www.water-alternatives.org Volume 6 | Issue 3

Fogelberg, K. 2013. From adopt-a-project to permanent services:
The evolution of Water For People's approach to rural water supply in Bolivia
Water Alternatives 6(3): 367-383

From Adopt-a-Project to Permanent Services: The Evolution of *Water For People*'s Approach to Rural Water Supply in Bolivia

Kate Fogelberg

Water For People, Arequipa, Peru; kfogelberg@waterforpeople.org

ABSTRACT: The dominant paradigm in rural water provision in Bolivia has focused on the provision of infrastructure, whether by government agencies or international cooperation groups. However, the investment in infrastructure has led neither to universal access for all Bolivians nor to consistently high levels of services for those who do have access to a water system. This paper will describe the transition of one international non-profit organisation, Water For People, from supporting dispersed water projects throughout the country towards targeted support of water services at the municipal level, aiming to support permanent universal services. The institutional evolution – including changes in governance, implementation strategy, donor base, and indicators of success – that allowed field programmes to shift from projects to services provides the context for the change of approach in Bolivia. A discussion of the various aspects that have changed in the organisation's operations in seven municipalities in Bolivia, from the scale of intervention, to municipal-wide planning information and tools, to support to service providers and service authorities, and an increased focus on post-construction monitoring, demonstrates how the *Everyone, Forever* approach is resulting in a more service- delivery-oriented approach in Bolivia.

KEYWORDS: Rural water supply, non-governmental organisation, service delivery, sustainability, Bolivia

INTRODUCTION

Although the Joint Monitoring Programme suggests the water sector has met the Millennium Development Goal five years early, the ever-increasing data on the sustainability of these investments paint a less rosy picture (RWSN, 2010). The historical assumption was that the lack of infrastructure in rural areas kept people from continuous access to safe water, but recent research from around the world suggests that, in fact, the sector is closing the gap of initial access, but sustaining investments in rural infrastructure will be the real challenge (IRC, 2012). Values vary from region to region, but on average, 40% of water projects fail due to poor planning and execution, lack of local ownership, absence of post-construction monitoring to actually learn if the project continues to function, or a narrow focus on projects and beneficiaries instead of sustainable services and capable service providers (Skinner, 2009; RWSN, 2010; Liberia WASH Consortium, 2011).

In this context, changing the goal from one of completing projects to working towards ensuring a sustainable service delivery has had profound implications for the US-based non-governmental organisation (NGO) Water For People (WFP), both at its headquarters and sites in Bolivia. This paper will discuss the institutional evolution needed to be able to make the change from projects to service delivery and provide examples of the programmatic changes in rural water provision supported by WFP in Bolivia.

THE ROAD TO CHANGE

Water For People was founded in 1991 by leaders in the North American water and wastewater industries as a response to the perceived failure of the international community to meet the goals of the 1980s 'water decade' of providing universal water access. Throughout the 1990s, the organisation raised money on an ad hoc basis and sent the funds to NGOs doing water projects in over 40 countries around the world. For the purposes of this paper, a working definition of 'project' can be understood as a community-level water infrastructure-dominated investment, heavily financed by external development agencies. At the same time, some supporters of this young non-profit organisation also engaged in direct provision of water and sanitation projects, travelling on their holidays to finance and construct water systems themselves. From Slovakia to Vietnam, and many countries in between, money was sent, projects were done, reports were received, but follow-up was nil.

By the late 1990s, however, leadership and staff had recognised that constructing dispersed water projects around the globe was not the most effective way to contribute to solving the global water crisis. The decision was made to hire a single staff person from each of the four countries – Bolivia, Honduras, Guatemala, and Malawi – and focus on fund-raising and implementation efforts there. But as often happens in small NGOs, chasing fund-raising targets and maintaining relationships with stakeholders have resulted in opportunistic decisions that kept the NGO involved in projects outside of the four targeted countries. Turning down donors' and influential board members' requests to fund or implement work in other countries did not happen. Although the organisation had 'focused' its work geographically, community water and sanitation projects in Bolivia could be found from the eastern jungles shouldering Brazil to the *altiplano* on the Peruvian border, thousands of miles away.

The assumption was that all of this activity meant thousands of people were benefiting from safe water. But like most international non-profit organisations, WFP had no post-construction systemic monitoring system, or linkages to national government monitoring systems, meaning it had no idea if the hundreds of pumps and taps it had installed still functioned as designed. At that time, the sector could only imagine success in terms of new beneficiaries, so organisations, WFP included, focused their efforts on new projects at the expense of understanding what may be happening with the hundreds it had already implemented.

During the period 1997 to 2005, the organisation supported a total of 148 projects benefiting an estimated 37,000 individuals in Bolivia. Of these projects, 80% were constructed in 10 municipalities, which almost always involved working with three main partners: local government, a local implementing NGO and the community. The 148 projects could be broken down as follows:

- 82 gravity-fed water projects, pumped water systems and hand pumps
- 35 sanitation interventions, including pit latrines, ventilated pit latrines, pour flush toilets, pour flush toilets with shower, and dry composting latrines
- 31 other projects, including 10 operation and maintenance training courses and chlorination initiatives (projects for following-up the free chlorine level and bacteriological tests in eight water cooperatives), and stand-alone hygiene education for communities

The majority of these projects followed the 'adopt-a-project' (AAP) financing model, in which a request for support would be sent to the headquarters office in the United States. Modelled on child sponsorship fund-raising strategies, where a donor literally directs his or her finance to support a particular child, the AAP method meant that the organisation had to wait for specific proposals to be generated in Bolivia. The headquarters team would then seek financing for the water project, leaving staff, partners, and most importantly, community members who drank from ponds and rivers, with no indication on when the water project would be completed. Similar to many small organisations, WFP did not have sufficient cash reserves to be able to make commitments without having those projects adopted. There were no annual planning tools in place such as budgets or operational plans, as all work

depended on how successful the headquarters team was in getting the projects adopted. A massive excel spreadsheet was used to track basic information – a project identification code, the amount needing 'adopting', the donor, and several columns to enter dates of reports received from the field or reports sent to the donors.

GROWING PAINS: SHIFTING FROM PROJECTS TO SERVICES

What is needed to supervise a few dispersed community water projects in Bolivia and get those projects adopted at headquarters is quite different from what is needed to fund-raise and programme for service delivery. A service delivery approach departs radically from the adopt-a-project approach which tends to focus on infrastructure in one community, with minimal attention given to financial and administrative management, and even less effort at monitoring or supporting management over time. At its very simplest, project approaches focus on building the water system, whereas service delivery focuses on building an ongoing service (IRC, 2012). Similarly, donors who are attracted to philanthropic giving that lets them feel direct 'ownership' over a project will not all be convinced that moving away from projects towards service delivery is as meaningful as being able to adopt a handpump. Going from having no strategy to a rather robust and ambitious plan required developing organisation tools and processes to guide and measure the implementation of that strategy.

WFP was forced to change key staff positions, in Bolivia and at its headquarters office as part of the shift from the AAP approach to facilitating sustainable services. This is easy to say, but hard to do in practice, as NGOs are not known for their rapid staff and management changes. Yet human resources are fundamental in this area of work, because if staff members still believe that the dispersed project approach is the way to solve the water crisis as the organisation moves on, any attempt at strategy will be undermined. A supportive leader and governance structure are paramount to making these types of changes; WFP's leadership believed this was the only way to make a dent in the water crisis and executive support for these types of changes and led the organisation through this transition. Without strong leadership at the top, it is unlikely that an organisation will have the courage to fundamentally change its operations, especially if it means potentially losing some support along the way. The governance structure of the Board of Directors – the group of individuals responsible for fiscal and strategic oversight of the institution – was eventually also restructured to a leaner, more flexible and diverse group of people as part of the organisational adaption.

Non-profit organisations cannot exist without their donors, which is why much work around the world, not just in the water and sanitation sectors, is still donor-driven. One of the most 'feel-good' types of donations is the adoption model described above. It is a tangible, feel-good way for organisations to fund-raise, but it will never lead to sustainable systemic change. The fact that water systems are not already in place is not simply a matter of financing or even of infrastructure, but the failure of a system complex that is robust enough to provide and maintain that service is a matter of concern. Without addressing some of those structural components such as public financing, supply chains, and preventive maintenance, the water project will most likely function for a short period of time, and then succumb to its dysfunctional environment, taking the benefits of safe water with it. Adopting a project ignores all of those systemic issues and provides a short-lived solution to a complex problem.

The fund-raising strategy had to change if WFP was going to make the leap from a reactive, small-scale organisation to one that would have the potential to end water poverty not just for a few cherry-picked communities, but for everyone. The organisation's mission remained the same, but strategies and tactics changed, so it was not surprising that some previous donor priorities did not align with new priorities. Many donors grew with the organisation and were excited about contributing to something larger than the installation of one handpump, but some supporters were lost along the way, primarily around two issues. First of all, WFP used to allow donors to restrict their contributions to a specific

community and a specific water project, which meant 1) that work could not happen until a donor had been identified; 2) a report had to be provided on that specific water project in that community to that particular donor. The fund-raising department was staffed with people dedicated to providing a high level of customer service to a relatively small number of donors. The second reason some donors were lost was that as part of the shift from projects to services, the organisation was no longer supportive of tourists travelling overseas to identify, build, and finance water systems themselves in the name of WFP. 'Voluntourism' is a fund-raising strategy still used in the sector, but WFP came to recognise that volunteer efforts to actually build water systems or toilets for people was not a smart strategy for long-term development.

The positive impacts of modifying fund-raising and programming strategies from a simplistic infrastructure investment at the community level to one that attempts to support service delivery indefinitely meant that the organisation was able to access new sources of funding that were previously out of reach. Individuals, companies, and innovative foundations have actually become more attracted to WFP as a result of its institutional shift from projects to services. Although WFP does not collect formal data on why donors choose to give to them over other WASH NGOs, it is possible that the shift from projects to services has contributed to the average income growth rate of 30% per year since 2007.

The early WFP did not have an explicit strategy to reach the vision *to build a world where all people have access to safe drinking water and sanitation, and where no one suffers or dies from a water- or sanitation-related disease*. The operational tools used by the organisation were limited to narrative project proposals, specific budgets for individual water systems, an excel format to track those projects, and reports sent to donors on the use of their funds in their adopted projects. Annual reports summed up the individual efforts throughout the year, and as an example, the 2005 annual report claimed the following successes: "[w]ith your help, Water For People achieved its program objectives in 2005 by funding 78 projects and helping nearly 80,000 people around the world develop safe drinking water sources and build improved sanitation systems". Projects and beneficiaries were reported as indicators of success, consistent with sector practice.

The following year (2006), the organisation did develop its first strategic plan to provide direction for its operations over the following five years by aiming to achieve the following goals by 2011:

- 1000 new persons per day with water and sanitation
- 10 country programmes
- 85% of all resources invested in programmes
- Secure US$12 million

Several years into the 15-year period to reach the Millennium Development Goal of "halving by 2015 the proportion of people without sustainable access to safe drinking water and basic sanitation", the organisation was seeking to dramatically scale up the number of people it was reaching annually. One option for reaching more people was to expand the number of countries of operation. In addition to the original four countries, a full programme was opened in India in 2005, following many years of working through a university partner to design and implement arsenic removal filters. Between 2007 and 2011, the organisation hoped to double the number of operational countries from five to ten, building on the regional bases already established in Central America, South America, and East Africa to be able to reach more people and make a case for the replicability of its approach in different contexts. No analysis went into what it would actually cost to reach 1000 new persons per day; rather the budget figure came from a calculation of future fund-raising possibilities. Also absent was any consideration of what it might cost to sustain those investments over time, ensuring that those 1000 new persons continued to enjoy safe water for years to come. And consistent with prevailing sector indicators of

success at the time, no consideration was given to the sustainability of those projects providing water to the 1000 new persons per day, but that would change over the coming years.

Meeting the goal of 1000 persons per day by late 2009, leadership and governance decided it would be advantageous to create an even more ambitious plan to guide the organisation's work for the following five years. No longer focused on new beneficiaries, the current plan put universal access and sustainability at the forefront of its goals and was part of the ongoing evolution to the current *Everyone, Forever* approach, described at length below.

MORE THAN WORDS: HOW PROGRAMMING CHANGED

Different staff, different donors, different goals, and new and improved planning and management processes allowed the programme to evolve from an unknown NGO to one that is currently influencing national-level decisions in Bolivia. Some of the key changes are described below, but it is important to note that this evolution is ongoing and will continue to change as lessons are learned from failures and successes.

Using the example of Bolivia, one of WFP's oldest programmes, it is quite illuminating to see how the organisational shift from projects to services has fundamentally changed programming in the field. Bolivia, home to a population of 10 million, and the poorest country in South America, is well known in the water sector for two different events: 1) the 'Water Wars' of 2000, where civil society rejected the concession of Cochabamba's water provision to an international private company; and 2) President Evo Morales' successful efforts at lobbying the United Nations to include water as a human right in 2010. It is well recognised that access to water is a fundamental building block for societies and economies but access to water needs to be permanent to be able to fully deliver the potential benefits of an improved supply. 2012 estimates from the Joint Monitoring Programme suggest 70% of rural Bolivians drink from an improved source but WFP, like many in the sector, doubt the validity of that information, as the household surveys used to estimate those figures focus on access to improved infrastructure, not whether the said infrastructure provides continuous service and if people actually use it.

New roadmap: Everyone, Forever

No longer fixated on numbers of beneficiaries or projects, the organisation developed a new strategic plan to guide its work from 2010 to 2014. Departing from its own past measurement of success and in an effort to transform sector practice as well, the goals are permanent universal access in at least two municipalities in each country of operations. A stark difference between this plan and the last strategic plan is the adoption of an explicit sustainability goal – the organisation aims for a 90% sustainability rate by 2014, defined below in the section on measurement. The overall strategy of the organisation can be summarised in the *Everyone, Forever* approach, which includes general concepts for facilitating permanent universal access to water services, but is not meant to be a prescriptive methodology.

- Every family, school and clinic in targeted municipalities has access to safe, clean water and sanitation.
- Everyone contributes: government and communities pay while external implementing agencies finance the gaps still remaining to reach full municipal coverage.
- Outcomes – levels of service and levels of sustainability of investments – are monitored for ten years to verify results and help institutionalise capacity to address inevitable problems that emerge. Over the ten-year period, responsibility for monitoring is shifted to the appropriate government agencies, with long-term funding mechanisms in place to sustain monitoring over longer time frames.

- Success is defined as universal access to water services being sustained over time so that targeted municipalities never need another international water and sanitation NGO again. This means systems need to grow as communities grow. It means that water resources need to be sustained and that management and financial systems need to be in place to operate, maintain and eventually replace water and sanitation infrastructure.
- Other municipalities are inspired by this initiative and replicate it without WFP's direct financial support for water service delivery. Momentum at district level leads to a national push around the principles of *Everyone, Forever.*

The institutional strategic plan shaped the development of new country-level strategies. WFP-Bolivia's new plan includes universal permanent services in six rural municipalities and one peri-urban municipality, also a great leap from its prior goal to reach 75% water coverage in four rural municipalities.

Targeted intervention and potential for scale

Since the decentralisation processes of the 1990s, municipalities in Bolivia have been responsible for ensuring that their populations have access to safe water and sanitation but more often than not they fail to fulfil this mandate of ensuring that all of their constituents have continuous access to a water service because of well-recognised limitations of financial, human, and technical resources. By concentrating in several municipalities instead of in randomly selected communities all over a country, resources can be maximised, monitoring becomes easier, and a bottom-up model of service provision can influence national policy, as opposed to top-down prescriptions that may or may not materialise at the local level. Demonstrating a viable model for service delivery at the municipal level also has much greater potential to encourage other municipalities to adopt a similar approach.

In the case of Bolivia, no one took notice when the organisation was building a couple of water projects per year throughout the country. However, since focusing its efforts in several municipalities, WFP-Bolivia has been approached by a variety of other municipalities, state governments, and the Vice Ministry of Basic Sanitation to explore how the approach can be replicated in areas where WFP does not have a direct influence. Some key partners in this process have of course been the local authorities themselves, the Association of Municipalities in Cochabamba, the Federation of Municipalities of Bolivia, and the state-level water and sanitation coordinating body. High turnover in national-level positions in Bolivia does suggest that a bottom-up approach of demonstrating successful municipal-level interventions as opposed to policy mandates may be the best way to influence others. Concrete examples of the increased level of influencing potential include the following partnerships:

- Agreements for technical assistance signed with three additional municipalities.
- Agreement signed with *Mancomunidad de Cono Sur:* A mancomunidad is a group of municipalities that see value in formally associating themselves for a particular reason. The Mancomunidad de Cono Sur includes two municipalities in which WFP-Bolivia is working, and based upon the recommendation of current local government partners, discussions are underway to determine how WFP-Bolivia can support the 12 municipalities that make up the *Cono Sur.*
- Agreement with SENASBA *(Servicio Nacional para la Sostenibilidad de Servicios Basicos):* SENASBA is a national government body responsible for ensuring the sustainability of water and sanitation services. They are working on documenting the experience of institutionalising local government water and sanitation support offices, with the end goal of changing national policy to include these offices in all municipalities.

Data for decision-making

In the adopt-a-project world, the decision-making process was to receive proposals in the Bolivia office, send them to headquarters to look for adoptive parents, wait for confirmation, and then co-finance the work. There was no prioritisation of investments, or assurances that the most vulnerable populations were being reached at all since then as now, the wealthier, more connected, easier to reach populations were often those who were most active in seeking solutions. The starting point once the shift was made to working in municipalities was to conduct a baseline survey of the water and sanitation conditions in each community of the municipality in order to accurately plan and prioritise not just for one project but for many years of continuous development. Conducted in partnership with local government, these studies led different leaders to make different investment decisions. For example, in one municipality, the priority was communities that had never had a water system; whereas in others, it was systems that needed smaller investments to improve the service level.

A mapping exercise in 2007 in Bolivia illustrates just this point: of over 100 communities visited in the rural municipality of Tiraque, fewer than ten had no water system, 17 were functioning per Bolivia government norms, and the rest were providing sub-par services, requiring anywhere from complete rehabilitations to minor repairs to ensure water of adequate quantity, quality, and continuity was being provided to all citizens. Whatever the local priority, building on the data of water system status enabled WFP and its partners to make much more accurate estimates of how much it would cost to reach everyone with sustainable services in each municipality, and that in turn is allowing local governments to raise additional funds from state and national governments.

When the first municipal-wide mapping exercise was conducted in 2007, the unit of analysis was the community and community-level coverage and the tools used reflected that approach. Over the last five years, however, the increased focus on universal access has meant that monitoring tools are also needed to understand not just communal-level coverage, but household access, as well, so additional data collection tools have been developed to allow local government staff to determine whether they need solutions that are technical, social, or both to fulfil their mandate of service provision.

Management support

A service delivery approach recognises that if rural communities are to function as service providers, direct support will be needed to ensure the level of service continues from the day construction finishes into the indefinite future (Smits et al., 2011). Direct support refers to the various functions needed to maintain high levels of service over time and includes monitoring (financial, water quality, functionality), technical advice, administration and operations training or re-training, conflict resolution, and resource mobilisation, among others (ibid). Rightfully criticised as an illusory 'magic bullet' for all rural water management, community management does seem to function a bit better in piped schemes that offer a higher level of service than with communal handpumps (Whittington et al., 2008; Marks, 2010). At least in rural Bolivia, community-based management is still the dominant approach in the sector. The most frequently implemented technology in the high valleys where WFP-Bolivia works, consistent with national government standards, is a protected surface or groundwater source distributed to household taps through a piped network; thus, community management models in Bolivia may fare better than in other areas where the technology choice is not household connections. In fact, one of the few sustainability studies conducted in Bolivia showed that 95% of systems were functional, offering some positive counter-data to the growing database of unsustainable interventions (Whittington et al., 2008).

In the AAP model, no thought had been given to direct support to community water boards, and the one-off management training that may or may not have occurred had a very optimistic and unrealistic view of sustainability. As part of its shift towards service delivery, the WFP-Bolivia team has been experimenting with a variety of direct support mechanisms: Local government support through the

Direccion Municipal de Saneamiento Basico (DMSB) associations of water committees, and potentially high-functioning community water boards operating the water systems of poorer functioning systems in other communities.

Local Government Direct Support. The DMSBs are an example of local governments providing direct support to community water boards. Initially formed as *Unidades Municipales de Saneamiento Basico*, the elevation of the offices to the 'Direction' level has been an important institutional change to ensure they are not closed when mayors and other elected officials change as it is legally more difficult to get rid of a 'Direction' than a 'Unit'. In addition to overseeing all implementation of water and sanitation hardware and software interventions, they also provide functions such as re-training community water boards, monitoring, registering community water boards with the National Water Authority, and solving conflicts. The DMSBs in the six rural municipalities do suffer from the common problems in small, resource-poor local governments: high turnover, low motivation of staff, and the logistical challenges of operating in rural communities with difficult access to roads and weak communication channels. One of the common critiques of external development agencies supporting similar direct support providers is the sustainability of such efforts when external finance ends. Data from 2011 and 2012 of WFP-Bolivia and local government investments in direct support seem to support the position that local governments are capable of financing the vast majority of these costs.

As Table 1 shows, 82% of the costs are borne by the local authorities through their annual budgets. WFP-Bolivia contributed 18%, which was primarily the cost of some donated equipment (computers, motorbike). Populations and areas of the municipalities vary greatly – from the smallest municipality of 1900 people to the largest at over 35,000 inhabitants. Per capita direct support also varies, from the lowest in the San Benito district of $0.05/inhabitant to the highest of $1.16/inhabitant in Cuchumuela, more than 20 times as much as in San Benito (Table 1). Some of these differences can be attributed to the fact that San Benito was just beginning its work with WFP-Bolivia in 2011 and so it did not designate as much money as they would in future years. Cuchumuela is also the smallest and home to highly dispersed communities, thus the costs of direct support will most likely be higher there.

Table 1. Costs of DMSB's direct support in 2011.

Municipality	WFP ($)	Local government ($)	Total ($)	Population (2001 census)	Per capita direct support ($/capita)
San Benito	277	1032	1309	24,700	0.05
Villa Rivero	467	1759	2226	7316	0.30
Arani	217	1737	1953	12,000	0.16
San Pedro	144	908	1053	15,155	0.07
Cuchumuela	516	1687	2203	1900	1.16
Tiraque	491	2564	3055	36,565	0.08
Total	2112	9686	11,799	97,636	0.12
Cost share	18%	82%			

In 2012, the local governments increased their direct support by about 30% – from about $9700 to about $12,700 (Table 2). WFP-Bolivia has reduced its overall contribution by 15%, and it also paid a smaller percentage of the overall costs, reducing its proportion from 18 to 12%. Given the increased contributions by government more than offset the reduction by WFP-Bolivia, average direct support costs have risen from $0.12 to $0.15. Documenting what is being spent on direct support is a step in the right direction towards understanding what are the true costs of supporting rural service providers, but merely understanding actual expenses does not imply that these amounts are sufficient to maintain

high levels of service over time. Further analysis is necessary to understand what the optimal investment is in direct support over time and if increased investment leads to higher levels of service.

Table 2. Costs of DMSB's direct support in 2012.

Municipality	WFP ($)	Local government ($)	Total ($)	Population (2001 census)	Per capita direct support ($/capita)
San Benito	310	2684	2993	24,700	0.12
Villa Rivero	206	2064	2271	7316	0.31
Arani	929	3047	3976	12,000	0.33
San Pedro	259	939	1198	15,155	0.08
Cuchumuela	0	1383	1383	1900	0.73
Tiraque	103	2560	2663	36,565	0.07
Total	1807	12,677	14,485	97,636	0.15
Cost share	12%	88%			

Associations of water committees. Another possible mechanism for providing direct support to community water boards is through the association model. Conservative estimates suggest that over 75,000 community water boards provide water services to a 40 million people in Latin America, which represents 30-40% of the population in Latin America (Avina, 2011). At its simplest, the rationale for forming associations in any sector can be understood as a way to achieve economies of scale, access and share information, and potentially influence sector discussions that would not be possible acting alone. Efforts are underway to test this model in rural Bolivia to see if associations of water committees can provide complementary support to the direct support provided by local government offices. The service providers in the municipality of Cuchumuela have been the most active in forming an association, most likely due to the small size of the municipality. One of the roles they may be able to fulfil is access to finance beyond the capabilities of individual water committees in two ways, the first being that although government finance is one option for repair and/or replacements, legally they cannot put aside money from its annual operating budget to prepare for eventual repairs and replacements, whereas the Association can receive funding from local government and save for large repairs and replacements. The other possibility is that associations may be able to access more traditional types of micro-finance and commercial finance to offer their members. As part of WFP-Bolivia's evolving support towards rural water supply providers, an analysis of current and potentially new financial products available to rural water supply providers is planned for 2013.

Rural Water Boards for Hire? A final option currently under consideration is how the organisation can support high-performing rural water committees to operate lower-performing water systems of other rural communities. This idea is being explored with rural service providers so while WFP-Bolivia does not have experiences to share, what is important for other organisations similar to WFP is to reflect on how their own external development assistance can be directed to supporting rural water providers and to experiment with approaches that may not have been tried before.

Diversified technical designs

More often than not, in rural Bolivia the piped systems will only reach the concentrated homes in a rural community, excluding householders who are further away from the village centre. In Bolivia, these householders are often the elderly, single mothers, or other vulnerable populations, resulting in the hardest-to-reach populations being excluded over and over from safe water services. By changing the end goal from a random number of beneficiaries to permanent universal access in defined districts,

however, engineers have had to change how they design systems, taking into consideration self-supply options and multi-family designs. Politically, in Bolivia, any solution that focuses on implementing the right to water is going to be appreciated by the government and just that is happening now in response to WFP's campaign to reach *Everyone, Forever*. Cuchumuela was the first rural municipality to have verifiably reached its entire population, but even this success took longer than was planned because monitoring data showed that although community-level coverage was increasing, household access had stagnated. A household-level survey showed that, of the approximately 60 householders still drinking from unprotected surface water, about half had migrated away from the municipality after the system was built, meaning they spend the majority of their time in other parts of the country or abroad. The other half, however, were eventually served through a combination of financing from themselves, the local government, and WFP-Bolivia, through a range of self-supply and multi-family solutions.

Financing sustainability

Another stark difference between the AAP approach and a service delivery approach is the recognition that the service provider, whether a community organisation or not, will need access to finance to maintain, expand, repair, and in time, replace the system. Coupled with this operational difference is WFP's goal that in the municipalities and communities where it intervenes, external assistance (from another NGO) is never needed again to solve its water problems. Many activities are in process now to ensure true financial sustainability:

- Life cycle costing: WFP is adapting a tool developed to calculate the life cycle costs of handpumps to gravity-fed systems, which is the predominant technology in rural Bolivia. Life cycle cost analyses are an important tool in the service delivery approach as it forces whoever is involved in implementation to consider all of the hardware and software costs associated with not only initial implementation, but ongoing operations and maintenance, major repairs and replacements, the cost of capital, and the costs of direct and indirect support to service providers (Fonseca et al., 2011). In contrast, the AAP model uses a very narrow definition of the cost of a single water project and, more often than not, only includes infrastructure and maybe some software. As a starting point for long-range planning, the costs of maintaining, expanding, and replacing the initial infrastructure are critical.
- Explore non-traditional financial partners: The story of many rural water systems the world over is that they were donated completely or in part by an NGO or paid for with government finance. Governments and NGOs are rightly recognising that public and charitable funds will not be sufficient to reach the MDGs, let alone universal access; figures to reach the MDGs, however, do not consider what it will cost to sustain those investments. WFP-Bolivia is testing whether the Association Model, whereby individual management committees form a larger association for the greater capacity it provides, could serve a financial role. Access to finance was one of the key challenges identified by the newly formed Latin American Association of Water Committees (Avina et al., 2012). To further explore the potentials, an assessment of financial institutions' interests in developing new financial products (insurances, high-interest yielding savings accounts) is in process.

Post-construction/sustainability monitoring – The early years

In order to start to understand whether or not the investments made over the last decade were still operating as assumed, WFP began to collect annual sustainability data starting with a pilot in Honduras in 2006. In 2007, for the first time in its ten-year history, the Bolivia programme staff, their partners and volunteers went back to water systems for the first time. The discussions on which metrics to measure and which indicators to use are ongoing not only within the organisation but within the sector. However, WFP approached an action – learning methodology with the goal of modifying the process

and indicators based upon trial and error. Financed from the organisations' unrestricted funding, the development of the monitoring protocol was not donor-driven but rather an institutional investment in learning, accountability, and sector transformation. A first step in the process was to identify the existing monitoring systems in each country where WFP worked at the time and incorporate country-specific indicators and processes where applicable.

Thus, in 2007, a team of five volunteers partnered with WFP-Bolivia staff and partners to visit a sample of past work co-financed by WFP-Bolivia over the last ten years. That first year, 50 'projects' were visited; complete data were collected on 38 water systems and eight toilet interventions. Those 50 projects were so dispersed throughout the country that it required planes, cars, and donkeys to revisit some of them. Smart phones and tablets had yet to be used widespread for data collection, so the supplies needed to conduct the fieldwork were many, including piles of paper questionnaires, cameras, GPS units, clipboards, and more. Observational data and interview answers were written into paper formats that were then entered into an excel workbook that calculated scores. The process was time-consuming and prone to errors, and would evolve, as discussed below, but it was an important first step in developing a post-construction monitoring system.

Household and management interviews and household and water system sanitary inspections were conducted using the following general categories displayed in Table 3.

Table 3. 2007 Sustainability monitoring metrics.

Water	Sanitation	Hygiene
1. Availability of water	1. Use	1. Knowledge on handwashing
2. Use	2. Hygienic maintenance	2. Presence of water and soap
3. Management		3. Environmental hygiene
4. Financial management		
5. Operations and maintenance		
6. User satisfaction		
7. Standards of distance and numbers		
8. Sanitary site survey		
9. Water quantity		
10. Water quality		

Results from this first exercise showed that about one third of the projects visited were optimal (meaning water was available in sufficient quantity and being used, management structure was in place, and tariffs were being paid). Two-thirds were ranked as sub optimal, meaning there were deficiencies in one or more of the aforementioned categories. Water was available at the 38 sites with full data, albeit at different service levels. The data themselves were interesting, but more helpful to learning and programming was the confirmation that funding projects all over the country were not the best way to achieve sustainable water services. Staff came away from this first monitoring exercise convinced that focusing in a limited number of municipalities and emphasising management and support to community water boards constituted the way forward.

Evolving sustainability and level of service monitoring

When the indicator of success is the existence of a water system or the theoretical number of people that could drink from there, these metrics are what are measured. When the rules of the game change, however, and success is defined by the outcome over time, one needs to be able to measure and report on different metrics. Defining these metrics is only one part of the puzzle, as arguably the more

complicated issue is ensuring that the data are collected and used. WFP's data collection continues to evolve, from nothing in the early years of the organisation to using teams of foreign volunteers and locals to collect the data and to embedding the process in government institutions. Advancements in technology have allowed WFP to move from cumbersome paper-based formats and manual data entry to the AKVO FLOW system, which uses Android mobile phones and cloud – based storage facilities to collect survey data, photos, and GPS locations. Moreover, the data are uploaded over cellular networks, internet connections, or through a transfer from phones to computers, greatly reducing the time for data entry and the possibility of errors. Multilingual and customisable, the tool is making the collection and analysis of data much easier than in the past.

What is measured is also being refined. As the organisation has shifted from defining success by new beneficiaries to sustainable services over time, indicators to measure sustainability and services had to be modified, too.

As Table 4 below mentions, WFP is currently using six indicators to assess the level of services: technology, number of users, access, reliability, down time, and quantity. Missing is quality, and the organisation is testing different methods for integrating water-quality testing into this analysis, but the current data do not include it. Points are given and a scale from 0-6 determines the level of service.

Table 4. Level of service metrics and scoring.

Level of service scoring key			Level of service metrics	Points possible
Scores	Colour	Label	Has improved water point	1
0	Black		No. of users meeting standards	1
1	Red	Inadequate level of service	Majority of community members have access to the improved system	1
2-3	Orange	Basic level of service	There is enough drinking water everyday of the year	1
4-5	Yellow	Intermediate level of service*	The system was down for 1 day or less in the last 30 days	1
6	Green	High level of service	Quantity of water available meets standards	1
			Total	*6*

In partnership with the local government representatives, an annual monitoring exercise is conducted. Although data can be consolidated across the seven municipalities where WFP works, the municipal-level breakdown of data is a more useful planning tool. Data from the municipality of Arani are presented in Figures 1 and 2, and the changes in levels of service in the 53 communities that make up the municipality can be attributed to construction of new systems, expansion and rehabilitation of existing systems, as well as the impact of improved management, which are captured more specifically in the data on levels of sustainability given below. Similarly, for level of sustainability, the organisational metrics are described in Table 5.

The nine-point scale is also divided into categories: no improved system, unlikely to be sustainable, somewhat likely to be sustainable, likely to be sustainable, and highly likely to be sustainable. Based on the nine indicators above which measure technology, availability, tariff payment, financial management, access to spare parts, management, current problems, and expansion, the sustainability of the system can be measured over time. Figures 3-5 demonstrate the situation in the rural municipality of Cuchumuela, home to a population of 2000 spread across 14 communities.

Figure 1. Level of service in Arani municipality in 2011.

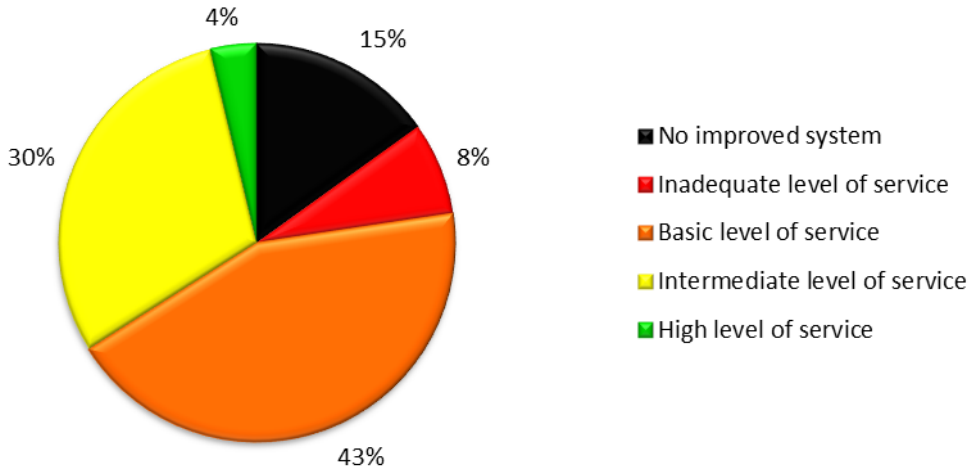


Figure 2. Level of service in Arani municipality in 2013.

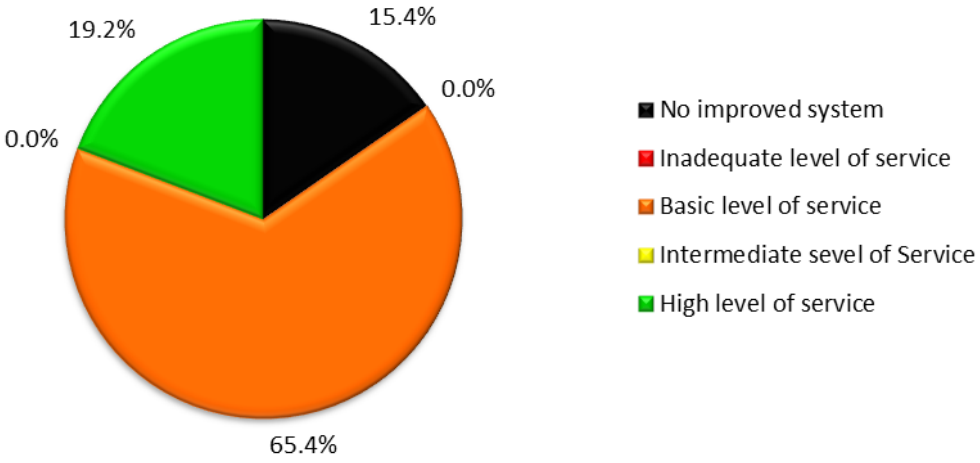


Figure 3. Level of sustainability in Cuchumuela municipality in 2011.

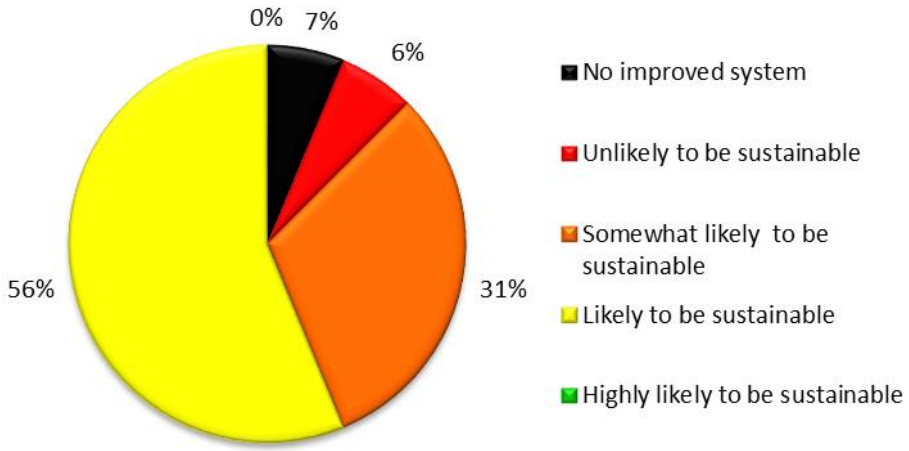


Figure 4. Level of sustainability in Cuchumuela municipality in 2012.

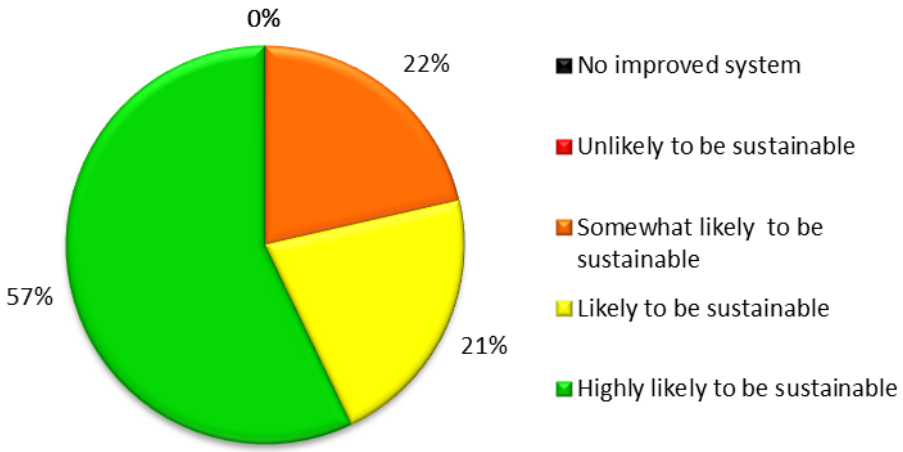
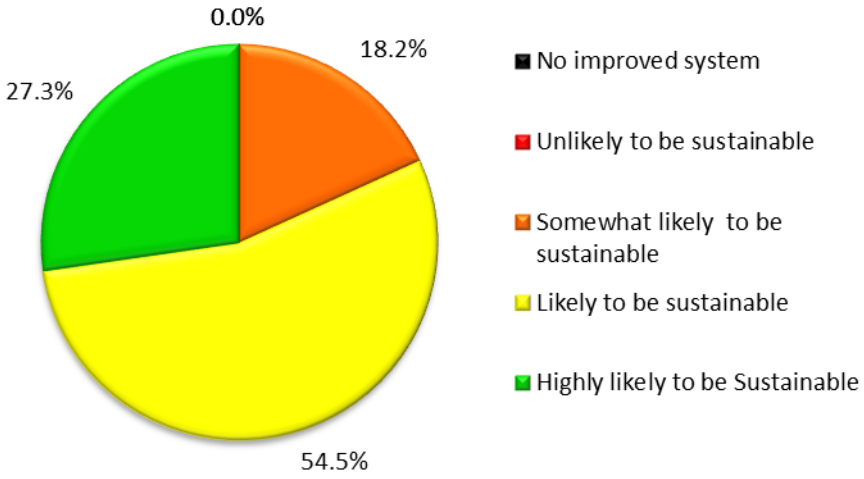


Figure 5. Level of sustainability in Cuchumuela municipality in 2013.



The lowest ranking indicators in the level of sustainability are the questions on financial management. Part of the issue is a methodological one; the methodology to date has favoured surprise visits to gain an accurate sense of hygiene practices, but this happens at the expense of notifying the treasurer, resulting in low frequencies of actually being able to review the books. A tariff is being paid in 80% of the sites visited, but the appropriateness of that tariff is not captured here. The other methodological limitation is that many rural communities have the custom of paying an 'extra tariff' when a larger repair is needed, and while evidence of this can be seen through the low down times of the system, the financial management indicator does not take these alternative payment schemes into consideration. Cuchumuela reached universal access for the first time in late 2012 with provision of water services to all of its inhabitants. What remains to be seen, however, is whether they will be able to maintain universal access, high levels of service, and high levels of sustainability over time. These data will be collected in conjunction with the local government for the next ten years and published online.

Table 5. Level of sustainability metric and scoring.

Level of sustainability scoring key			Level of sustainability metrics	Points possible
Scores	Colour	Label	Has improved water point	1
0	Black		Water was available on the day of the visit	1
1-3	Red	Unlikely to be sustainable	A tariff or user fee is collected for water	1
4-5	Orange	Somewhat likely to be sustainable	Water point financial records were reviewed by monitors	1
6-7	Yellow	Likely to be sustainable	There is a positive balance listed in the financial records	1
8-9	Green	Highly likely to be sustainable	Spare parts are available in or near the community	1
			There is someone responsible for water point management, operations and maintenance	1
			There are no current problems with the water point	1
			The system has been expanded to incorporate new users	1
			Total	*9*

The analysis of what to measure, how to measure, who should measure, and with what frequency is of great importance to the sector in general. One of the most important lessons learned in the past five years is that consensus across countries with very different realities is extremely difficult. While the indicators used respect country differences in national norms, more work needs to be done to contextualise the tools. As more countries, and even regions, develop national monitoring systems, WFP continuously analyses how to complement existing systems and improve its own. For example, the work being done in Central America with the SIASAR monitoring system has resulted in WFP analysing changing the 'level of sustainability' metric to a service provider measurement. The system is not perfect, and continues to be modified, but has served many purposes, including:

1. Greater accountability and transparency to donors and other partners. Donors are now confident that when they invest in WFP, they will be able to understand the impact of their dollars not just at the output level, but whether or not those dollars continue to provide safe water over time. Local government partners have access to data that other municipalities do not have, allowing them to make informed investment decisions.
2. Institutional learning: going back and seeing what is working and what is not provide the invaluable opportunity to learn from mistakes and capture and replicate what is working. As previously mentioned, verifying that remote households were not accessing improved systems has changed how WFP-Bolivia designs solutions and has forced them to expand their technological options. Going back also allows success stories to be documented and shared; such is the case with many communities opting to invest in water meters to improve water availability and equity. WFP-Bolivia had no idea that this had happened in several communities and by understanding how and why this was happening has allowed many local government partners to mandate the inclusion of water meters in rural systems.
3. Demonstrating a monitoring system that can be adopted and scaled by others: no external development agency is ever going to replace national monitoring platforms, but what external agencies can do is innovate and demonstrate processes that can be adapted and adopted by

national government. In the case of Bolivia, the household access to data, level of service and level of sustainability presented as part of the documentation of the Cuchumuela's experience of reaching universal access has sparked an interest by national government in having similar data for all 337 municipalities in the country.

CONCLUSION

Other municipalities, states, and even national-level actors are taking note of the examples being set by a growing number of municipalities in Bolivia, which demonstrate that by adopting a service delivery approach, water poverty can be eradicated for everyone, forever. The Government of Bolivia has ambitious targets itself – to eradicate extreme poverty and guarantee universal access to basic services by 2025. They will only be able to do this if they tackle the systemic constraints currently preventing millions of rural Bolivians from enjoying any water service and millions more who have suboptimal services. Since evolving from a small, scattered NGO to one focused on district-level promotion of service delivery, WFP has only become more efficient and impactful in supporting the government in reaching its goals.

Times have changed since Water For People began its journey of change, and the incentives for similar NGOs to begin to adopt a similar approach will only become stronger. The philanthropic sector is shifting its position on how it ranks charitable organisations, moving from a dry analysis of overhead percentages to measuring how effective the organisation actually is at delivering whatever service it provides. Sector metrics for success are moving beyond static beneficiary numbers or number of projects to functionality or sustainability of interventions. Major donors are increasingly focused on the outcomes, i.e. the sustainability of a water system, rather than just the water system itself. Adopting projects and implementing individual community water systems have unfortunately not been able to solve the world's water crisis for good, and by sharing the messy evolution of one external development agency away from projects towards sustainable services, Water For People hopes to inspire others to follow suit so that water poverty comes to an end for everyone, forever.

REFERENCES

Avina. 2011. *Modelos de gobernabilidad democrática para el acceso al agua* en América Latina. Panama City, Panama: Avina.

Avina and the Foundation for the Development of the National System of Protected Areas 2012. Mecanismos Financieros del Agua en América Latina. Panama City, Panama: Avina.

Fonseca, C.; Franceys, R.; Batchelor, C.; McIntyre, P.; Klutse, A.; Komives, K.; Moriarty, P.; Naafs, A.; Nyarko, K.; Pezon, C.; Potter, A.; Reddy, R. and Snehalatha, M. 2011. Life cycle costs approach. Briefing Note No. 1a. The Hague, Netherlands: International Water and Sanitation Centre.

IRC (International Water and Sanitation Centre). 2012. *A service delivery approach to rural water supply*. The Hague, Netherlands: IRC.

Liberia WASH Consortium. 2011. Rural water point mapping: Preliminary analysis and verification brief. Monrovia, Liberia: Liberia WASH Consortium. http://wash-liberia.org/wp-content/blogs.dir/6/files/sites/6/2013/01/Final_Review_Version_-Waterpoint_Atlas_Investment_Plan_x.pdf (accessed on 1 August 2013)

Marks, S. 2010. Community participation and sense of ownership for the water system: Evidence from Kenya. Paper presented at CRGP Seminar, Stanford University, Stanford, California, US, 20 October 2010.

RWSN (Rural Water Supply Network). 2010. Myths of the rural water supply sector. St. Gallen, Switzerland: Rural Water Supply Network.

Skinner, J. 2009. Where every drop counts: Tackling rural Africa's water crisis. www.iied.org/pubs/pdfs/17055IIED.pdf (accessed on 1 August 2013)

Smits, S.; Verhoeven, J.; Moriarty, P.; Fonseca, C. and Lockwood, H. 2011. *Arrangements and cost of providing support to rural water service providers*. Working Paper No. 5. The Hague, Netherlands: International Water and Sanitation Centre.

Whittington, D.; Davis, J.; Prokopy, L.; Komives, K.; Thorsten, R.; Lukacs, H.; Bakalian, A. and Wakeman, W. 2008. *How well is the demand-driven, community management model for rural water supply systems doing? Evidence from Bolivia, Peru, and Ghana*. Brooks World Poverty Institute. Working Paper No. 22. Manchester, UK: University of Manchester.