water for people
MALAWI

Improving Functionality of Rural Community Water Points Through Service Contracts

October 2022

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1.0 Introduction

Chiradzulu is a district in the southern region of Malawi with a population of 365,875 (National Statistics Office of Malawi, 2018), predominantly subsistence farmers. The district is demarcated into 10 small geographical areas called Traditional Authorities. According to the Fifth Integrated Household Survey of 2020, 92.1% of the households have access to an improved water source and 90.1% of the improved water points are handpumps. In Malawi, rural water supply is mostly provided through drilling of boreholes fitted with Afridev Handpumps, which contribute to over 94% of the technologies used to supply portable water in rural communities. Community water points are managed through community-based management model whereby each water point is managed by a team of 10 volunteers as a water point committee (CBM Manual 2010).

The central government's disengagement from rural water service provision in the late 1980s and political pressure for communities to take greater ownership and responsibilities, have led to the widespread adoption of community-based management as the predominant model in developing countries. Low functionality rates (around 60 to 70% in sub-Saharan Africa) and low service levels are the visible symptoms of the widespread failure of community-based management. Growing evidence of failure has led practitioners and decision-makers to question community-based management's ability to deliver service at scale and seek alternative, more professionalized management arrangements. In Chiradzulu water point functionality is at 71% (Water For People Annual Monitoring Report-2019).

There is no clear and agreed upon definition of what a professionalized management arrangement entails. However, a shift away from volunteerism, improved monitoring and regulation, heighted accountability, and the delegation of at least some responsibilities to more capacitated and skilled service providers, as well as the provision of ongoing support and training to service providers, increased operational and financial sustainability are all commonly referred to as key features of more professionalized management arrangements.

2.0 Our Approach

Applying the Everyone Forever model, Water For People in Malawi is working to ensure that safe drinking water services are made permanent for every household, health clinics, and schools. Since 2010, the Everyone Forever model has fundamentally shifted the

industry's approach to the crisis while addressing Sustainable Development Goal (SDG) 6. Water For People has been identifying and training Area Pump Mechanics as skilled individuals to support communities on major maintenance of handpumps as a business. Since 2019 Water For People has been collaborating with Basic Services Development Agency (BASEDA) a local NGO specialized in operation and maintenance and the District Water Office in Chiradzulu District on operation and maintenance of community water points.

2.1 A Paradigm Shift

Water For People in collaboration with BASEDA and Chiradzulu District Water Office is promoting a concept of service contracts between the trained Area Pump Mechanics and Water the Point Committees (WPC). There are 41 Area Pump Mechanics (APMs) in the district who have been trained and supported with funding from Water For People and BASEDA. The selection of APMs is done in liaison with the District Water Office and Extension workers from different localities in the district. The APMs are equipped with tool kits and pushbikes to support their daily work.

Initially, repair contracts were for major repairs only which had less impact on improving functionality of handpumps in the district. The service contracts on the other hand, allow handpumps to undergo routine preventive maintenances to improve the functionality of the handpumps and increase the life span of the handpump hence ensuring that communities still have access to improved water sources overall.

The contracts are between a WPC and APM. The WPC has the mandate to collect a monthly tariff which is flat fee from water users (normally households), these funds are used for operations and maintenance of handpumps. The WPC purchases fast wearing handpump parts p from nearby spare parts shop owners who have also been trained to stock borehole spare parts.

3.0 Service Contracts Arrangements

The service contracts are arrangement in two form between the APM and WPC. However, the shop owners also play a critical role in the service contract through stocking of spare parts.

3.1 Annual Routine Preventive Maintenance Contract

The WPCs pay a lumpsum fee of minimum MK 5,000 ($ 4.8)/ year? Or month? and maximum of K12,000 ($11.6), the fee varies from location to location, to the APM and they are visited every four months for routine maintenance to replace fast wearing parts

3.2 Major Repair Contract

The WPCs pay a lumpsum fee minimum of K3,000 ($ 2.9) to K12,000 ($11.6/ month? Or year?) for major repair contracts. If the borehole has broken down whilst under a service contract, the APM will provide maintenance service and the WPC will shoulder the cost of

materials. Repairing an abandoned borehole, an APM would charge a maximum of K400,000 ($ 388) per repair depending on the severity of the damage.

4.0 Methodology

Water For People measures access to sustainable water service by measuring water point level of service. The level of service measures[1] the availability of an improved water systems that is meeting government standard. This is achieved through annual surveys. The level of service measurements go beyond just availability of an improved water system as indicated below;

Table: 1 Level of service Metrics

Water Point Level of Service Metrics	Points Possible
Water Point/System Is Improved	1
The Source of The Water Point/System Is Protected	1
Water Point/System Infrastructure Is in Good Physical Condition and Is Functional	1
Number of Users of Water Point/System Meet Standard	1
Water Is Available on The Day of The Visit	1
Water Point/System Was Not Broken or Out of Service For 1 Day or More a Month in The Last Year	1
Water Point/System Has Adequate Water Quality (bacteria, turbidity and other contaminates of concern)	1
Water Point/System Has Adequate Water Quantity	1
Total	8

The level of service results are plotted on a scale of 0 to 8 with distinct colour codes representing progress and as Water For People will always aspire for Yellow colour

[1] Water For People Water Level of Service is measured at 3 levels as follows a). Community b). Household and c). Public Institutions (Clinics and Schools)

(Intermediate Level of Service) and Green colour (High level of Service). At community level we celebrate achievement of Everyone if intermediate and high level of service is 90% or more.

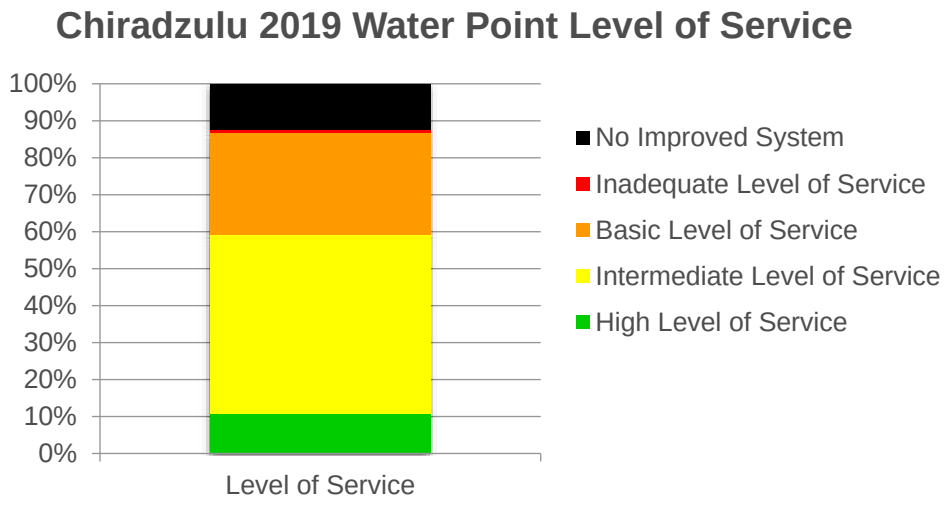
Table 2: Level of Service colour Codes

Scores	Color	Label
0	Black	No Improved System
1-2	Red	Inadequate Level of Service
3-5	Orange	Basic Level of Service
6-7	Yellow	Intermediate Level of Service
8	Green	High Level of Service

5.0 Results and Discussion

In 2019, Water For People conducted a census of all communal water points to assess the level of service based on metrices in Table 1.

Figure 1: Level of Service at District Level



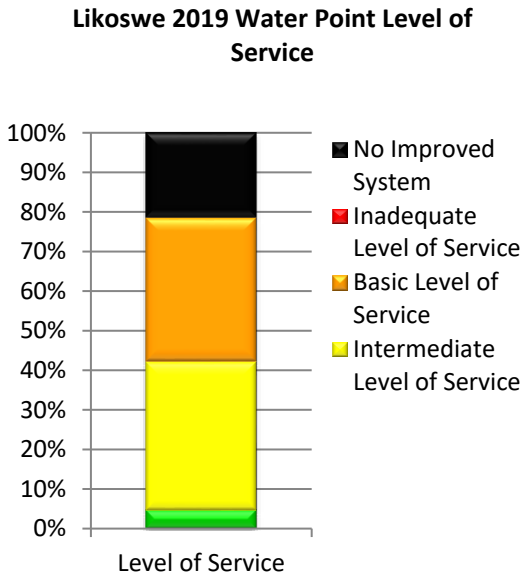
The district water level of service for Chiradzulu was at 59.1%. The key metrics that contributed to the lower level of service included Water Points being out of service or broken down for 1 day or more in a month, water not being available on the day of visit and water system infrastructure being not in good physical condition. All the metrics identified relates to good practices on operation and maintenance are supposed to be

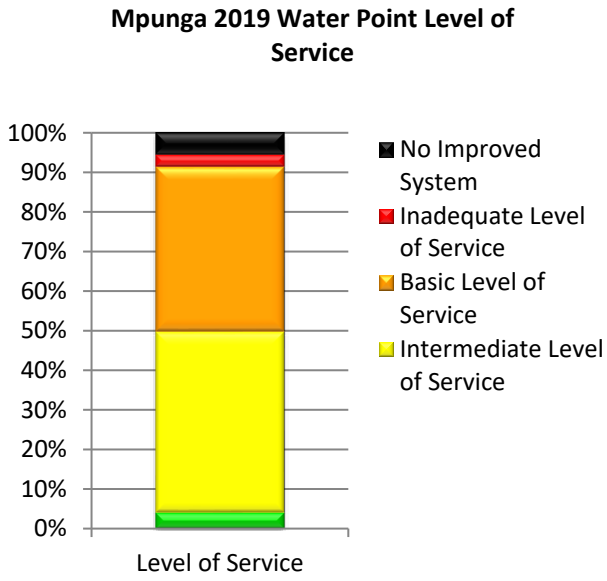
handled by the WPC.

Table 3: 2019 Level of service metrics

Metric	Meets Metric Requirements	Does Not Meet Metric Requirements	% meeting metric requirement	% not meeting metric requirement
Water Point/System Is Improved,	1617	0	100%	0%
The Source of The Water Point/System Is Protected.	1566	50	97%	3%
Water Point/System Infrastructure Is in Good Physical Condition and Is Functional.	949	667	59%	41%
Number of Users of Water Point/System Meet Standard	638	979	39%	61%
Water Is Available on The Day of The Visit	1314	302	81%	19%
Water Point/System Was Not Broken or Out of Service For 1 Day or More a Month in The Last Year	922	694	57%	43%
Water Point/System Has Adequate Water Quality (bacteria, turbidity and other contaminates of concern)	1202	44%	96%	4%
Water Point/System Has Adequate Water Quantity	1407	80	95%	5%

Table 2: FY 2021 Level of Service at Traditional Authority level





At Traditional Authority level, A Likoswe and Mpunga were the only TAs which had lowest level of service of below 50% (Likoswe 42.1% and Mpunga 49.7%). Coincidentally these TAs are top TAs with highest number of water points (Hand pumps) out of the 10 TAs in Chiradzulu (Mpunga 199 and Likoswe 280)

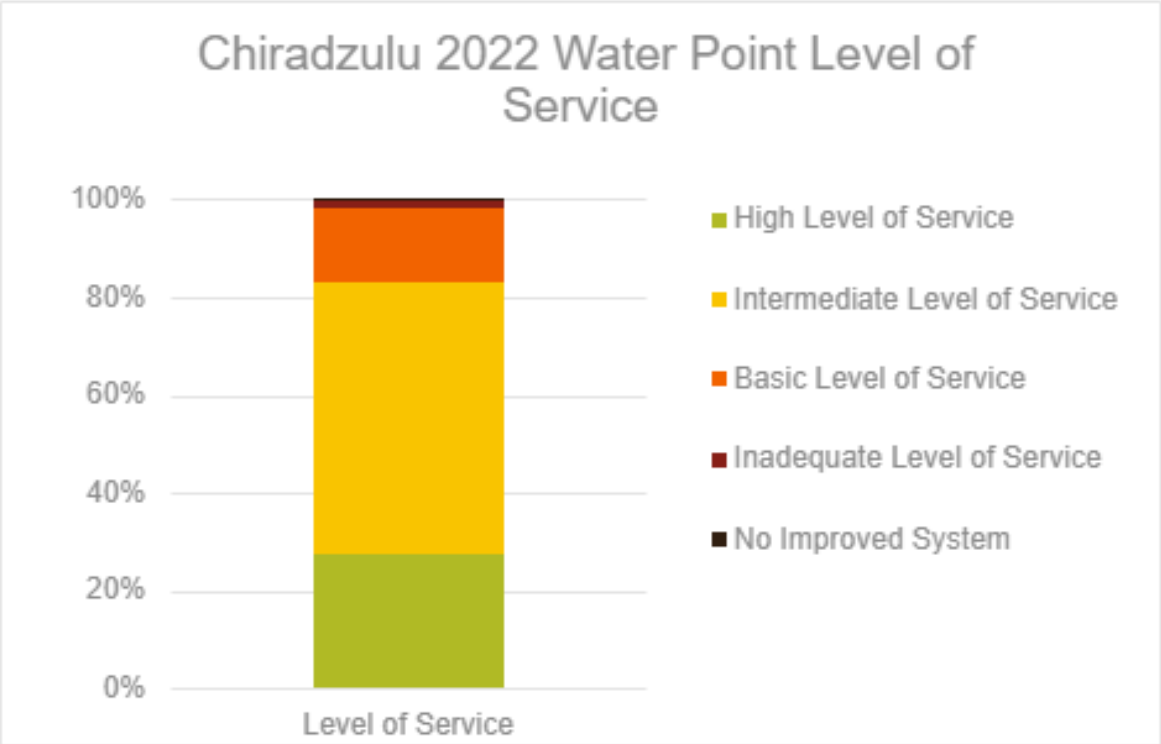
Table 4: Service Contracts (October 2021 to May 2022)

No	Name of Traditional Authority	Total of APMs	Total Number Contracts	Total Revenue
1	Kadewere	9	113	$328.8
2	Chitera	3	8	$ 62
3	Mpunga	3	250	$ 1939.9
4	Likoswe	5	41	$ 318
5	Sandrack	3	11	$ 85.35
6	Onga	2	23	$ 44.6
7	Ntchema	3	4	$ 6.5
8	Mpama	6	12	$ 34.92

9	Nkalo	4	18	$ 52.37
10	Maoni	3	22	$ 42.7

The service contracts are not only aimed at helping to improve on the functionality and level of service of water points but are also significantly boosting the economic status of the area mechanics and shop owners who stock spare parts.

Table 5: District Level of Service (2022)

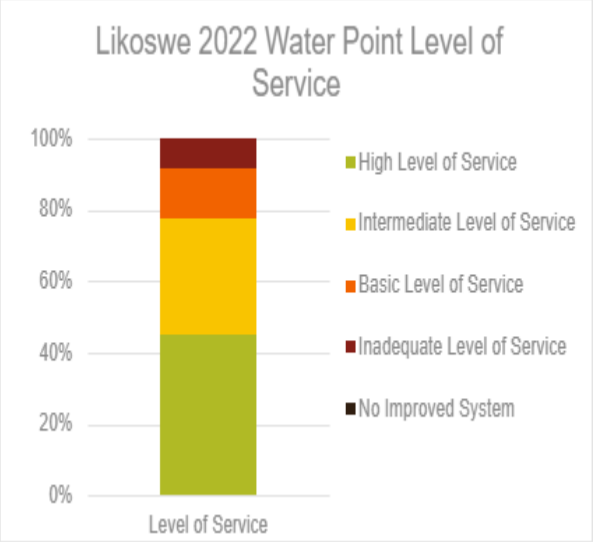


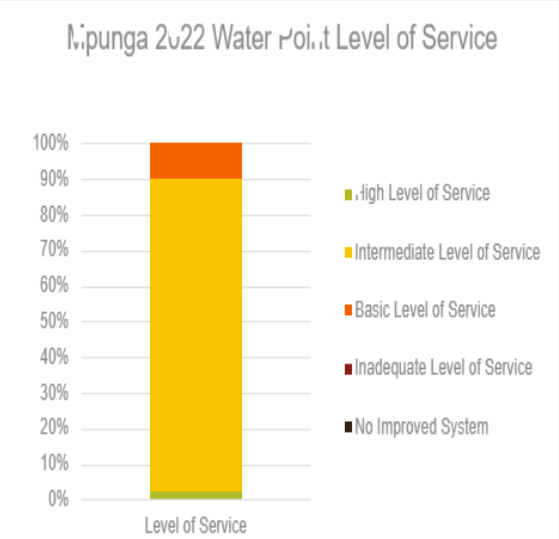
During District wide annual monitoring of 2022, a sample 432 water points was randomly done across the district to assess the LoS. The overall LoS has increased to 82.8% from 2019. Comparing the metrices that affected the LoS score in 2019 has significantly improved by over 50% across the three metrices; physical condition of the water point, water being available on the day of the visit and water system being out of service or broken down for 1 day or more in a month or year.

Table 6: 2022 Level of Service Metrics

Metric	Meets Metric Requirements	Does Not Meet Metric Requirements	% meeting metric requirement	% not meeting metric requirement
Water Point/System Is Improved	1601	0	100%	0%
The Source of The Water Point/System Is Protected	1587	14	99%	1%
Water Point/System Infrastructure Is in Good Physical Condition and Is Functional	1341	260	84%	16%
Number of Users of Water Point/System Meet Standard	1037	570	65%	35%
Water Is Available on The Day of The Visit	1392	209	87%	13%
Water Point/System Was Not Broken or Out of Service For 1 Day or More a Month in The Last Year	1224	377	76%	24%
Water Point/System Has Adequate Water Quality (bacteria, turbidity and other contaminates of concern)	319	1219	21%	79%
Water Point/System Has Adequate Water Quantity	1391	92	94%	6%

Table 7: FY 2022 Level of Service at Traditional Authority Level





At TA level the two focus TAs of Likoswe and Mpunga the Level of Service has significantly improved comparing the two monitoring years (2019 and 2022) by over 30%.

6.0 Conclusion and Recommendation

There is a significant correlation between improved functionality of community water points and increased community water level of service which also translates to improved satisfaction levels of water users in Chiradzulu. Improved awareness of communities (water service providers) around service contracts is an opportunity to improve on skilled operation and maintenance of community handpumps and prolonged life span of community handpumps through the engagement of the private sector.

Recommendation

As efforts are being made to scale the contracts service arrangement for handpumps there are a number of things to be critically considered to help consolidate and amplify the gains being realized through the arrangement.

The contract service fee must be standardized by the District Council (Capping) to protect the communities from being duped whilst promoting market liberalization for the APMs.

Lobby for politicians' and local governance structures endorsement of the APMs to eliminate dependency syndrome of the water point committees on politicians for borehole repairs. The water point committees and communities should have ownership towards the operations of the water points to ensure sustainability.

Conducting periodic satisfaction survey for WPC to help improve further the arrangement as the initiative is being scaled up.

Lessons Learnt

The network of APMs, has created a platform for continued monitoring of functionality of handpumps by the district Water Office. Through the routine visits and routine preventive maintenances conducted the APM provides monthly reports for the condition and status of all handpumps withing an APM's catchment hence reducing the operational costs for District Water Office.

Improved performance of WPCS towards tariff collections- The engagement of APM through is enhancing the performance of Water Point Committees as they are continuously collecting monthly tariff from water users as they are obliged to always make subscriptions to the APMs for continued benefitting from service contracts and keep borehole spare parts that are required. The arrangement acts strictly on cash basis

The network of legally recognized APMs has eliminated bush area mechanics who lack expertise and capacity to conduct routine and major borehole repairs.Reports from the District Water Office shows that there are tremendous decreases in frequent breakdown of borehole with the introduction of trained mechanics as they conduct their work with necessary knowledge on government standards.

Challenges

There are still some Area mechanics who have not done any service contracts despite the engagement. This has led to some TAs having less boreholes under service contracts.

Political interference. Some politicians are responsible for operation and maintenance of community water points hence jeopardizing the success of the service contract arrangement.

References

- Water For People 2019 Annual Monitoring Report
- Water For People 2022 Annual Monitoring Report
- Malawi population and Housing census_2018 Report, National Statistics Office
- The Fifth Integrated Household Survey Report (2020), National Statistics Office, Zomba, Malawi