

**41<sup>st</sup> WEDC International Conference, Egerton University, Nakuru, Kenya, 2018**

**TRANSFORMATION TOWARDS SUSTAINABLE  
AND RESILIENT WASH SERVICES**

**CREATING SUSTAINABLE WATER SERVICES THROUGH BOREHOLE  
BANKING**

*Dorothy Mbewe (Malawi)*

**PAPER [OFFICE USE ONLY]**

---

**Abstract**

*Borehole Banking is a concept borrowed from the Village Savings and Loans Model whose aim is to improve sustainability of boreholes by reducing rate of non-functional Handpumps. Borehole banking helps to increase a sense of ownership in the community as access to loans is open to those that contribute towards the water point monthly tariff fee. Community members get loans from the bank to pay for various bills and pay back at an agreed interest rate and agreed period. Borehole banking has improved the rate of functionality from 64 % in 2015 to 94% in 2017(FLOW results). Increased sense of ownership among communities is a good way to ensure that water systems are sustained. Water points have readily available funds to purchase spare parts and pay for any services rendered to them.*

---

**Introduction**

Resource availability and community ownership is key to sustainable water services in communities. Communities must continue to contribute throughout the life of a water system to ensure that water systems are sustained. Sustainable Development goal 6 aims at ensuring availability and sustainable management of water and sanitation for all, and it provides a clear focus towards sustainability. Water is not only supposed to be available but there must be practical measures in place to ensure the prolonged life span of the water systems. Stakeholders must strive to ensure that they build capacity of communities to take care of water systems, long after 'projects' have phased out.

Increased non-functionality rates of boreholes poses a threat to the sustainability of Boreholes and Water Systems in general. Borehole Banking was thought as one way of addressing increased non-functionality rates of water systems. A Borehole Banking initiative is an adaptation of the village savings and loans model whose overall objective is to address the rate of non-functional water points. Borehole banking encourages communities to continuously contribute towards the pump operation and maintenance funds through the monthly tariff of all water users ( Chikwawa District council,2015). The scheme encourages individuals to take loans from borehole funds to help start small businesses and pay various bills. It helps to increase funds at the water point which are used to take care of repairs at the borehole and to buy spare parts. Water for People, in partnership with Chikwawa District Council is implementing the borehole banking concept in Chikwawa District in the southern region of Malawi.

**Methodology**

Annual monitoring using Field Level Operational Watch (FLOW) is conducted to understand level of service of water systems, the functionality rate, system coverage in the districts and service provider level of service. In 2015, functionality rate in TA Chapanya was at 64% (Water For People,2015). This implied that 36% of the boreholes in the Traditional Authority were not functioning. Based on this status, Water for

People-Malawi intervened and introduced Borehole Banking initiative as a measure of addressing non-functionality but also promoting a vibrant community managed initiative which can sustain rural water systems.

### **How a Borehole Bank Operates**

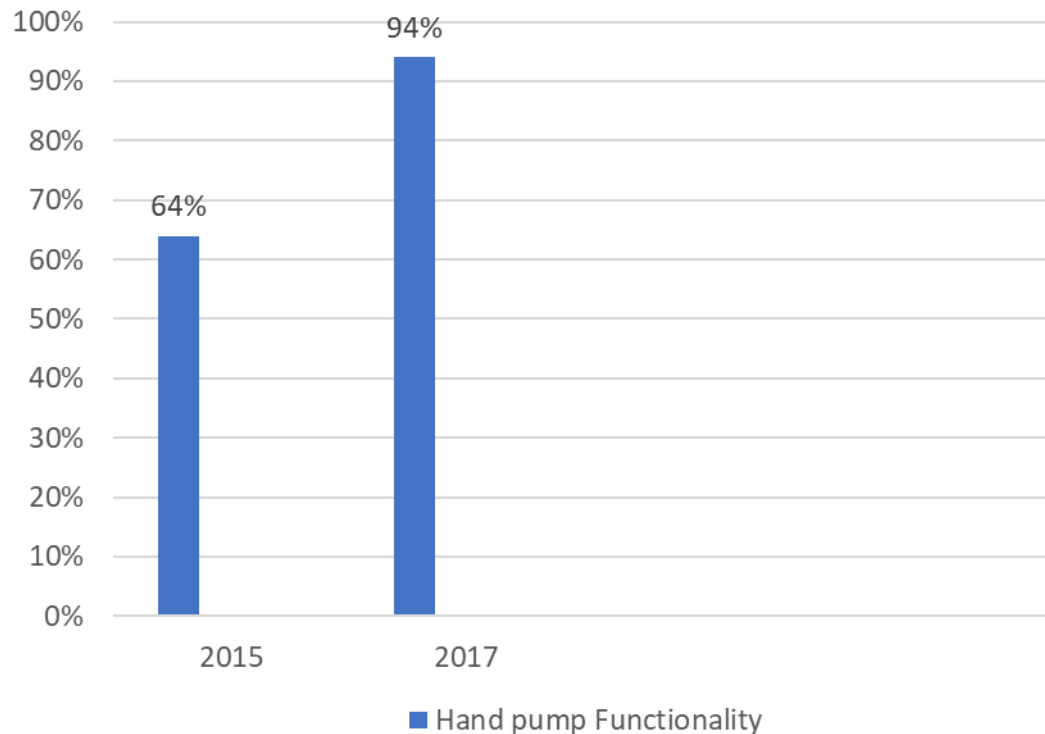
Borehole Banking is managed and operated by selected Water Point Committees from the community. Water Point Committees consisting of 10 members each selected from the community are set up to oversee the management of a water point ( Ministry of Agriculture, Irrigation, and Water Development, 2015). Water Point Committees are trained in Operations and Maintenance of a borehole, and overall management of the water point. Each household that is accessing water from a water point is required to contribute a monthly tariff that is calculated using the AtWhatCost tool which is a full life-cycle costing model that ensures water points recover the full cost of the borehole by the end of its 15-year life span. The cost of a borehole is calculated at \$ 4,794 (Mk3,499,420), this cost is divided into 15 years and divided among households using the water point who contribute monthly (Chikwawa District Council and Water for People, 2015) . Based on the calculations in the AtWhatCost tool in Chikwawa District, a minimum monthly contribution would be 27 Cents (Mk197) depending on number of households in the community.

To ensure that users are actively contributing towards the Water point and that the water point has enough money to purchase borehole spare parts and any repairs before the committee is trained in borehole banking, the water point must reach a threshold of MK 50,000 (\$ 68.49) after which the water point Committee must be trained in borehole banking. Individual members from the community borrow money from the borehole bank at an agreed interest rate and payback period. Access to the borehole bank is open only to the water users that contribute their monthly tariff as this encourages a continued commitment by the users. When the money at the borehole bank accumulates, some committees open bank accounts with official commercial banks within the district which is designed to have three signatories (Chikwawa District Council and Water for People, 2015) .

Every individual taking a loan is required to fill an application form, each loan application is screened and approved with an accompanying collateral security in case the loan beneficiary defaults. Each time a member wants to apply for a loan, the committee reads out the Borehole Bank constitution developed at that water point to the applicant for the sake of understanding the consequences in case he/she defaults. (Chikwawa District Council and Water For People, 2015)

### **Major Findings and Successes**

Borehole banking has helped in boosting funds at water points while reducing the non-functionality rate. This is evidenced in a case of Traditional Authority (TA) Chapananga with a current hand pump functionality of 94% in 2017 from 64% in 2015 (Water For people, 2017)). Borehole banking also helps reduce borehole down time as water points have readily available funds to buy spare parts and pay for maintenance services. A survey conducted in 2016 whose objective was to compare results, showed that out of 115 randomly selected boreholes that were sampled, 23 water points that had borehole banks had 100% functionality and 97 boreholes showed 68% functionality. The 32 % non-functionality was concluded to be due to lack of pump maintenance funds to be used for repairs and buying borehole spare parts which led to most boreholes breaking down. Water For People Has also scaled up Borehole Banking to three (3) other Traditional Authorities and there has been good response from the communities. Additionally, there has been a positive feedback from Dedza and Phalombe Districts where United Purpose an international NGO has been implementing Borehole Banking. Borehole Banking has not only improved Borehole functionality in these areas but has also changed the mindset of the community members towards water, people view water as a domestic tool but also as a source of money for household and community development.

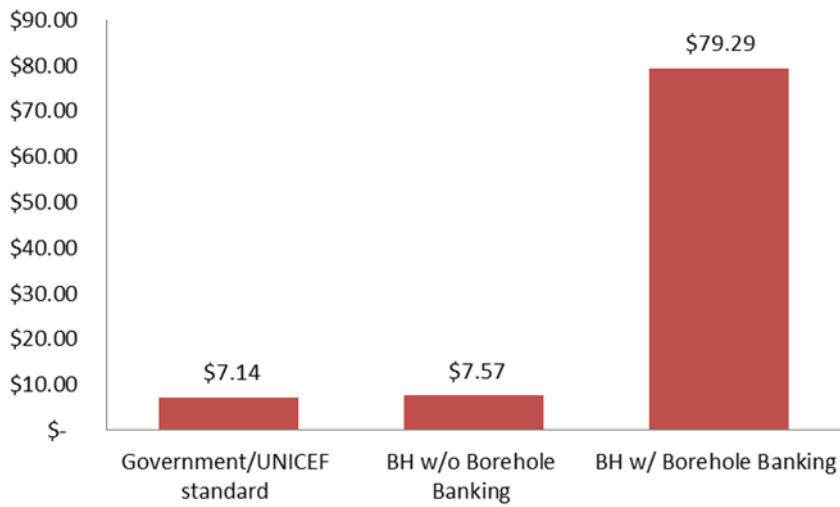


Graph 1: The graph shows hand pump Functionality increase from 2015 to 2017 (FLOW Results) in Traditional Authority Chapanaanga.

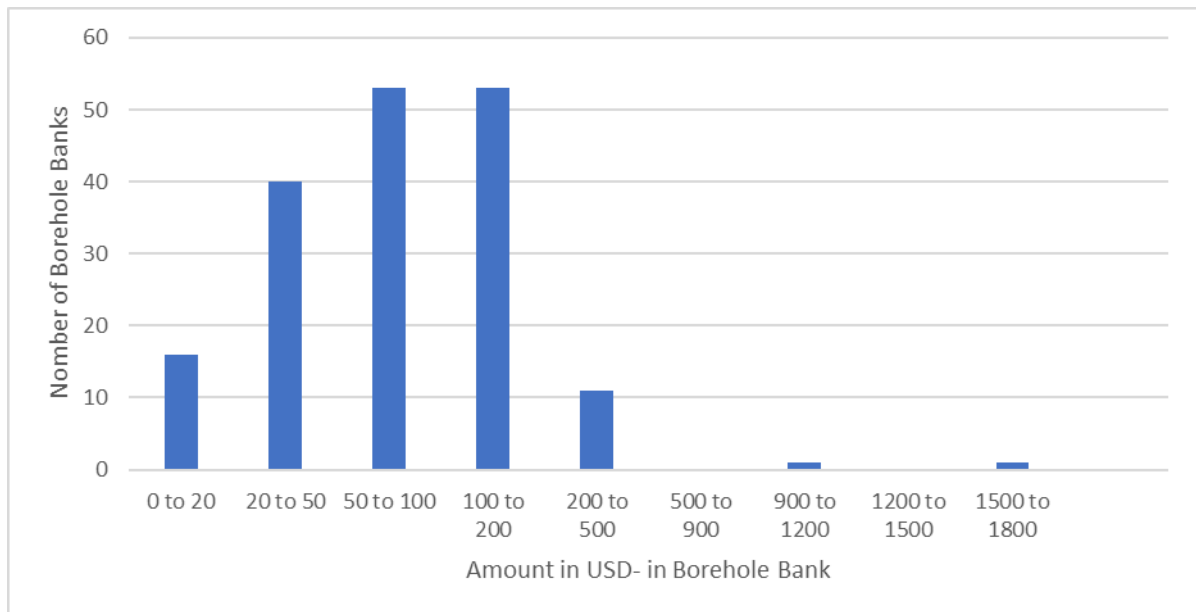
Tremendous impact has been seen on water point funds, as well. One example of a water point in Chikwawa has accumulated MK 1,200,000 (\$1641.59) since starting out in 2015. Water point committees readily buy spare parts for the borehole and can pay for the repair services to Borehole Users Associations and Area Mechanics, borehole banking is improving individual lives in communities as individuals borrow money to do various businesses that boost their financial status.

Borehole banking has helped improve the collection rate of tariffs, on average a water point without a borehole bank has \$7.57 and one with borehole banks has \$79.29 savings, the Government sets the minimum borehole funds at 7.14 of which most borehole banks have exceeded. The social welfare of communities through the monthly meetings, and boosting the private sector in the communities through water points engaging to buy spare parts and pay for repair services. Additional water points in the Traditional Authority have adopted borehole banking on their own simply by word of mouth.

## MBEWE



Graph 2 : this graph shows the savings per Water point, comparing between those with Borehole Banks and those without.



Graph 3: showing number of borehole banks within ranges in pump funds in borehole Bank.

As seen on the graph above, 159 Borehole Banks out of 175 assessed, have pump funds within the range of 20 to 1800 which is above the recommended Government set standard, representing 91% of the total number of Borehole banks. Despite having most Water Points performing very well, with Borehole

Banking, there are still others that are not performing with borehole bank which is a challenge, at times some community members in communities where Borehole Banking is performing well tend to slide back on the tariff Contributions, as a solution to this, Water For People has engaged an assessment of all Borehole Banks to understand the different factors that lead to the different Borehole Bank Performances and conduct revamping sessions to those communities

## Conclusion

Borehole banking is not only improving hand pump functionality, but also improving people's lives in the communities, Borehole Banking also empowers the community as decisions are made at community level. This paper proposes this concept to be scaled up to all water points in rural areas in Malawi as a way of reducing the rate of non-functional water points and ensuring full cost recovery in the shortest period.

---

## References

Water For People Malawi, 2015; *Field Level Operation Watch; Monitoring results* .  
Water For People Malawi, 2017; *Field Level Operation Watch; Monitoring results* .  
Chikwawa District Council and Water for People, 2015; *Water Point Bank – Training Guidelines*.  
Ministry of Agriculture, Irrigation, and Water Development, 2015; *Rural Water Supply Operations and Maintenance Series, O&M guidelines, and manuals*.

---

## Contact details Contact details

*About the author: Dorothy Mbewe is a Project Officer working with Water For People Malawi to implement WASH programs in Chikwawa one of its Everyone Forever districts in the Country, with the aim of providing safe and portable water to all which are sustained by strong communities, governments and markets.*

Dorothy B. Mbewe  
Water For People, PO Box 1207, Blantyre, Malawi  
Tel: +265 88 138 88 05  
Email: [dmbewe@waterforpeople.org](mailto:dmbewe@waterforpeople.org)  
www: [www: www.waterforpeople.org](http://www.waterforpeople.org)

---

PLEASE NOTE: **ALL PAPERS** INCLUDING IMAGES REFERENCES, ACKNOWLEDGEMENTS AND CONTACT DETAILS, MUST NOT EXCEED **6** PAGES .

**Papers not set in this template or which exceed the required maximum number of 6 pages will be +rejected without review.**