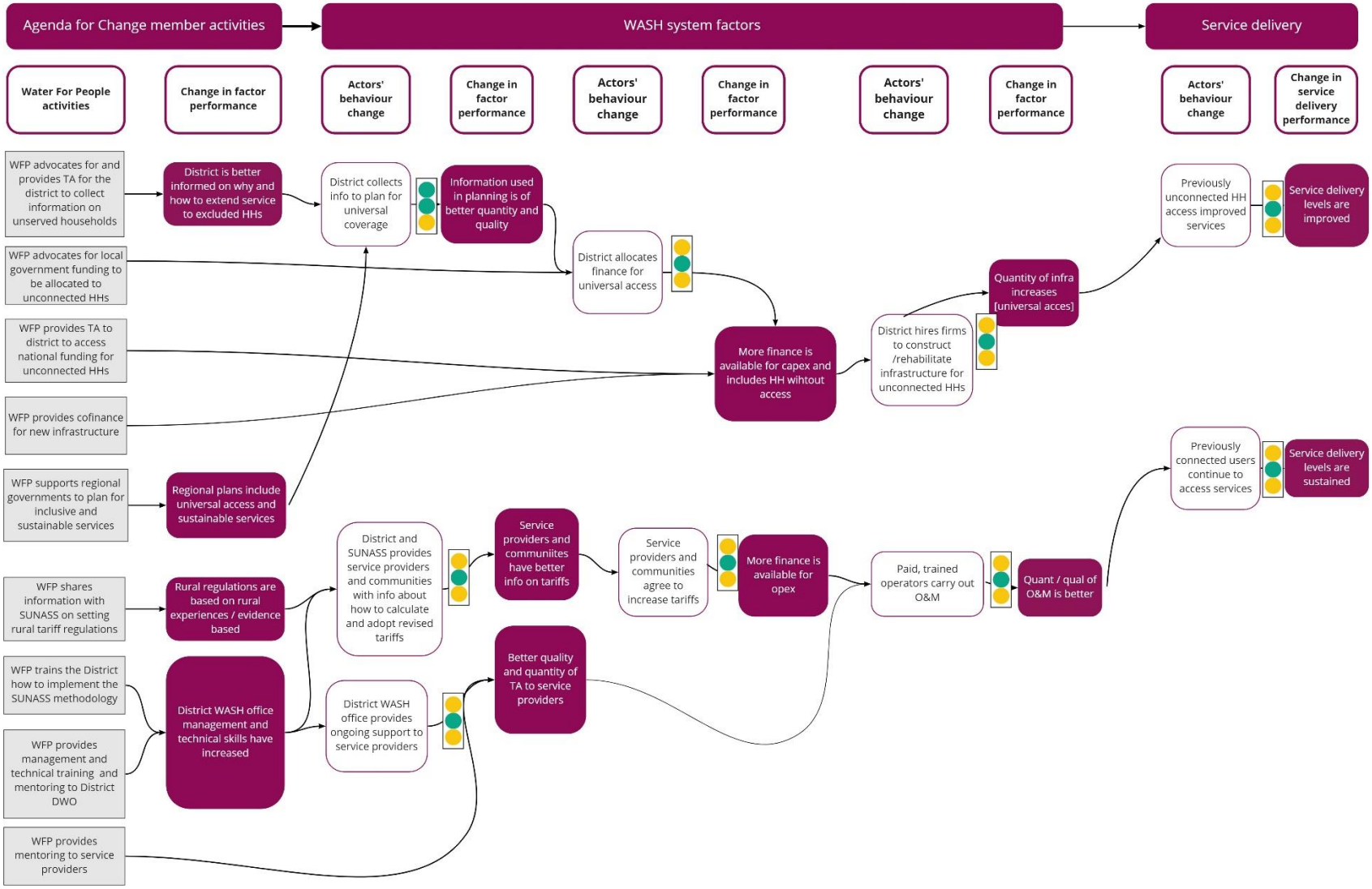


Figure 11: Water For People's theory of change, for the streams of work assessed with traffic light assessments of scale, ownership, and resilience

6. HOW WATER FOR PEOPLE FACILITATED CHANGE

The focus of this this report is on whether – and to what extent – systemic change was achieved by Water For People's work in rural water service delivery in Perú. Having established that a series of important and likely sustainable changes have occurred, it is worth examining how Water For People achieved these successes.

6.1. Water For People's approach

Water For People and Agenda for Change have extensively documented the 'how to' of a district-wide approach elsewhere[14], but it is worth highlighting a few fundamental aspects of the approach here given their importance to system-strengthening activities and subsequent service delivery improvements in the Asunción case.

Firstly, committing to sustainable access to water services has had important implications for how Water For People has chosen to work and evolve over time. Recognizing that their own exit is based upon service authorities and service providers having the requisite knowledge, skills, and finance to ensure water services continue to provide adequate levels of service over time has guided their interventions and subsequent monitoring efforts. To measure progress towards their own exit, Water For People invested in its own monitoring system and process to assess levels of service and a range of metrics they consider important for sustainability of service delivery.[15]

And realizing that in order for some of these functions, such as planning for universal access or providing TA to district WASH offices, to scale beyond any single district and be sustained once Water For People has exited, they are now in an interesting phase of exploring how such a model can work with regional government performing roles that Water For People carried out in Asunción. Asking "Who will do what we did?" is a fundamental scale up question that Water For People is currently testing in the scale up districts.

In practice, committing to supporting first a district, and then multiple regions to scale such an approach has important timing implications. Water For People signs multiple year memorandums of understanding to demonstrate their commitment to partners. As the case has shown, working with and through partners to achieve important step changes towards better performing factors takes time. Initial analysis of Asunción as a partner district began in 2013 and whilst Everyone milestones were reached by 2018 and 2019, the 'Forever Focus' phase is ongoing eight years after work commenced. Scaling the work to the regional level will require additional time to see both impacts at the water supply scheme level, such as improved planning or additional finance, and monitoring to assess whether these changes also contribute to improved or sustained service delivery.

Underlying the institutional commitment over at least a decade, which is the required timescale to achieve systemic change, is an organizational business model that by necessity prioritizes unrestricted

[14] For example, see A District Wide Roadmap for Universal Access to Sustainable WASH Services or Everyone Forever: Water For People's WASH System Strengthening Model.

[15] To our knowledge, the links *between* the two key monitoring processes had not been explored before this study; rather Water For People reported on them independently of each other.

funding. Many similar international NGOs operate on a project-by-project business model, but in Water For People's case, country teams develop multi-year operational plans for their work in each district (plus replication and national scale efforts), then the business development team raises funds to meet those needs, which includes a significant portion of unrestricted funds. In this case specifically, from the period 2012 to 2020, it is estimated that USD 2.59 million from 5 donors, including Green Empowerment, Kimberly Clarke, Caterpillar Foundation, Colgate Perú, and Xylem, as well as unrestricted organizational funds, have been invested.

6.2. How important is collective action?

Agenda for Change promotes collective action as a central pillar of achieving strong WASH systems. [24] 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. Secondly, they may work with other NGOs also funded by donor actors. Water For People's activities in Perú have been much more focused on the former, as its entire strategy is based on supporting service authorities at different levels and service providers to facilitate sustainable services. In addition, in the context of Asunción there is currently limited involvement of other development partners or NGOs.

Although in the past donors and NGOs were active in the Cajamarca region, their numbers have decreased over time as donors have shifted their priorities to other regions. Water For People activity reports mention different collaborative efforts over the past eight years, such as engagement with the Global Water Partnership and support to *Centro Ideas*, another NGO, to adopt the Everyone Forever model, but the scope and impact of such relationships has been limited. Of much greater importance to both the scale and sustainability of water services has been the ongoing collaboration with the various local and regional government agencies.

The district wide approach that Water For People implements, as well as the scaling up efforts underway at regional level, demonstrate active collective action intent with the diverse government agencies responsible for various aspects of service provision. In this case alone, there is evidence of collective action between the district WASH offices, the decentralized regulator's office, and water committees. Supporting the development of a regional plan included convening multiple regional government agencies, such as the Regional Ministry of Housing, Construction and Sanitation Offices, the decentralized offices of the national regulator (SUNASS), the Citizen's Action Centre of the Ministry of Housing, and Environmental Health Offices. In fact, deepening the relationships between the diverse agencies involved has been a key component of the work to date, even if it is not explicitly measured.

An important indicator of collective action is investment in shared priorities. Complementing the USD 2.59 million investment from Water For People towards achieving sustainable water services was a USD 960,000 investment from the district government and citizens in Asunción.

7. 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 Water For People's work – this section includes a summary of what was learned about Water For People's contribution to systems change in the rural water system, as well as reflections on the approach.

7.1. Water For People's contribution to systems change and improved service delivery

Water For People's work in the rural water system in the district of Asunción has demonstrated that improving key factors in the WASH system with local actors has made significant contributions to improved and sustained service delivery. ***The changes in the planning and financing factors for universal access facilitated by Water For People have a clear and evidenced link to improved water services for previously unserved households***. Neither Asunción nor the scale up districts were investing in collecting these types of information before engaging with Water For People, let alone allocating finance to extend or provide first time access to dispersed, unserved households. And whilst the national, results-based incentive program provides financing for districts meeting key targets related to service provision, it does not specifically incentivize extending first time access to dispersed households, which provides further weight to the additionality of Water For People in these factors.

In addition, Water For People's work with district WASH offices and the national regulator on better information for tariffs that cover O&M and skills to be able to provide O&M have contributed to sustained service delivery levels over time.

Figure 12 summarizes some of the key data provided in the SSC referenced earlier, showing significant improvements in the case of trained operators and service providers that charge a tariff that covers O&M and no change in the default rates.

Indicator	*Baseline figure*	*2021 SSC figure*
Percentage of service providers with a trained operator	30%*	90%
Default rates less than 10%	78%**	78%
Percentage of service providers that charge a tariff that covers O&M	37%**	75%

**2013 baseline report*

***2017 SSC data*

Figure 12: Baseline and 2021 service provider indicators

The changes reported in Asunción above stand out even more when benchmarked against relevant regional indicators. Figure 13 below summarizes available and relevant benchmarks provided earlier in the document of how Asunción performs across key metrics related to the capacity of district support, service provider skills, and tariffs. The differences are notable across all metrics, suggesting Asunción performs much better than similar districts across these metrics, which are also the ones that Water For People has targeted over the intervention period thus far, strengthening the contribution even further.

Metric	*Asunción*	*Regional benchmark (n=127 districts)*
Number of district WASH staff	4	75% of districts only have 1 staff member
Service providers charging any tariff	100%	80%
Service providers have a trained operator	100%	24%
Service providers have good or adequate access to TA	73%	13%

Figure 13: Summary of Asunción performance on key skills, TA, and finance metrics [25]

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 service providers. These behavior changes were, in turn, triggered by a chain of WASH system factor performance changes and behavior changes – for instance in **planning for universal access to water services that** can be traced back to Water For People activities, reflecting the theory of change visualized in Figure 14 below and expanded upon in Figures 4 and 11, above.

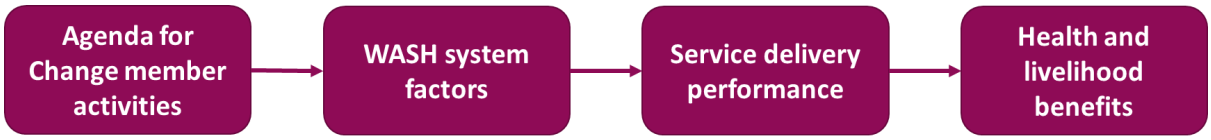


Figure 14: Agenda for Change members' theory of change, implicit in system strengthening efforts

As the service delivery (new access or access to sustained services) 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. Whilst this is inherently more sustainable than being directly dependent on Water For People itself, a more nuanced analysis of scale and sustainability can be done by analyzing the scale, ownership, and resilience of the key behavior changes.

In doing this, we found that there is good evidence at the district level for scale, with the changes in factor performance targeted affecting users across the district. Simply due to timing of the scale up process at the time of the research, the evidence of uptake in the scale up districts had not yet materialized. Ownership was strong across all the behavior changes, supported by evidence of either increasing investment by users in tariffs and paying operators, or the district securing or investing funds to provide direct support to service providers.

The greatest threat to the sustainability of new and existing water services is the resilience of the behavior changes which caused them. Part of this is a timing issue, as Water For People is still involved at the district level as it progresses through its 'Forever Focus' phase, providing mentoring to district WASH office and service providers. An interesting scale up process is underway, in which Water For People is testing whether the regional public actors can and will replace the various advocacy, technical assistance, and financing role that the NGO itself played in the Asunción case. Despite the potential risks to resilience, the current state of the water sector in Perú – a national policy of universal coverage, various sources of public finance for direct support, capital maintenance, and capital expenditure, creates a favorable environment to sustain and expand the results achieved in Asunción.

7.2. Reflections on the approach

Having previously applied this approach to the first test case with WaterSHED, some additional reflections emerged while testing this with Water For People's experience in Perú.

Like the WaterSHED case, this approach enabled us to map the links clearly, systematically, and comprehensively between one part of Water For People'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 they influence each other. 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.

Two important differences between the cases merit mentioning. In Cambodia, WaterSHED had already closed and exited, and had extensive third-party evaluations of its work. By contrast, Water For People is still active in both Asunción and beginning a scale up phase with three different regional governments and therefore we had to rely more heavily on monitoring data, progress reports, and interviews with Water For People staff to reconstruct the theory of change and add additional detail where necessary. Rather than an ex–post learning exercise as was the case with WaterSHED, the Water For People case shows that this can be used to assess what has changed already and why, and what is still in progress.

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[1] See especially A. Miehlbradt, 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/.

[2] Everyone, Forever: Water For People's System Strengthening Model, July 2021. Everyone-Forever-Model-Summary-Jul-2021.pdf (waterforpeople.org)

[3] Municipalidad Distrital de Asunción, 2014, 'Plan Estratégico de Agua y Saneamiento del distrito de Asunción 2014-2018.' Unpublished.

[4] Ibid.

[5] Ibid.

[6] Ibid

[7] Water For People, 2013, 'Biannual report 2013.' Unpublished. Converted to USD using FX of 0.3867.

[8] Municipalidad Distrital de Asunción, 2014, 'Plan Estratégico de Agua y Saneamiento del distrito de Asunción 2014-2018.' Unpublished.

[9] Water For People, 2021, 'Reporte de consulta de proyectos.' Unpublished.

[10] Water For People. 2014. 'Biannual report 2014.' Unpublished.

[11] Ministerio de Vivienda, Construccion, y Sanemiaento, 2022, 'Reporte de Consulta de Proyectos Asuncion.' Unpublished.

[12] Gobierno Regional de Cajamarca, 2020, 'Plan Regional de Saneamiento 2021-2025,' Unpublished.

[13] Water For People, 2021. Internal report. Unpublished.

[14] Water For People, Lista de Verificacion de Servicios Sostenibles, 2021, unpublished.

[15] Ibid.

[16] Water For People, Lista de Verificacion de Servicios Sostenibles, 2021, unpublished.

[17] https://www.ircwash.org/sites/default/files/working_paper_5_-_arrangements_and_cost_of_providing_support_to_rural_water_service_providers_analyses.pdf

[18] Gobierno Regional de Cajamarca, 2020, 'Plan Regional de Saneamiento 2021-2025,' unpublished.

[19] WFP data.

[20] Water For People, 2020,'Trends in household service levels.' Unpublished.

[21] For more information on Water For People's monitoring methodology, see here.

[22] Water For People, 2021,'Trends in water point service levels.' Unpublished.

[23] Water For People, 2021,'Tariff consolidado 2021,' Unpublished.

[24] See https://washagendaforchange.org/glossary-term/collective-action/

[25] Author's elaboration based on DATASS data: DATASS - Modelo para la toma de decisiones en saneamiento (vivienda.gob.pe)