



Final Report
Co-op Group

Understanding the impact of Co-op funded wash projects in Southern Malawi

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Submitted by Itad

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Abbreviations & Acronyms

Term	Definition
CLTS	Community-led total sanitation
FGD	Focus Group Discussion
MHM	Menstrual hygiene management
MK	Malawian Kwacha
SDG	Sustainable Development Goal
UP	United Purpose
VIP	Ventilated Improved Pit Latrine
WASH	Water, Sanitation and Hygiene
WPC	Water Point Committee

Photos

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Executive Summary

What changes have resulted from the Co-op's investment in water projects in Malawi?



This was the central question for our assessment of the water projects funded by Co-op and implemented by United Purpose since 2014. These projects (among others) are funded through sales of Co-op's own-label bottled water, with 3p from the sale of every litre supporting Co-op's 10-year partnership with The One Foundation.

Co-op already reports on the level of investment in international communities (including water projects) – in 2016 it reported that over 10 years, £7 million of funding had been provided and 1.5 million people supported. We were asked to move beyond this, exploring the wider impact of the projects on individuals and communities.

We conceived a basic theory of change to help us assess the projects, breaking down the results the project could be expected deliver as:

Outputs

Did construction of the water points mean that people had access to safe water?

Outcomes

Are the water sources continuing to provide people with access to safe water?

Impacts

What are the wider impacts as a result of the availability of safe water: on individuals, households and the community?

Our approach has been that each level of results should be proved in turn: outputs are a requirement for outcomes, which in turn are a requirement for impacts.



What did we find?

We visited six communities where Co-op had funded a water point to gain an understanding of each result included in our theory of change.

This allowed us to draw conclusions for these specific communities, but our assessment was not designed to provide a representative picture across the whole project.

We interviewed 54 households, held focus groups with a total of 48 women and met with the community members charged with managing the water point.



We found the following answers to the questions we posed:



All the water points we saw were still working

United Purpose reported only one water point (out of 153 in total) was completely broken. In itself this is a success when more than one in ten water points in sub-Saharan Africa can fail within the first year. Five of the water points we saw were reported as working continuously – providing water all year round – although one was reported as running dry during the dry season.



Almost everyone we spoke to was continuing to use the water points

In fact, out of 54 households we spoke to, 53 reported that the water point funded by the Co-op was their main source of water. Most people (46 households) were satisfied with the service the water point provided, but there were some problems. In cases where there was no other water point close by, long queues at the water point meant more time spent collecting water. In a few cases people were not able to pay the tariff to access the water.

The biggest changes people cited were a **better quality of life** and **improvements to health** with both mentioned by nearly three quarters of households



Quality of life

When people said their quality of life had improved, this was a result of increased flexibility and convenience. Improved access to water meant they spent less time collecting water and had more flexibility to choose when to do this. For many of the women we spoke to, this in itself was a significant change: for example, not waking at 3am to collect water means they no longer spent their days exhausted. But it also meant they could spend more time on what mattered to them. This could include looking after their family, or keeping the house clean and tidy. This is not something we could assign a value to, but what was undoubtable was the sense of pride this gave people.



Health

This meant reduced cases of illness in families, usually diarrhoea in particular. We already know how unsafe water (particularly when it is contaminated with faeces) can cause diarrhoea, so this finding (albeit anecdotal) is not a surprise. But it was something which was repeatedly raised, often unprompted. However, because of a lack of data from before the construction of the water point, we are unable to put specific figures on this change.

What are the challenges?



Realising impacts

There were examples where the changes described above were not as apparent. Where access to water was not guaranteed or where people continued to use unhygienic toilets (or none at all), improvements to health were less frequently mentioned. While access to the water points resulted in time savings, this did not always translate into easily quantifiable improvements, either because of external constraints (a lack of money to invest in a livelihood) or because people placed greater value on using the time for other (non-monetary) activities.

Sustainability

The projects face many of the challenges seen in rural water supplies across sub-Saharan Africa where communities are expected to manage the water points with little or no ongoing support. Of the communities we visited, two had managed to save some money to pay for bigger repairs, two were undertaking routine maintenance, and two communities were doing neither. No community had managed to undertake maintenance and build up savings. Without systems in place to support the communities in managing their water points, and get them back on track when they struggle, it is difficult to be confident that the water points will keep working.

Monitoring

At the start of this assessment we planned to use existing data to develop insight into the number of people who had benefitted from the water points, and whether or not they still were. The lack of data meant we were unable to do this: it was difficult to reach any firm conclusions on the actual number of people being served by the water points, and the information on whether or not water points were working (and being maintained) was limited.

We have provided Co-op, The One Foundation and United Purpose with recommendations on how they can improve monitoring processes; collecting data in future which will help improve understanding of the ongoing success of the project.

1. Introduction

We were asked by Co-op to undertake an independent social impact assessment of Co-op's partnership with The One Foundation, a UK-based charitable foundation which supports projects providing communities with access to clean water in sub-Saharan Africa. Specifically, we were asked to look at projects providing water and sanitation to communities in Southern Malawi, exploring the impacts of the project on individuals and the wider community.

Co-op already reports to its members and the public on these projects through its annual 'Co-op Way Report'. To date, this reporting has provided details of the funding provided along with basic output statements – the number of people supported – but Co-op wanted to develop a better understanding of the results of this investment.

From the outset we knew that assessing impact in WASH projects was not straightforward: the evidence for direct health and socioeconomic impacts is complicated, and it is not easy to prove causality. Added to that, given the three-month timescale for this project we would be limited in what new data we could collect on the ground, and would need to use existing data if at all possible. Given what we knew, we concluded it was not possible to provide a comprehensive assessment of social impact so set out to understand the outcomes of the projects, and find illustrative examples of impact.



Box 1: What is impact

In this assessment we have used a specific definition of impact: *the higher-level goals to which it is hoped a project will contribute*. We haven't considered being able to use clean water an 'impact' in itself - we are interested in what effect access to clean water has had on people's lives.

With this in mind we proposed to approach this assessment in three broad stages:

1. Understanding what impact means for Co-op
Through a review of existing literature in this area and a joint inception workshop
2. Understanding the sustainability of project outcomes
Through a review of existing project data
3. Assessing the impact of the United Purpose projects
Through a limited set of community case studies, and analysis of existing project data

This report provides an overview of what we did, together with our key findings. The report starts with an overview of the interventions funded by Co-op, followed by an overview of our assessment approach and the fieldwork we undertook (Section 2). We present detailed findings from the fieldwork in Section 3, and overall conclusions in Section 4. Finally, we provide an overview of how these projects may contribute to achievement of the Sustainable Development Goals (SDGs), and recommendations on what additional monitoring would help Co-op better understand and communicate the results of The One Foundation partnership, and any contribution towards achieving the SDGs (Sections 5 and 6).

1.1. What has Co-op funded?

Co-op has partnered with The One Foundation for over 10 years – for every litre of Co-op own-brand bottled water sold, 3p funds projects providing access to improved water and sanitation in Africa. To date, this has resulted in over £8 million of funding and 1.7 million people¹ supported.

One of the projects funded through this partnership is a water, sanitation and hygiene (WASH) project implemented in Southern Malawi by United Purpose (UP, formerly known as Concern Universal). This project covers Mulanje and Thyolo districts, and is implemented in communities covered by the Eastern Outgrowers Trust (EOT), an association of smallholder farmers who provide tea to the numerous estates in the region, and one of Co-op's Fairtrade producer-partners. Mulanje and Thyolo are located in Southern Malawi, and the local economy is highly dependent on tea and coffee production. Access to improved water sources in the area is low: only 52% of the population in Thyolo² use an improved source compared with national rural coverage of 63%.³

1.1.1. Overview of project activities

Co-op funded projects focused mainly on increasing access to improved water sources, but there were also activities on promoting good sanitation and hygiene practices, and constructing school toilets ('latrines'). The projects were funded in two phases between 2014 and 2017 as detailed in Table 1. A third phase started in September 2017, but was not included in this assessment.

Over both phases UP Malawi constructed or rehabilitated a total of 153 water points (detailed in Table 1). These water points serve a total of 122 communities, as some larger communities require multiple water points to provide a good level of service to all households.



¹ This is the most recent data provided by The One Foundation as of January 2018.

² Based on information provided by district water officials. This data may be out of date, and district-wide water point mapping is currently under way which will help establish new coverage statistics.

³ *Progress on drinking water, sanitation and hygiene: 2017 update and SDG baselines*, available at <https://washdata.org/reports>

Table 1: Details of Co-op funded WASH projects (source: UP Malawi progress reports)

	Phase 1	Phase 2
Duration	Jan 2014– Dec 2015	Aug 2015 – July 2017
Funding	£170,000	£300,000
1. Assessment of existing water points	60 sites	120 sites
2. Non-functional water points rehabilitated (or unimproved sources upgraded)	60 water points	50 water points
3. New boreholes constructed	13 water points	30 water points
<i>People benefitting from project water sources⁴</i>	18,702	20,000
4. Establish and train water point committees	75 committees	80 committees
5. Construction of improved latrines at schools	4 schools	8 schools
6. Hygiene education	4,996 people	21,135 people
7. Local government staff capacity building	21 people	51 people



Increasing access to improved water sources

The largest component of the projects is increasing access to improved water sources,⁵ comprising 70–75% of the total budget. This involved either constructing a new water point, repairing an old water point which had broken down, or upgrading an unimproved water point (protecting an open spring or hand-dug well). In each community where a water point was provided, the community elected a group of people to form a water point committee (WPC). This committee took on responsibility for managing and operating the water point, including collecting contributions from community members (to cover the cost of spares and maintenance services), ensuring that the water point and surrounding area is kept clean and hygienic, and arranging for any necessary

⁴ Number of people benefitting was not identified as an output for the projects, but was reported on by UP Malawi.

⁵ An improved water source is defined by UNICEF and WHO as: one that, by nature of its construction, limits the possibility of the water becoming contaminated from outside sources (such as faecal contamination). This covers all the water sources funded by Co-op.

maintenance. Each WPC was given training to help ensure they understood their responsibilities. This was coordinated by UP Malawi but the training was facilitated by district officials (from the health, water and community development departments), lasting five days for new water points, and three for rehabilitated water points.

Messaging on hygiene and sanitation

During the construction of the water points and training of WPCs, UP Malawi provided (again through district officials) basic messaging on hygiene and sanitation – this comprised 10–14% of budget. This messaging included several topics: the importance of hand washing with soap; how to handle and treat water to ensure it is safe; the importance of keeping the water source clean; and the need to construct household toilets. Additional messaging is provided to community members through events at schools (see below). The work on hygiene and sanitation does not, however, comprise a systematic behaviour change programme, with follow-up for households and communities (for example, Community-Led Total Sanitation⁶ is not being used), nor is total community sanitation coverage a condition before water point construction starts.

Schools

In both phase one and phase two, 15% of the budget has been spent on activities in schools. This has included the construction of ventilated improved pit (VIP) latrines and, in phase two, the provision of menstrual hygiene management (MHM) facilities for girls. Alongside this, school health clubs (groups of pupils who are trained to champion good hygiene and health practices to other pupils) were established and hygiene promotion events (large-scale events open to school learners and community members) held.



⁶ Community-Led Total Sanitation (CLTS) is one of the most widely used methodologies for improving sanitation behaviour and has been adopted by the Government of Malawi as one of the official approaches for sanitation. Further information on the CLTS approach is available at <http://www.communityledtotalsanitation.org/>

2. Assessment methodology

2.1. Our theory of change

To better understand the results of the projects, and how impacts might come about, we broke down the results into a results chain (see Box 2 below). This shows the sequence of results needed to achieve the overarching goals of a project. Each step is dependent on the preceding steps: it is not possible to achieve impact, if the project outputs and outcomes have not already been achieved.



Box 2: The results chain

Inputs

the raw materials that provide a basis for interventions. Inputs can include money, technical expertise, relationships and personnel.

Process

what the programme does: the interventions. For example, delivering training or services, providing technical assistance.

Outputs

the specific, direct (tangible and intangible) **things that result from project activities.**

Outcomes

the changes/benefits that a project or intervention is designed to deliver.

Impact

the higher-level goals to which it is hoped a project will contribute.

This formed the basis of our assessment approach – in trying to understand impact, we first wanted to test whether results had been achieved at each step of the chain⁷. We developed a series of results statements for process, outputs and outcomes, which we would be able to explore in the field. We focused on the activities which formed the biggest part of the projects: community water points and school sanitation facilities.



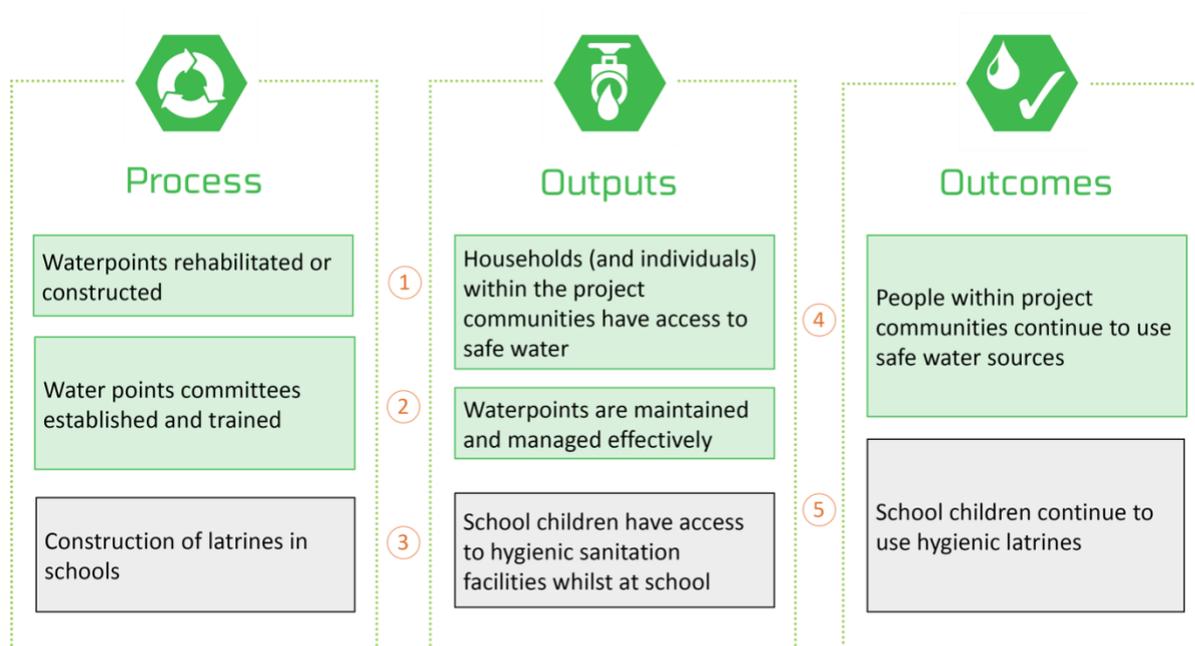
⁷ We did not seek to test 'inputs' as these are already reported by Co-op and The One Foundation.

At this stage we did not include impacts. While, based on past experience, there were some impacts we expected to see during the fieldwork, we did not wish to limit the assessment to specific impacts, instead looking to identify any impact recognised by individuals or the community.

Taking these statements, we developed a simplified⁸ theory of change (Figure 1). A theory of change is a tool to make assumptions explicit about how change happens, and provide a framework to predict, plan and monitor project results. It allows us to explore what the requirements are to move between each step of the results chain, and how we can test if these requirements are in place.

For example, people can only continue to use safe water sources if the sources will continue to function in the future. This may be an obvious statement, but making it explicit helps to identify what factors the assessment needs to consider – in this case, understanding whether or not systems are in place to help make sure that the water points are maintained and repaired.

Figure 1: Initial theory of change for Co-op funded projects



Key Assumptions

1. The water points are appropriate for and usable by communities
2. Human, institutional, financial and technical resources are sufficient to maintain the water point
3. Latrines are appropriate for use by school children
4. Water points are technically, environmentally and financially sustainable
5. Schools are able to maintain the latrines

⁸ A more detailed theory of change could introduce additional assumptions and outputs – for example adequate capacity of district water authorities or the availability of space parts could be assumptions behind the continued functioning of the water points.

We reviewed the existing indicators used by UP Malawi (either for this project or the overall national programme) to understand what information was already known about the results of the projects, and put this into context by looking at common indicators across the WASH sector (see Box 3).

This showed that many of the indicators used by UP Malawi were measures of process with only limited measures of outputs. There were no existing indicators which provided information on project outcomes or impacts. This meant that when considering the approach for this assessment, we had to start by understanding outputs and outcomes, before we could consider impact.



Box 3: What we measure in rural water

While there have been several advances in the indicators used in the rural water sector in recent years, the majority of monitoring is still focused on process and outputs. This can include simply reporting the number of water points or latrines constructed, or the number of people with ‘access’ to an improved water point. Reporting access often includes assumptions that if a water point is constructed households will automatically (and exclusively) use it. In reality, a household may be unable (or choose not) to use a water point for many reasons: the distance to the water point, affordability, aesthetic preferences or simply the breakdown of the water point.

Recent innovations have included a move towards measuring the ‘service level’ actually received by users (<https://www.ircwash.org/news/service-levels>), and seeking to understand whether or not the water points are likely to continue delivering this level of service.

Monitoring service levels measures if users are able to easily access sufficient quantities of good quality water, when they need it; but these measures are still far from the norm for many rural water projects. Sustainability monitoring is at a nascent stage, and we adapted a recent proposal for universal metrics for rural water as a framework for understanding sustainability of Co-op funded projects for this assignment (<https://openknowledge.worldbank.org/handle/10986/27950>).

2.2. Fieldwork

We spent one week visiting six communities and two schools (shown on the map in Figure 2) which had been involved in the projects. The sites were chosen to cover both phases and districts, including successful communities⁹ and those which were struggling to manage the water point. We undertook the following activities:

⁹ We relied on UP Malawi to identify ‘successful’ and ‘challenging’ communities based on the experience of their staff.

Water point functionality check

This is a visual and physical inspection of the water point to ensure that it is working, and an indicative water quality test.

Understanding the functionality of water points is an essential foundation for the assessment as it provides us with a measure of **outputs** – is the project water source providing a safe source of water? If the water point is non-functional, then there can be no outcomes, and any observed impact cannot be attributed to the project.

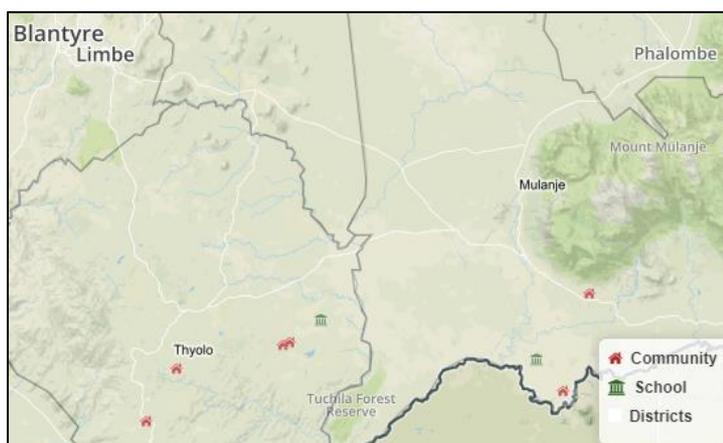


Figure 2: Locations of communities and schools visited

Household interviews¹⁰

In each village we conducted individual interviews (with the person primarily responsible for collecting water – almost exclusively women) at 10 households. The interviews were split into two sections: a quantitative section collecting information on water usage, and hygiene and sanitation practices; and a qualitative section exploring some of the resulting changes on a household level.

The quantitative questions provide us with a measure of **outcomes**: are people actually using the water source, and is it meeting their needs? The qualitative questions provide specific examples of **impact**.

Water point committee meetings

At each water point we conducted a meeting with the WPC, focusing on the operation and maintenance of the water point. This included the financial performance of the WPC (Are they collecting user contributions? How are these managed?), any repairs or maintenance undertaken on the water point, and any external support available to the WPC.

The WPC meetings allowed us to begin to understand the **sustainability** of the water points. Even if the water point is functioning today, is it likely to continue functioning in the months and years ahead?

Community focus group discussions (FGDs)

Within each village we also held a focus group discussion with a group of eight women – women because they overwhelmingly shoulder the burden of collecting water, and are likely to experience the most significant impacts of a new water point.

These discussions provide another means of starting to understand any **impact** which has been felt on an individual or community level.

¹⁰ We undertook household interviews in all communities, but in one community due to the small size (only 30 households) and the high number of households which were unavailable (due to working etc) we were only able to complete four interviews. The results for this community have not been used in any quantitative analysis.

School sanitation inspections

School sanitation was a relatively minor part of the projects, both in terms of budget allocated and activities undertaken, compared with community water supplies. This is reflected in our assessment of the impact of school sanitation: we undertook brief visits to two sites, which included an inspection of the sanitation facilities and discussions with school staff and girl pupils.

The expected outcomes and impacts for school sanitation differ from those linked to the community water points both in terms of how impact is realised, and who experiences the impact. For this reason, although we have reported on this work to Co-op, the results are not included in this report.

2.3. Limitations of this methodology

The primary limitation of this report is that the data collected, and the findings drawn from this data, can only be considered to hold true for the limited number of communities studied. Any findings of impact are purely illustrative and it should not be assumed that they would be replicated across the wider project area. This limitation arises from the limited number of communities and households from which data was collected during fieldwork, and the limited nature of the pre-existing data which we were able to use. This limitation was something which we highlighted from the start of the assessment.

We also made an early decision not to attempt to place an economic value on the impact of the water projects. This reflected both the first limitation (the lack of data) and the state of measuring impact across the water and sanitation sector. For instance, a 2011 report by the Organisation for Economic Co-operation and Development on the benefits of water services¹¹ concluded that:

The full magnitude of the benefits of water services is seldom considered for a number of reasons. Non-economic benefits that are difficult to quantify but that are of high value to ... individuals and society, i.e. ... dignity, social status, cleanliness and overall well-being are frequently under-estimated. In addition, benefit values are highly location-specific and cannot be easily aggregated.

As a specific example, a large portion (up to three quarters) of the estimated economic benefits stem from time savings – but this often involves an assumption that time savings are used for economically productive purposes. Our findings (see Section 3.3) suggest that this is frequently not the case for beneficiaries of Co-op funded water points.

¹¹ See: http://www.oecd-ilibrary.org/environment/benefits-of-investing-in-water-and-sanitation_9789264100817-en

3. Findings

Our findings are based on observations and data collected during the fieldwork, and supported with existing data from UP Malawi where possible. The findings follow the theory of change outlined above: we first establish process and outputs, before moving on to consider outcomes and finally examples of impacts.

3.1. Process and outputs

For process we looked at whether or not the results listed in Table 1 had been achieved. For most results (e.g. number of water points constructed, or latrines constructed in school) everything we saw suggested that the reported numbers were reliable. However, there are queries over the number of people reported as receiving hygiene education. The figures included significant numbers of 'indirect beneficiaries' based on the assumption that WPC members who were targeted with hygiene messaging would then pass this on to other community members. It seems unreasonable to include these assumptions in reported figures if there is not additional evidence to support it.

For outputs we tried to understand if the number of *people benefitting from project water sources* (see Table 1) reported by UP Malawi reflected what we saw on the ground, and was supported by available data. We were not able to do this for phase one (due to insufficient data) and the data for phase two presented a mixed picture. However, based on the best approximations we could make, it seems that the figure of 20,000 people benefitting from phase two water points is an underestimate.¹² This figure was based by assuming a standard figure of 250 users per water point, but both our observations and the raw data we were provided suggest higher numbers of users: one water point we visited was used by 200 households (over 800 people). This is likely to lead to issues such as overcrowding at the water point, but does mean that more people are receiving some (albeit limited) water service than reported.

3.2. Community water points outcomes

All the water points we studied were functioning at the time of visit, and were providing water to users. However, we needed to test the two outstanding results from the theory of change:

Output – Water points are managed and maintained effectively
How likely is it that the water point will continue to be maintained in future?

Outcome – People within project communities continue to use safe water sources

What service is being received by users? Can they collect enough water, within a reasonable time, when they need it?

We set this within the World Bank rural water metric referred to in Box 3¹³. The full findings are included in the appendix to the report but here we summarise based on the broad areas.

¹² Because of the assumptions we made, we do not feel able to provide an estimate of the actual number of beneficiaries.

¹³ See: <https://openknowledge.worldbank.org/handle/10986/27950>

Service levels

The water points generally provided a good level of service to users in terms of the accessibility (round trip time to collect water including waiting), availability (is water available when needed?) and the user satisfaction (with both the quality and quantity of water available), with two exceptions.

One of the water points was seasonal, running dry during the dry season (around three months a year). When this happened community members resorted to using surface water or travelling longer distances to use a protected spring in another part of the village.

Four of the six water points had median collection times of less than half an hour (the standard for 'basic water' under the SDGs) but one water point had a median collection time of 35 minutes – linked to the high number of households using it (99) and the distance from the water point of some households. The water point with the most households using it (200) actually had a lower median collection time – reflecting that this measure is affected by both number of users and distance to the water point. In addition to this, we found that many of the communities had a self-imposed rule that people could only collect one pail of water at a time. While this might help limit queuing at the water point, it could also mean people have to make repeat trips to the water point to collect enough water.

During the fieldwork, we also undertook basic bacteriological water quality screening tests. While these tests do not provide a definitive measure of water quality, some of the results came back positive – suggesting that the water point may be contaminated with faecal coliforms. This is in line with research that shows that it cannot be assumed that improved water sources always provide water which is completely free of contamination.¹⁴

Governance

We found that water point committees had been established at each water point, and we were able to talk to some of the members in each community. In only one community did we find the WPC was failing to carry out any of its duties (and had not done so since 2016). We also tried to understand how involved communities were in decisions about the water point. This was a mixed picture between and within communities. In only two communities did households respond that they were regularly involved in meetings, while in two different communities there was unhappiness with the way the borehole was managed.



¹⁴ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3367284/>

Operation and maintenance

Although the water points were working, and the surrounds were clean, operation and maintenance of the water points was not consistently good. Preventative maintenance had been undertaken by only two communities, while none of the WPCs kept good records of user fee collections or savings – those we managed to see were incomplete or out of date.

All but one WPC was collecting regular user tariffs, but the level of these was often not set with an understanding of how much money may be needed in future. Only one WPC had considered the cost of buying spares when setting (and then raising) the tariff.



Financial management

Based on the limited financial records available, and the recollections of the WPC members, it was difficult to assess financial sustainability consistently: four out of six WPCs had no record of any expenditure. However, the information we did collect suggests that only two WPCs have sufficient funds to cover the cost of more significant repairs to the water point, and that these have been accrued at the expense of spending on regular maintenance. Although half the WPCs reported that they had been visited by either the local government or UP Malawi, these were informal monitoring visits. There did not appear to be any systematic support for WPCs.

3.3. Illustrative impacts

Based on the FGDs with women and household interviews, we identified the most commonly cited impacts arising from the water points. We are using the definition of impacts stated in Section 2: 'the higher-level goals to which you hope your project will contribute'.

We identified the most common changes in two ways. For FGDs, participants were directly asked (towards the end of the discussion) what the biggest change for them personally was. For household interviews we have identified all the changes mentioned by a respondent during the interview. For comparison we start with a summary of how respondents described the situation in the village before the water point was constructed.

3.3.1. Previous water points and key difficulties in using them

Before the project water points were constructed, it was reported that the main water points were either unimproved sources (surface water or unprotected dug wells), or a borehole in a neighbouring village. This was reported in FGDs and WPC meetings and reflected by the quantitative answers of the household interviews (Table 2: Water source used before UP Malawi intervention (household interview respondents)). There were a small number of households who previously used a borehole in the same village, although this was reported to be very overcrowded.

Table 2: Water source used before UP Malawi intervention (household interview respondents)

	another village	within village
borehole	2	5
surface water	16	16
unprotected dug well		11

The main issues reported with using the previous water source included: the length of time taken to access the water source when it was not within the village; the fact that, when shared with another village, the water point was overcrowded, leading to disputes over collecting water; and the fact that the surface water used was dirty and/or smelled bad, with some cases of people sharing water sources with livestock.

The effects of these difficulties were expressed in numerous ways. Nearly all participants attributed high levels of diarrhoea (and in some cases cholera) to consuming dirty water, while a few respondents also attributed headaches and skin rashes to the dirty water. Where communities reported that the water smelled bad, women recalled how bathing in the water left them feeling unpleasant, and even led to their husbands mocking or rejecting them due to the smell it left on them.



The participants reported that the long time spent collecting water had several knock-on effects. In Nanchakala, multiple women reported that when collecting water from the previous source, they had to leave before it was light (as early as 4am): they felt that walking alone to the remote water point at this time left them vulnerable to attack, and they feared rape. One woman reported that she has been chased by men, resulting in her dropping and breaking her pail of water. Other women reported leaving the house early led to their husbands 'suspecting them of being with another man', leading to difficulties in their marriage.

An effect of both the distance travelled to collect water and crowding at the water points was the limited quantity of water collected. This typically resulted in households rationing the water used for personal and household hygiene.

3.3.2. Most commonly experienced changes

Through the focus groups and household interviews, the most commonly experienced changes reported by participants were improvements in the quality of life and better health. In the FGDs, 57% of participants cited quality of life or better health as the ‘biggest’ change they and their families had experienced since the water point was constructed. In four FGDs over half of participants cited one of these changes, whilst in the remaining two FGDs at least 1/3 of participants cited one of these changes. In household interviews 94% of participants identified at least one of better health or improved quality of life as a change which had occurred since the water point was constructed. Below we explore in more detail each of the changes that were cited by participants during the fieldwork.

Convenience and flexibility

73% of interview respondents
32% of focus group participants

The most commonly cited change (by 32% of FGD participants, and in every community) was the increased convenience of collecting water, and the flexibility this allowed them. This manifested itself in several ways, but centred around women no longer having to devote significant chunks of their day to collecting water, and having to plan other tasks around this. Several participants spoke of being able to ‘multi-task’ – for example they could leave the home while cooking to collect more water without the food burning, or they were happy to leave children at home while they collected water from a nearby well. Having reliable access to water also lifted the worry of running out of water later in the day, and meant they did not have to rush back from work or the fields. Several participants even mentioned that they now had more time to sleep as they did not have to rise early in the morning to collect water.

It was striking how much the participants valued the way in which access to a water point simply ‘made life a little easier’. This was both in terms of the number of times it was mentioned, and the numerous ways it was expressed. It may not be possible to place a direct economic value on this, but this in no way makes the change any less important for the women we spoke to.

Health

73% of interview respondents
25% of focus group participants

Twenty-five per cent of focus group participants cited improved health as the biggest change – nearly always expressed as decreased incidence of diarrhoea. This was frequently linked to the perceived health of their children, and the number of cases of diarrhoea they experienced. Participants in some groups reported this change as happening at the same time as the borehole construction as an unprompted observation (What are the main health problems in your village?), while in other groups it was reported after being asked directly about the situation after the borehole was constructed.

In one community, decreased diarrhoeal disease was not cited as a change by any participant, and diarrhoeal disease was cited (unprompted) as one of the main health concerns in the community. This community stood out for two reasons: it was the only community where the water point was seasonal, and it was reported as having higher levels of open defecation, with no sanitation campaigns having been undertaken by the district in that village. Diarrhoea was also cited as a problem in Muhoma (where not all households could afford to use the water point) and Maganiza (where there was continuing open defecation).

We attempted to triangulate this information with data from health outreach workers on cases of diarrhoeal disease from 2016 and 2017. However, the data we were able to access were not comparable as they were collected over varying timescales and at different times of the year.

Family and Household chores

31% of interview respondents
20% of focus group participants

Twenty per cent of respondents chose being able to spend more time on tasks related to their family and household as the most significant personal benefit arising from the water point. This included being able to better look after children (for example, bathing them before school) or even that their marriage had improved, as their husbands no longer complained that they were away from the house for long periods of time.

Having more time to spend on household chores was cited in several villages but was particularly common in Maganiza. This included keeping the house clean, and cleaning clothes, and was a source of pride for the participants in question. Specific examples given were that as they were now able to use more water it was now possible to clean clothes properly – before they stayed dirty – and as a result they lasted longer before needing to be replaced.

Livelihoods

24% of interview respondents
< 10% of focus group participants

Only a small number of participants reported that spending more time on their business or farm was the biggest change resulting from the construction of the borehole. Many more participants mentioned that the construction of the water point had allowed them to spend more time in their fields, or allow them more flexibility in when they went to the fields (see above), but they did not suggest that there had been any significant benefit (in terms of increased business or harvest) as a result of this increased time. In two communities, a lack of access to agricultural inputs (seeds and fertiliser) was directly cited as a reason why increases in the time spent in fields did not lead to higher yields.

Although many of the participants cited their livelihood as 'doing business', this typically involved selling more valuable vegetables (in particular tomatoes). A small number of participants generated income through selling small items (such as soap or washing powder). There was one clear example of a participant building their business as a result of having more time to dedicate to it, but it appears that typically, participants do not have the capital to invest in the necessary stock.

Other changes

A number of respondents in one community cited an improved sense of security as the biggest change – linked to the fear of rape or attack by unknown men cited earlier in the FGDs. While undoubtedly positive on an individual level, this also had some potentially adverse side effects: the participants now felt able to send their children to collect water instead of going themselves.

A number of elderly participants, did not cite a specific change, but instead said that the borehole had ‘changed their lives’. For many this was the only time in their lives they had been able to access an improved water source, and a combination of increased dignity, ease of access, and pride in their community contributed to what they felt was an overwhelming change.

3.3.3. Limitations to changes

During the fieldwork, participants identified (directly and indirectly) several external factors which might limit the potential for the water points to effect change.



Latrine coverage was generally reported to be good in the project communities, with little open defecation. This was supported by the household interviews – with nearly all households reporting using a latrine, and two-thirds observed to be using an improved latrine. When probed, FGD participants generally attributed this high level of coverage to interventions by the district health office following cholera cases (or similar). As reported above, this was not the case in one community – there was lower latrine coverage, there had been no sanitation campaign, and diarrhoeal disease was identified (unprompted) as a continuing health concern. This would appear to agree with existing literature on this topic – that an integrated approach to WASH is needed to realise health impacts.¹⁵

Three participants (all in one community) reported that there has been no change in their lives as a result of the water point being constructed, because they did not use it consistently. Either they were unable to afford the user contribution (MK 200 / month) or else the borehole was too far from their homes (reported by elderly participants) so they reverted to using the unprotected dug well. It was claimed in the FGD that many households are in the same position.

¹⁵ For example, researchers from the London School of Hygiene and Tropical Medicine stated that, in relation to the effect of WASH interventions on diarrhoeal disease, ‘It is not necessarily helpful to separate out the three WASH interventions, as they act upon interlinked transmission pathways, and often cannot be provided in isolation from each other. Appropriate sanitation and hygiene behaviours both require adequate water supply.’ See *The Impact of Water, Sanitation and Hygiene on Key Health and Social Outcomes: Review of Evidence* available at <http://www.sharersearch.org/research/impact-water-sanitation-and-hygiene-key-health-and-social-outcomes-review-evidence>

4. Conclusions

In the assessment, we have taken the results (at process, output and outcome level) we set out in the initial theory of change and tested whether they had been achieved for the water points we visited. In summary, this is what we found:

Process

- **Water points rehabilitated or constructed**
This was achieved – all the water points had been constructed as planned.
- **Water point committees established and trained**
This was achieved – at each water point a committee had been established and trained.

Outputs

- **Households (and individuals) within the project communities have access to safe water**
This was achieved – all the water points we visited were providing access to water, and it appears that the water points are serving at least as many people as reported by UP Malawi.
- **Water points are managed and maintained effectively**
This was partly achieved – while some water point committees were exemplars of how to undertake preventative maintenance, and others had managed to amass reasonable savings, no community had done both. At the same time, in the absence of a system of external support for the communities, it was unclear how the committees or the communities would recover from a shock to the water point – such as it breaking down.

Outcomes

- **People within project communities continue to use safe water sources**
This was partly achieved – despite the shortcomings in operation and maintenance, the water points are still working to date, and in most communities the majority of people were using the water point. In two communities usage was not continuous: due either to the seasonality or the unaffordability of the water point. However, linked to the output result of ‘Water points are managed and maintained effectively’, the sustainability of these outcomes is uncertain based on the lack of financial resources to pay for future water point repairs, and the lack of systematic support (an ‘enabling environment’) for the WPCs.

Project impacts

The last step of our work was more exploratory – to identify anecdotal examples of impact from project beneficiaries.

Although anecdotal, there is compelling indicative evidence that the project has resulted in benefits to individuals and households. The most frequent changes have been an increase in flexibility and convenience (stemming from reduced time spent collecting water) and perceived improvements to health (in terms of diarrhoeal disease cases).

Although this assessment was only able to collect illustrative examples of impact, these were reported by respondents across multiple research strands and communities, and it is clear how these could be attributed to project outcomes: using an improved drinking water source limits the risk of faecal contamination – a key cause of diarrhoeal disease; collecting water from a source which is nearer to the home requires less time.

However, we also found that these impacts were not fully realised. Individuals did not always recognise health impacts when there were other potential sources of faecal contamination (e.g. open defecation), or where households reverted to using unimproved water sources. Time savings most often resulted in an improved quality of life, but not something which could be easily measured and quantified: into a financial value for example.



We took an exploratory approach to understanding impact in Co-op funded projects, and did not try to identify potential impacts in advance. However, any future work assessing project impact could start with the impacts we identified (e.g. health and time savings) and explore them more fully. It may be useful to separate these impacts into immediate impacts – that is, impacts which arise directly from the project outcomes – and higher-level impacts – which are dependent on factors beyond the project outcomes. Access to improved water is then necessary but not *sufficient* to realise the higher-level impacts, suggesting that in order to realise higher-level impacts additional processes may be needed.

- For health benefits:
 - The immediate impact of the water point is people no longer suffer diarrhoea as a result of drinking dirty water.
 - To achieve the higher level of impact of reducing diarrhoea overall, other faecal-oral contamination routes (such as poor sanitation and hygiene) would need to be addressed in addition to providing clean water.
- For time savings:
 - The immediate impact of the water point is people have more freedom over how to spend their time.
 - Higher level, quantifiable impacts (for example using the time to improve livelihoods) would require additional support for communities and individuals to take full advantage of the time savings.

5. How are these projects contributing to the achievement of the Sustainable Development Goals?

SUSTAINABLE DEVELOPMENT GOALS

At the outset of this assessment, one of the aims was to help Co-op understand how they might better *communicate* the impact of projects such as the partnership with The One Foundation to members and other stakeholders. The Sustainable Development Goals¹⁶ (SDGs) are a set of goals, targets and indicators which provide a framework for understanding the progress of all countries across a range of social and economic development issues – including access to water and sanitation. The SDGs for water and sanitation align broadly with the outputs and outcomes we identified in our theory of change, but they don't cover the wider project impacts.

Co-op already reports on how its work aligns with the SDGs: extending this reporting provides a framework for communicating the results of water projects funded through The One Foundation partnership, and understanding how the projects contribute to the ultimate aim of providing access to water and sanitation for all.

Below we describe how Co-op's partnership with The One Foundation specifically contributes towards the achievement of three of these goals related to water and sanitation, and set out what additional data are needed to understand better the scope of this contribution and use the framework to report even more effectively in future.



SDG 1.4

By 2030, ensure all men and women, in particular the poor and vulnerable, have equal rights to economic resources, as well as **access to basic services**.

A basic drinking water source is defined as: *Drinking water from an **improved source**, provided **collection time is not more than 30 minutes** for a round trip, including queuing.* The water points funded by Co-op can provide a service which could meet this criterion, but additional information would be needed to understand the contribution of the projects towards meeting SDG 1.4:

- representative data on collection time to understand if this is less than 30 minutes;

¹⁶ See: <https://sustainabledevelopment.un.org/topics/sustainabledevelopmentgoals>

- data on previous water point used, to understand how many people are gaining access to an improved source for the first time.

Of the six water points we visited, only one was providing a service where the median collection time exceeded 30 minutes.



SDG 6.1

By 2030, achieve universal and equitable access to **safe and affordable drinking water** for all.

To achieve this goal, people need to be able to use a drinking water source which is: **located on premises, available when needed and free from faecal and priority chemical contamination**. The requirement for the source to be on premises is very ambitious for rural areas in low-income countries, but does mean that Co-op funded water points – which are all community water points – do not contribute to achieving SDG 6.1. However, improved monitoring – of the availability and quality of water – would provide an understanding of whether the other two criteria for ‘safely managed’ sources are being met.



SDG 4.A.1

Proportion of schools with access to: ... (f) **single-sex basic sanitation facilities...**

To meet this goal, schools need access to: **Improved facilities, which are single-sex and usable at the school**. Co-op funded school latrines clearly meet this definition. However, as there were existing latrines at the schools we visited, it would be necessary to collect additional data (on existing latrine facilities) to understand if the project is providing first-time access to facilities, or supplementing existing facilities.

6. Additional monitoring – how could Co-op understand more about project outcomes and impacts?

In this section we provide recommendations on additional monitoring activities which Co-op and The One Foundation could adopt to better understand the project outcomes and impacts. This report has provided a snapshot of project outcomes and illustrative impacts: capturing information from a single moment in time in a limited number of communities. However, Co-op wishes to develop a more comprehensive methodology to understand project impact on a continuing basis. As outlined earlier in this report, we believe that a robust monitoring system should be built progressively along the results chain: establishing good measures of outcomes is a pre-requisite to considering potential project impacts. Our recommendations below are split between initial work on establishing firm outcome measures, and further work looking at impacts.

6.1. Agreeing a results framework

At the moment, the results reported to Co-op are based on processes – the number of water points constructed – but as part of this assessment we developed a simple theory of change to provide a framework for this assessment which defined outputs and outcomes ('people within project communities continue to use safe water sources'). In seeking to improve monitoring and reporting, Co-op and The One Foundation should look to agree a results framework which makes explicit what the expected outputs and outcomes are. This can be based on the theory of change we developed, or refined as appropriate. For example, it may be desirable to clearly separate the total number of people who are using a water point, and those who are using a water point which is not serving more than the intended number of people, and is accessible within 30 minutes (introducing a basic measure of service levels in line with the SDGs).

Our theory of change can cover results up to outcomes, but in establishing a methodology for assessing impact, Co-op and The One Foundation should reach a clear understanding on what the overall purpose of the projects is. Is providing improved water supplies to communities an end in itself? This would recognise that access to water is a human right and can be considered essential infrastructure, underpinning almost all facets of socioeconomic development? Or do the projects seek to have a broader purpose of leading to health or economic impacts? It is worth noting that many water-focused NGOs explicitly do not monitor or report health impacts, as they feel that the justification for providing access to clean water is strong enough in itself.

This report provides some evidence that, due to the focus of project activities on water and external socio-economic factors, the direct impacts arising from the project may be limited and heavily dependent on factors beyond the scope of the project or the control of UP Malawi. Given this, focusing on monitoring and understanding outcomes may be a better use of limited resources than seeking to measure impact.

6.2. Understanding outcomes: Regular monitoring of water point functionality

We believe that the first priority for future project monitoring should be establishing robust data on whether project outcomes have been sustained. This would allow Co-op to be confident in reporting how many individuals are continuing to benefit from project water points, and additionally would provide data for project management to identify failings and (potentially) work with local government and communities to address them. At present, although the UP Malawi staff have a good anecdotal understanding of the status of the project water points, this is not consistent nor is it reported.

The indicator framework we adopted for reporting water point outcomes could be used as a starting point for choosing what data to collect, with some changes. For example, the service level data are best collected at a household level, but undertaking regular household surveys may be too resource intensive. These data would be collected through regular visits to project communities (from current and previous projects), to collect information on the functionality of the water point, and the performance of the WPC. There is no clear standard on how often this would need to be – yearly could be seen as a sensible minimum requirement, but more frequent visits would provide more up-to-date data and provide a faster feedback mechanism if problems were identified.

UP Malawi is already starting to use smart-phone based data collection tools to collect data on water point construction, and these could easily be extended to cover ongoing monitoring.

It would be relatively straightforward for UP Malawi to roll out such a monitoring system (provided that sufficient resources are available). However, ideally this data collection should be undertaken by (or at least in partnership with) the district authorities. This reflects the districts' responsibility for overseeing water services, and also that any monitoring system should be indefinite – outlasting the presence of UP Malawi (or any other NGO) in the district. This may not be feasible in the short term due to local government capacity, but should be the end goal. In particular, the detailed design of the monitoring system would need to consider:

- available resources for data collection: whether by UP Malawi, local government or other partners;
- integration with existing district- and country-led monitoring systems: making sure that data collection is not replicated, that any data collected are shared with relevant partners and that indicators are in line with national standards;
- the relationship between data collection and ongoing support: ensuring that data collection is not a means to an end, but feeds back into ensuring that water points continue functioning.

During discussions with the District Water Office it emerged that Water for People (a US-based NGO) were undertaking water point mapping across both Mulanje and Thyolo districts. Seeking to integrate future monitoring with this sort of process could lead to efficiencies, and ensure that data collection feeds back into local systems, rather than being an extractive process.

6.3. Understanding change: Baseline and endline data surveys

Notwithstanding the discussion in Section 6.1 on the desirability of seeking to measure wider impacts, Co-op and The One Foundation should ensure they are collecting sufficient data at the start and end of the project, to understand the immediate changes it has brought about. For example, although our fieldwork showed that most people were using unimproved sources before the project, there is no data on whether this holds true across the project area. It is possible that the construction of water points has supplemented existing points, rather than providing first-time access to clean water.

To achieve this baseline and endline household surveys (representative of the project area) should be undertaken. These could be based on the quantitative questions asked at households as part of this assessment, but care should be taken to ensure that the design of the surveys reflects the project activities. For example, if there is additional work on hygiene and sanitation questions on behaviour change in these areas could be added.

7. Glossary

Term	Definition
Afridev	A common type of hand pump suitable for deep and shallow wells. All the water points included in this assessment were fitted with Afridev pumps.
Borehole	A deep well, drilled using machines, fitted with a hand pump or mechanical pump for drawing water.
Community management	The predominant institutional arrangement for rural water supplies in low-income countries (including Malawi) where, after construction, the water point is handed over to communities who are responsible (typically via an elected committee) for managing and repairing the water point.
Community-Led Total Sanitation (CLTS)	A commonly used approach to improving sanitation and hygiene practices in a community, which focuses on changing the behaviour of the entire community and ending open defecation. CLTS practitioners use emotional triggers (such as disgust) to help stimulate behaviour change.
Dug well	A shallow well, dug by hand, which may either be unprotected (open at the top with water drawn using buckets, or by users climbing down into the well) or protected (with the top covered by a suitable platform – usually concrete – and water drawn from a hand pump).
Hand pump	A human powered pump for lifting groundwater from a borehole or dug well. There are numerous types, with Afridev and Malda being used by United Purpose.
Malda	A type of hand pump suitable for shallower wells. This was used by United Purpose for a small number of water points, but not any of the water points included in this assessment.
Median	The median is the central value in a data set. It is an alternative measure to the mean, which may be preferable when establishing a ‘typical’ value as it is not skewed by extremely large or small values.
Menstrual hygiene management (MHM) facility	A facility to allow older girls and women a private and hygienic space to manage their menstrual hygiene needs. This is typically an enclosed space with a supply of clean water, and a means of safely disposing of used sanitary products (for example, a hole in the wall leading to an incinerator).
Spring	A natural outlet for groundwater which can either be unprotected (with water collected from a pool in the ground) or protected (where the source is encased in concrete to protect it from contamination and a pipe is provided as an outlet).

Ventilated improved pit (VIP) latrines	VIP latrines are designed to help avoid common problems of basic latrines – unpleasant odours and insect nuisance – by including an external vent pipe, which is covered with a fly mesh.
Water point committee	A committee comprising volunteers from the community who take responsibility for managing and operating the water point: collecting and accounting for fees; servicing the water point; and arranging for more complex repairs.



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