



Water.org: Meta Study of Existing WSS Research

Foundational Outcomes

14 December 2021

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Submitted to



Submitted by



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List of Abbreviations

FI	Financial Institution
ToR	Terms of Reference
ToC	Theory of Change
WSS	Water supply and sanitation
WASH	Water, sanitation and hygiene

Acknowledgements

This report was written by the Iwel/Aguaconsult team of Rachel Norman (Iwel), Ben Harris (Iwel), Sue Cavill (Iwel), Joseph Thompson (Iwel), Bill Twyman (Aguaconsult), with internal quality control by Goufrane Mansour (Aquaconsult), Don Brown (Iwel), and Elisabeth West (Iwel). The authors wish to thank the Water.org team, in particular: Katrina Green (Senior Insights Analyst) and Heather Arney (Senior Manager, Insights and Innovation) for their collaboration, engagement and responsiveness during this assignment. Thanks also goes to other Water.org staff including Magdalene Goble (Senior Analyst for Global Insights Monitoring), David Strivings (Senior Impact Analyst), Zehra Shabbir (Senior Analyst for Knowledge and Learning) and Rich Thorsten (Chief Insights Officer) for their engagement. Furthermore, thanks goes to the program managers Anthony Githinji (Kenya), Abu Aslam (Bangladesh), Jose PM (India) and Ann Carl Bailey (Philippines).

Version Control

Version number	Date	Author	Comments
1	8 th October 2021	Iwel/Aguaconsult team	Draft version to Water.org for review.
2	26 th November 2021	Rachel Norman	Revised to become a standalone Foundational Outcomes Paper.
3	7 th December 2021	Rachel Norman	Comments from Water.org review incorporated
4	14 th December 2021	Rachel Norman	Final submitted to Water.org

1. Introduction

1.1 Scope of the Meta Study

The objectives of the Meta Study are “to organize, synthesize and translate the (internal) evidence base into meaningful insights that compel action across donor and sector stakeholders” and “to inform Water.org’s future research and learning agenda by identifying key evidence gaps where additional insights and research are needed”. These objectives reflect the breadth of the (internal) evidence that already exists and highlights where evidence between Water.org activities and outcomes related to these thematic areas remains weak. Recommendations are also made in terms of Water.org’s future learning agenda as well as improving Water.org’s programming to strengthen its potential contribution to the five thematic areas.

1.2 Foundational outcomes

Foundational outcomes are the direct outcomes from the inputs and outputs of Water.org activities (see Annex 1). In turn, they are base level outcomes on which the thematic outcomes (WaterCredit as an accelerator, Household Finance, Health & Safety, Womens’ empowerment and equity, and Climate Change) are fostered. Foundation outcomes consider how WaterCredit (WC) supports better access to water supply and sanitation for households across 5 different areas:

- WC supports FIs to develop Water Supply and Sanitation (WSS) portfolios and increases the overall capital available for WSS improvements.
- WC directly provides access to WSS financing for Households (HHs).
- Through making loans available (directly and indirectly), WC supports increased access to improved WSS.
- WSS constructed by HHs with the support of WC are maintained post-construction and provide a safely managed service.
- HHs that improve WSS facilities also improve hygiene facilities and practice.

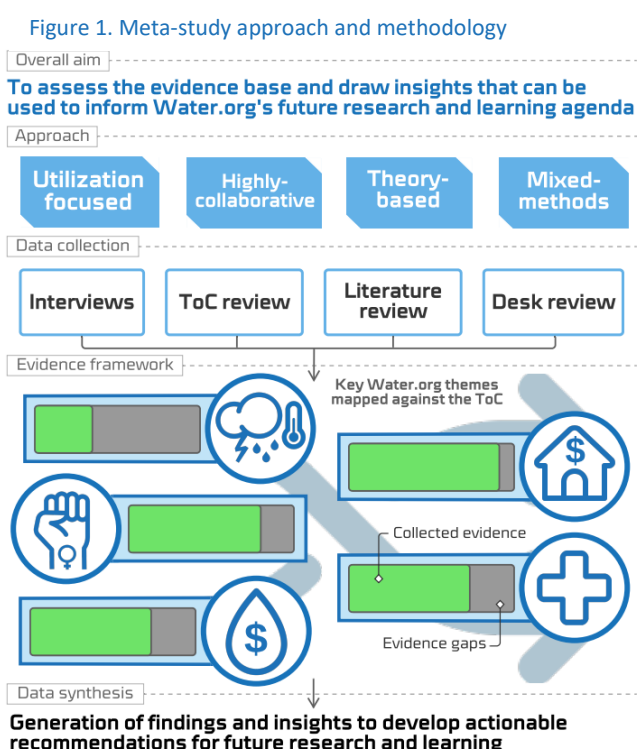
These foundational outcomes form the basis of the theories of change for each of the themes.

1.3 Methodology

Figure 1 summarizes the approach and methodology applied for the meta study.

Six stages of work were carried out:

1. Review and reformulation of the thematic theories of change and development of a Theory of Action;
2. Deep dive document and data review for internal evidence. This incorporated a sense check with Water.org core team to identify whether any additional data was available;
3. External literature review to source evidence on associated sub-themes including any gaps identified with the internal evidence;



4. Drafting of the Thematic Paper;
5. Co-creation workshop to develop and refine the associated Theory of Change;
6. Finalizing the Thematic Paper.

Analysis framework: The reformulated theory of change and associated sub-themes was used as the analysis framework.

Internal evidence data sources: The meta study analyzed both primary (interviews with country program managers) and secondary data, quantitative (WaterPortal data and mwater data) as well as qualitative analysis (evaluation reports and other such publications).

External evidence data sources: External literature was sourced using Google Scholar, reference lists in sourced literature, personal libraries, and cross-over and sharing of literature from one thematic area search to another. Both internal and external evidence were entered into a data capture tool for further analysis.


Scoring the evidence: Each sub-theme is given a Red, Amber, Green (RAG) rating. A grey color block depicts that the rating is not applicable.

Table 1. Color classification of RAG rating

Internal data	Strong evidence	External data	Strong evidence
	Emerging evidence		Emerging evidence
	Mixed evidence		Mixed evidence
	Weak evidence		Weak evidence
	Not applicable		Not applicable

Internal quality control: in addition to the sense checking by Water.org, three discrete internal quality control steps have been taken: an internal workshop sharing the internal and external evidence to identify and discuss thematic findings and cross-cutting aspects; and 2 rounds of quality assurance of the report (draft and final).

Internal and external evidence: two icons are included in the text to denote whether a data source is internal to Water.org or external:

 = internal evidence  = external evidence

Internal evidence data sources

This meta-study comprises of analysis of quantitative (WaterPortal data and mWater data) as well as qualitative data (as available within various evaluation reports and other such publications) – see Table 2. Despite the quantitative data being available for a number of different countries this meta-study reports Water.org data where the sample size is greater than 100. Whilst this reduces the data sets available for analysis from mWater and means that in some cases the sample is not truly representative¹, it provides a compromise so that the evidence available can at least be considered.

Acknowledging that the WaterPortal is live data, the analysis across the thematic areas has been conducted using data extracted during August, September and November 2021. This may result in minor differences in sample/reported numbers however is not considered a limitation.

¹ Sample size that is 'traditionally' recognised as providing statistical representativeness is >380 or >280 responses for small populations (e.g. 1000 loans) [Sample Size Calculator by Raosoft, Inc.](#)

The qualitative analysis built on the rapid document review (conducted during the inception phase), by completing a deep dive into the documents and included any additional documents that became available.

In the case of this Foundational Outcomes paper, internal evidence only is reviewed given the WC model is specific to Water.org.

Table 2. Overview of internal impact evidence data sources per country

Country	# of Evaluations	# of Impact Assessments	mWater 2.0 surveys	mWater 3.0 surveys	Interview with PM
Global	0	0	3,392	17,466	n/a
Bangladesh	6	0	820	3354	Yes
Brazil	0	0	70	412	No
Cambodia	1	0	640	2,215	No
Ethiopia	1	0	144	142	No
India	8	2	534	5,304	Yes
Indonesia	8	0	615	2,957	No
Kenya	2	1	10	545	Yes
Mexico	0	0	N/A	N/A	No
Peru	2	0	58	263	No
Philippines	2	0	449	795	Yes
Tanzania	0	0	17	553	No
Uganda	1	0	34	923	No

Qualitative data through evaluations

These reports contain a wide range of disaggregated data points across one or more different countries and a qualitative evidence base. There are 18 evaluations and 3 impact assessments along with summaries/briefs for both (see Table 18 in Annex 2).

1.4 Structure

The remainder of the report is structured as follows:

Section 2 provides a summary of findings.

Section 3 provides detailed findings for each of the sub-themes of Foundational outcomes.

Section 4 provides a concluding statement.

Section 5 details the thematic Theory of Change (ToC).

Section 6 sets out a series of practical recommendations for consideration by Water.org.

References are then detailed.

2. Summary of findings

There is a strong internal evidence base that WaterCredit (WC) supports FIs to develop WSS portfolios. There is clear evidence across all countries that where WC is implemented, WC supports financial institutions to develop WSS portfolios, and is likely to continue to do so based on demand.

There is a strong internal evidence base that WC increases the overall capital available for WSS improvements. There is clear evidence that WC increases the overall capital available for WSS improvements. This capital takes the form of original grants (from Water.org to FI partners) as well as leveraged and catalyzed finance. This is considered in response to factors such as strong client demand, ability to repay loans and functioning supply chains (Ikeda, J & Arney, H., 2015). Further detailed information can also be found in the WC as an accelerator Thematic Paper section 3.1.

There is strong evidence that WaterCredit directly provides access to WSS financing for households. There is clear evidence that WC is providing access to WSS financing for households however there is also an example where the loans were also used for other purposes such as business or agriculture (Davis, J. & Gilsdorf, R., 2016). Further detailed information can also be found in the WC as an accelerator Thematic Paper section 3.3.

There is limited detailed evidence that through making loans available (directly and indirectly), WC supports increased access to improved WSS. This limitation is in respect of whether the increased access is first-time access and whether the improved WSS is a movement from unimproved to improved or considered as a general improvement of an existing facility. This is particularly related to sanitation and it likely due to loans being used to improve facilities already classified as basic or shifting from unimproved to limited sanitation facilities (Mansour, G., et al, 2019).

Recommendation: identify and agree on a core set of recurring indicators that can be measured and where appropriate synthesized systematically over time. There is a need to better understand how many data points actually exist and consider which ones are systematically collected and/or reported over time.

Recommendation: ensure that the core set of recurring indicators is systematically measured and reported by all Partners. This is linked to Recommendation 1.

Recommendation: ensure that the Household borrower survey V3.0 includes questions related to the core set of recurring indicators in order to validate partner reporting. This recommendation cross-cuts each of the Thematic Papers and is detailed as such within the associated recommendations section. This is also linked to Recommendations 1 and 2.

Recommendation: categorizing improvement type into defined clusters of improved service delivery and track progression up the service ladder for borrowers over time. In addition, these categories should denote to what extent they are climate resilient and can be defined in line with the Climate Change thematic paper findings and recommendations, and be guided by climate resilient WASH frameworks such as the Strategic Framework on WASH Climate Resilience - GWP.

Limited long-term evidence (> 12 months) exists that suggests functionality rates are being maintained. There is emerging longer-term evidence that functionality rates are being maintained beyond 12 months following implementation. Where there are reports of functionality issues, largely related to sanitation, this highlights a potential gap in terms of what is happening with fecal sludge management.

Recommendation: Water.org and partners introduce a longer-term monitoring of sustained access linked to next recommendation of monitoring progress up the ladders. With the majority of evaluations taking place within 6-12 months from the end of implementation (exceptions noted), in order for sustained access to be better understood, this timeline would need to be extended to allow for a period of operation and maintenance. This is especially important noting that 72% of loans are taken by those in rural locations, acknowledging the Myths of the rural water supply sector and functionality rates and the international debate around post-implementation monitoring.

There is insufficient evidence to conclude that WSS constructed by HHs with the support of WC provide a safely managed service. Both loan and non-loan households have seen improvements in the availability of water considered safe and sufficient (Institute for Sustainable Futures, 2019). However, there is limited internal evidence due to limited indicators, on what is considered safely managed across either water and/or sanitation, beyond infrastructure type.

Recommendation: Water.org and partners introduce safely managed water component in their TA/education to Households based on the available international guidelines. For example, water safety planning and climate resilience.

There is mixed evidence as to whether HH that improve WSS facilities also improve hygiene facilities and practice. The positive evidence that exists is in the context of contribution as opposed to attribution and the nature of mixed evidence is due to the omission of systematic measuring of changes in attitudes, behaviors and/or practices (IRC, 2021). Interrelated to this is the question of, for example, to what extent does water safety planning feature within the learning provided by FI's and TAs.

Recommendation: When monitoring hygiene behavior and assessing impact, consider the extent of impact at community level as well as individual household level. This would most appropriately be through collaboration and coordination with other interventions and organizations, given the influence of community wide impact on health.

A review and refinement what data is being collected and the timeline associated with monitoring and reporting forms the basis of the recommendations above and ultimately cross-cut each of the above summary statements. Given these foundational outcomes form the basis of the other thematic theories of change, a review and refinement of what data is being collected and the timeline associated with both monitoring and reporting as well as learning and dissemination will have added value across the entire WC program.

Recommendation: Water.org and partners to ensure systematic cross-learning and dissemination is applied across all of the outcome / thematic areas to added value across the entire WC program.

Table 3. Robustness of the internal and external data for the foundational outcomes sub-themes

Sub-themes	Internal Data	External Data
WC supports FIs to develop WSS portfolios and increases the overall capital available for WSS improvements	Green	Grey
WC directly provides access to WSS financing for HHs	Green	Grey
Through making loans available (directly and indirectly), WC supports increased access to improved WSS	Yellow	Grey
WSS constructed by HHs with the support of WC are maintained post-construction and provide a safely managed service	Light Green	Grey
HHs that improve WSS facilities also improve hygiene facilities and practice	Yellow	Grey

3. Findings

These latter findings are based on Water.org’s internal evidence-base only and includes evaluations, impact assessments and monitoring data. Annex One provides an overview of what Water.org does and what data it collects.

3.1 Water Credit (WC) supports Financial Institutions (FIs) to develop Water Supply and Sanitation (WSS) portfolios and increases the overall capital available for WSS improvements

Table 4. RAG rating for evidence of whether WC leads to an increase in overall capital available for WSS improvements

Internal data		External data	
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There is a strong internal evidence base that WC supports FIs to develop WSS portfolios.

Since the commencement of Water Credit in 2005 a total of 151 partners² (of which 99.7% are FIs and 0.3% are Service Providers) have developed WSS portfolios providing 8,710,440³ loans to approximately 6M⁴ borrowers across 13 countries⁵. This is evidenced in collective terms as presented in Figure 2 as well as for specific countries as reported within the various evaluation and assessment reports. For example, in India between 2008 and 2011 growth is reported to have yielded more than half a million loans and has been attributed to the ‘superior return on investment’ (Water.org et al, 2017). In Bangladesh there has been a ‘strong increase in the portfolio growth, ranging from 35% to 103%’ due to factors such as high demand and through leveraging private sector capital which has reduced the cost per person compared to a traditional subsidy approach (Water.org, 2018). The Endline Evaluation of WaterCredit (Mansour, G. et al, 2019) also highlights that WC supports FIs to develop WSS portfolios with particular examples cited in Indonesia, Philippines and Peru.

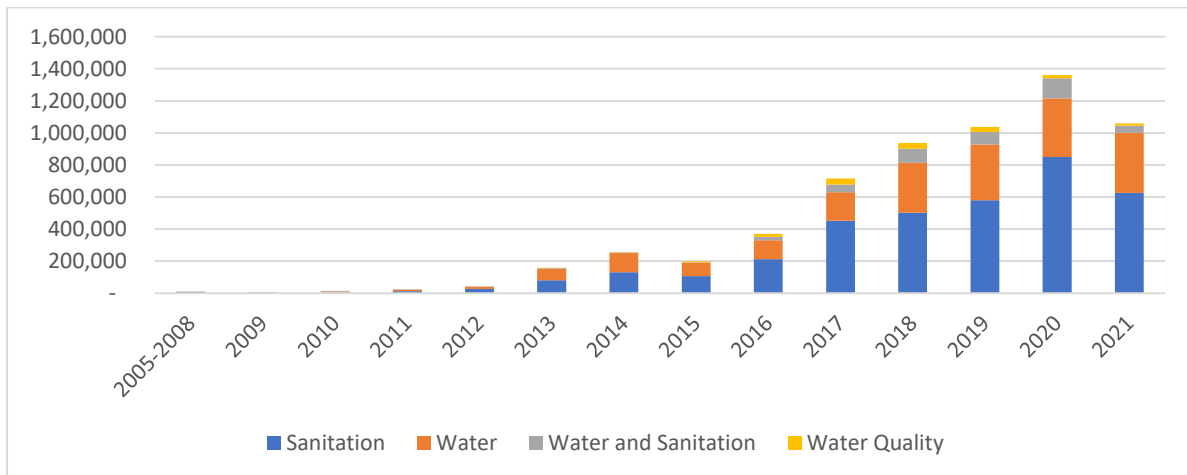
² [WaterCredit - A Microfinance Solution | Water.org](#)

³ WaterPortal, Total loans as at 24 September 2021. For 2005-2008 the total number for the period equals 110.

⁴ Water Portal, Borrower Gender data which matches Total Loan Data (note: difference between Total Loans and Total Loans Data).

⁵ Currently Water.org works in 11 countries: Bangladesh, Brazil, Cambodia, India, Indonesia, Kenya, Mexico, Peru, Philippines, Tanzania, and Uganda. The two countries of Ethiopia and Ghana and the countries of El Salvador, Guatemala, Haiti and Honduras are no longer benefiting from Water.org support, however, data is still included in the analysis with respect to collective loan evidence.

Figure 2. WaterCredit loans disbursed over time (WaterPortal, Water.org)



Based on the November 2021 data, the slight reduction compared to 2020 may still achieve the same levels, as two months still remain.

There is a strong internal evidence base that WC increases the overall capital available for WSS improvements.

Data from the Water Portal confirms the increased capital available for WSS improvements not only by the numbers of loans but also by the data available for **principal disbursed**⁶ (Table 5). In terms of the principal disbursed these funds include the total of all funds including original grants as well as leveraged/mobilised/catalysed finance. Some specific examples of leverage rates from the reports include:

- In India, for every dollar spent in grant funding mobilised over \$70 and in Indonesia the amount was \$57 (Water.org et al, 2020);
- In Peru, with US\$1.1M in direct subsidies provided to microfinance institutions, the lending capital leveraging ratio is US\$297 (Mansour, G. et al, 2019)
- \$11.3M investment leverages \$120M in loans from the private sector and social investors (Ikeda, J & Arney, H., 2015). By 2017 US\$19M turns into US\$463 M (Water.org, 2017)
- In 2017 Water.org catalyzed nearly US\$280M in private financing with US\$17.1M in philanthropic subsidies. By 2019 Water.org mobilised US\$1.4 billion with US\$26M (WHO, 2017; WHO, 2019).

⁶ Principal disbursed is the total value of Water.org initial and leveraged/mobilised capital.

Table 5. Loans and principal disbursed by country

16-Nov-21	Loans Disbursed	Principal Disbursed
Bangladesh	947,712	307,934,824
Brazil	43,763	33,514,110
Cambodia	383,753	198,094,710
Ethiopia	10,421	2,013,294
Ghana	960	3,172,777
India	3,416,539	745,867,213
Indonesia	628,864	98,018,628
Kenya	1,381,083	575,538,759
Mexico	2,976	4,230,714
Peru	912,647	1,117,660,207
Philippines	1,202,386	215,676,000
Tanzania, United Republic of	4,169	4,567,443
Uganda	16,474	17,018,081
Summary	8,951,747	3,323,306,760

According to the Water.org World Bank report (Ikeda, J & Arney, H., 2015) factors leading to successful water and sanitation financing have included MFI's ability to leverage capital and offer viable products, strong client demand and ability to repay their loans, as well as functioning supply chains. For further detailed analysis and findings related to leveraging of funds, see Section 4 and specifically section 3.1 of the Water Credit as an Accelerator paper.

Table 6. Numbers and rates of reporting loan repayment by country

16-Nov-21	Repayment Rate (Active)	Repayment Rate (All)	Loan Reporting Repayment Rate	
			Number	% of portfolio
Bangladesh	97.98%	98.67%	908,083	21%
Brazil	96.95%	98.58%	10,273	0%
Cambodia	99.53%	99.58%	197,456	5%
Ethiopia	88.63%	95.75%	4,225	0%
Ghana	149.92%	140.64%	725	0%
India	98.65%	101.28%	1,921,981	44%
Indonesia	96.72%	98.95%	289,947	7%
Kenya	93.95%	97.03%	27,938	1%
Mexico	101.91%	101.54%	871	0%
Peru	95.73%	98.81%	485,605	11%
Philippines	102.44%	111.90%	468,668	11%
Tanzania, United Republic of	97.93%	97.98%	2,616	0%
Uganda	128.90%	113.89%	9,637	0%
Total			4,328,025	100%

High repayment rates of WASH loans have been a contributing factor to high leverage rates. As customers are able to repay their loans, FIs become confident about portfolio viability and increase disbursement.

The WaterPortal data contains reported repayment rate data for 50% of loans (n=4,328,025 as of 16 November 2021). In general, the repayment rates are good for all countries (Table 6).

Exploring the data further (Table 7), greater confidence is given to Bangladesh, Ghana and Tanzania with the highest loan repayments reporting rates (approximately 96%, 76% and 63% respectively).

Table 7. Variance of reporting loan repayment rates by country

16-Nov-21	Loans Disbursed	Loan Repayment Number	Variance	Var. % of LD number
Bangladesh	947,712	908,083	39,629	4%
Brazil	43,763	10,273	33,490	77%
Cambodia	383,753	197,456	186,297	49%
Ethiopia	10,421	4,225	6,196	59%
Ghana	960	725	235	24%
India	3,416,539	1,921,981	1,494,558	44%
Indonesia	628,864	289,947	338,917	54%
Kenya	1,381,083	27,938	1,353,145	98%
Mexico	2,976	871	2,105	71%
Peru	912,647	485,605	427,042	47%
Philippines	1,202,386	468,668	733,718	61%
Tanzania, United Republic of	4,169	2,616	1,553	37%
Uganda	16,474	9,637	6,837	42%
Summary	8,951,747	4,328,025	4,623,722	

3.2 Water Credit directly provides access to WSS financing for HHs

Table 8. RAG rating for evidence that WaterCredit directly provides access to WSS financing for households.

Internal data		External data	
---------------	--	---------------	--

There is strong evidence that WaterCredit directly provides access to WSS financing for Households

Both the quantitative and qualitative evidence suggests that WaterCredit directly provides access to WSS financing for households.

This is evidenced through findings related to the purpose of the loan. Coupled with the geography of the loan the evidence provides context to the WSS financing needs of households.

Table 9. Clustering loan purpose The WaterPortal data reporting the purpose of the loan can be classified into water, sanitation, hygiene, water and sanitation and water quality (Table 9). The WaterPortal does not capture/report what the previous status was as compared to purpose and use of the loan.

Water	Sanitation
Borewell Or Hand Pump	Composting Toilet
House Water Connection/Piped Water/Water Storage	Fecal Desludging Services
Piped Water	Flush And Pour Flush Toilet To Piped Sewer System
Protected Shallow Well	Flush And Pour Flush Toilet To Septic Tank Or Pit
Rainwater Roof Harvesting	New Toilet (Septic/Pit)
Rooftop Rain Water Harvesting	Pit Latrine With Slab
Tube Well, Borehole	Sanitation
Water	Sanitation Networked Infrastructure Improvement
Water Networked Infrastructure Improvement	Sanitation Non-Networked Infrastructure Improvement
Water Non-Networked Infrastructure Improvement	Sanitation Renovation
Water Plus Water Filter	Special Needs Toilet
Water Tank Or Reservoir	Toilet Improvement Loan
Hygiene	Water and Sanitation
Handwashing Facility	Water And Sanitation
	Water And Sanitation Combo
Water Quality	
Water Quality	
Water Quality Improvement	

The mWater survey 2.0 indicates that most loans are indeed WSS-focused (Table 10)⁷. This is also supported with evidence from several evaluations and assessments:

- the endline evaluation in Bangladesh (Water.org 2018) which reported “42% of sampled households availed loans for water connections and 58% for sanitation improvements”;
- the assessment of challenges and determinants of success in India (Water.org, 2017b) which reported “514,286 WSS loans being disbursed under the initiative from 2011 to 2015”;
- the endline evaluation in India (Institute for Sustainable Futures, 2019) which reported 16,317 total loan disbursements and 78,322 beneficiaries under the initiative between March 2015 and September 2018;
- the endline evaluation covering Indonesia, Philippines and Peru (Mansour et al, 2019) reporting “results from the survey confirmed that households effectively used water and sanitation loans acquired through WaterCredit to improve water and sanitation services”.

However, an impact study in Kenya (Davis, J. & Gilsdorf, R., 2016) also reported that whilst 91% of respondents reported using the loan for sanitation 26 respondents reported that the loans were also used for other purposes such as business or agriculture, home improvements, and transport.

⁷ The mWater survey 2.0 also asks another question ‘What did you do with your loan’ however, the number of responses was 37 in total only and therefore not sufficient representation to report. The responses did all relate to WSS: Expand the WSS network coverage - extending piping, pump system, etc; Expand production capacity / new production line; Repairs / renovations of existing WSS infrastructure; Meet working capital needs; Construction of a new water source - dam, borehole, catchment, etc; Construction of new toilet facilities; Construction of a new sewage treatment plant; Other (please specify)

Table 10. For what purpose did you take the loan? (mWater survey 2.0, Water.org)

Country	Ethiopia	Philippines	Cambodia	Indonesia	Bangladesh	India
Sample	144	442	583	615	813	533
Percentage of sample	5%	14%	19%	20%	26%	17%
Water	58.33%	35.75%	43.91%	46.34%	48.83%	41.09%
Sanitation	42.36%	68.10%	60.03%	60.33%	56.46%	62.66%
Hygiene	0.00%	1.36%	0.86%	4.55%	0.37%	2.44%
Other (please specify)	0.00%	1.13%	5.15%	15.45%	0.12%	1.50%

Other mWater survey questions relevant to understanding the extent to which WC provide access to WSS financing for Households are ‘Did the loan principal cover the entire cost of the construction of the water and / or sanitation improvement’ (see WC as an accelerator Thematic Paper – section 3.3), ‘how much more did you pay for above the loan amount?’ and ‘how did you pay for the additional amount’?

3.3 Through making loans available (directly and indirectly), WC supports increased access to improved WSS

Table 11. RAG rating for evidence of WaterCredit supporting increased access to improved WSS.

Internal data		External data	
---------------	--	---------------	--

Through making loans available, WC increases the number of households with an improved WSS facility

When exploring this sub-theme there are two parts i.) access; and ii.) improved. In terms of ‘access’, consideration was given to whether increased access was restricted to first-time access or replacing an existing facility. In terms of ‘improved’, consideration was given to whether the access is referring to the movement from ‘unimproved’ to ‘improved’⁸ or improvement in terms of replacing an existing facility with something perceived as better.

The quantitative and qualitative evidence suggests that WaterCredit largely supports increased access to improved WSS. For water service provision, Figure 3 reports mWater survey 2.0 data and provides an insight into the improvements made across each of the sample countries, with a notable shift to household connections. This is further emphasised in Figure 4 with the numbers relating to in own dwelling, and in own yard/plot. However, there is little detailed evidence to understand the numbers around first time access and whether the improvement was from unimproved or an existing basic supply up the ladder.

The evaluation reports highlight positive results related to WC supporting increased access to improved water supply, however, as with the mWater data, does not necessarily specify whether this was first time access and movement from an unimproved to an improved facility. For example:

- In the case of Kenya 80% of WC HHS treated their water regularly compared to 56% for comparison households (Davis J., & Gilsdorf, R., 2016);
- Among households with water improvements in India, household connections increased from 2% to 94% where pre-intervention, over 80% utilized street / public taps (Water.org, 2015);

⁸ [Drinking water | JMP \(washdata.org\)](#); [Sanitation | JMP \(washdata.org\)](#); [Hygiene | JMP \(washdata.org\)](#)

- The endline evaluation of the WaterCredit Program in Bangladesh reports that 98% of the households had access to an improved water source and it took them less than 30 minutes to collect water compared to 79% at the baseline (Water.org, 2018).

Section 3.2 of the WaterCredit as an accelerator thematic paper also explores these nuances, in particular Table 5 and Table 6.

Figure 3. Primary water source at home prior to the improvement (n=1278) and after (n=1314)

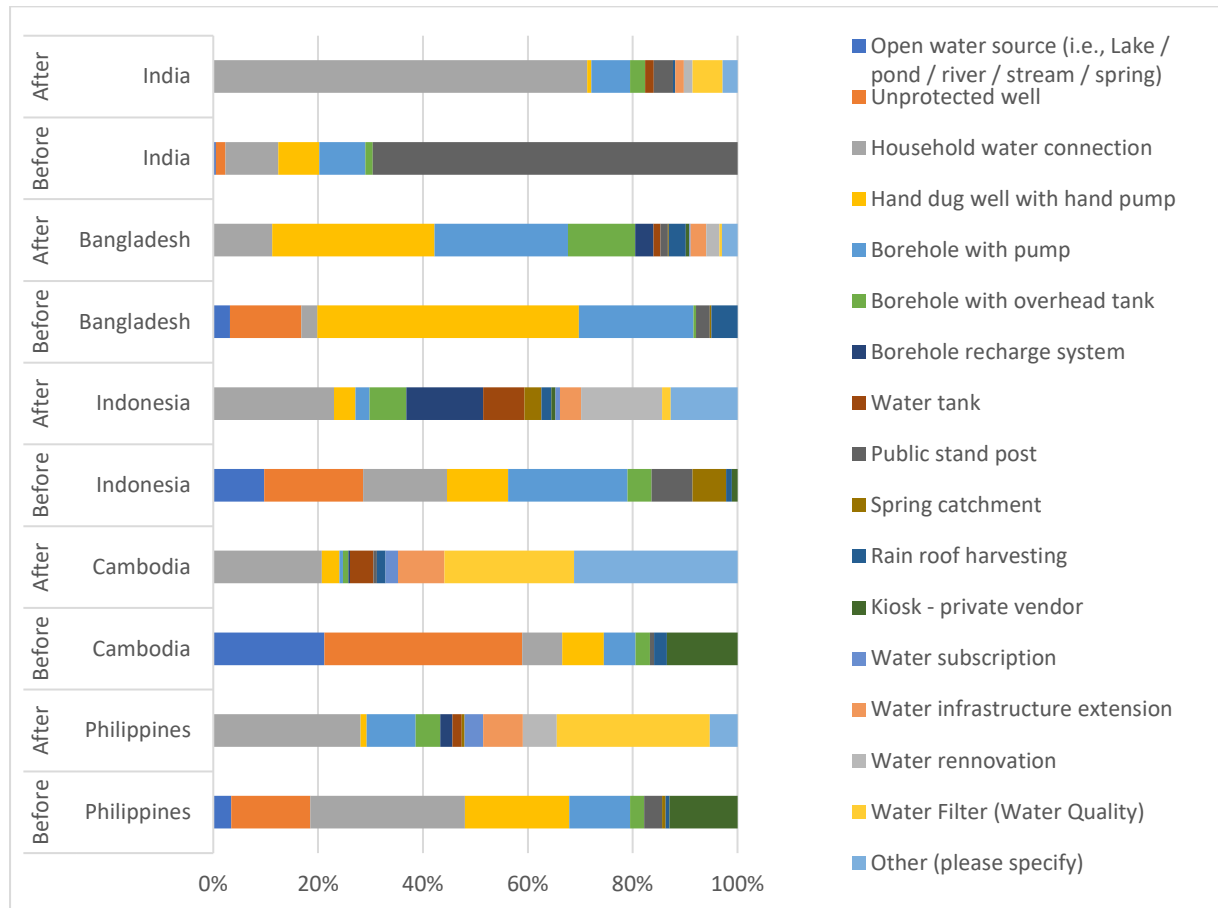
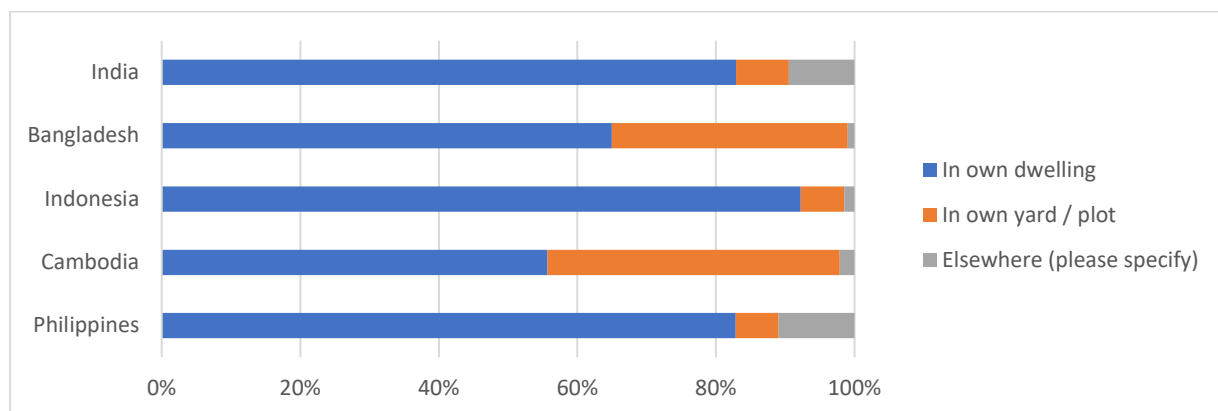


Figure 4. Location of water source improvement (n=1085)



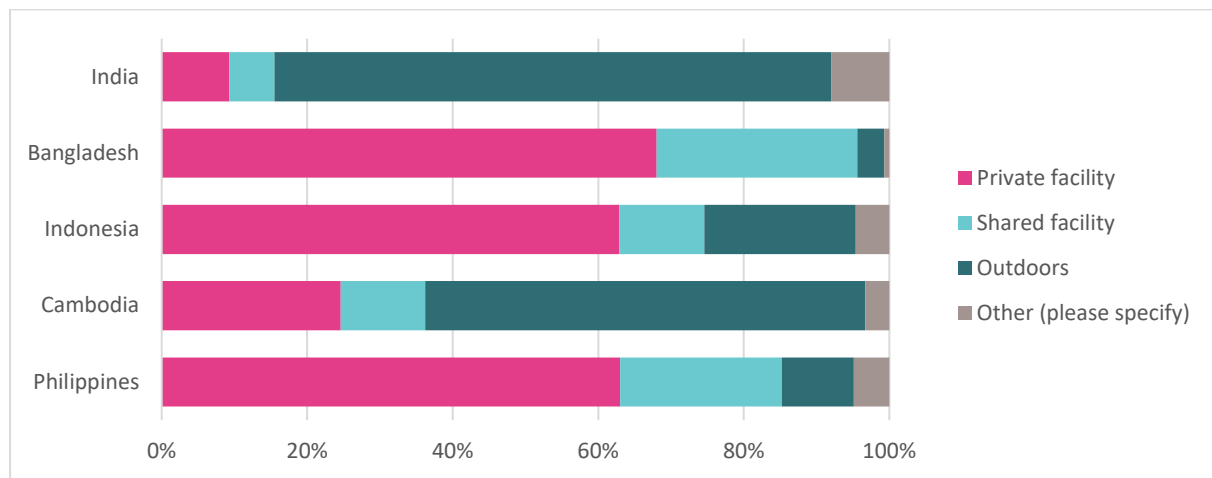
There is less clarity in terms of the mWater evidence for sanitation. Figure 5 provides an insight into the primary sanitation solution prior to the new sanitation improvement and Figure 6 highlights the type of sanitation improvement.

The mWater survey 2.0 also asks the question, after the sanitation improvement, whether anyone in the household use an alternative sanitation solution while at home. Responses were mixed:

- The Philippines (n=284), Indonesia (n=366) and India (n=324) stated 'Yes' for more than 96% of responses whereas Cambodia (n=337) and Bangladesh (n=434) stated 'No' for more than 96% of responses.

The follow-on questions of 'why does the person(s) sometimes use alternative sanitation solutions' and whether before and/or after the installation of the sanitation improvement did anyone in the household open defecate, also have limited responses⁹. Therefore, further understanding of what these alternative solutions are and extent of continuing open defecation or use of unimproved sanitation is not possible.

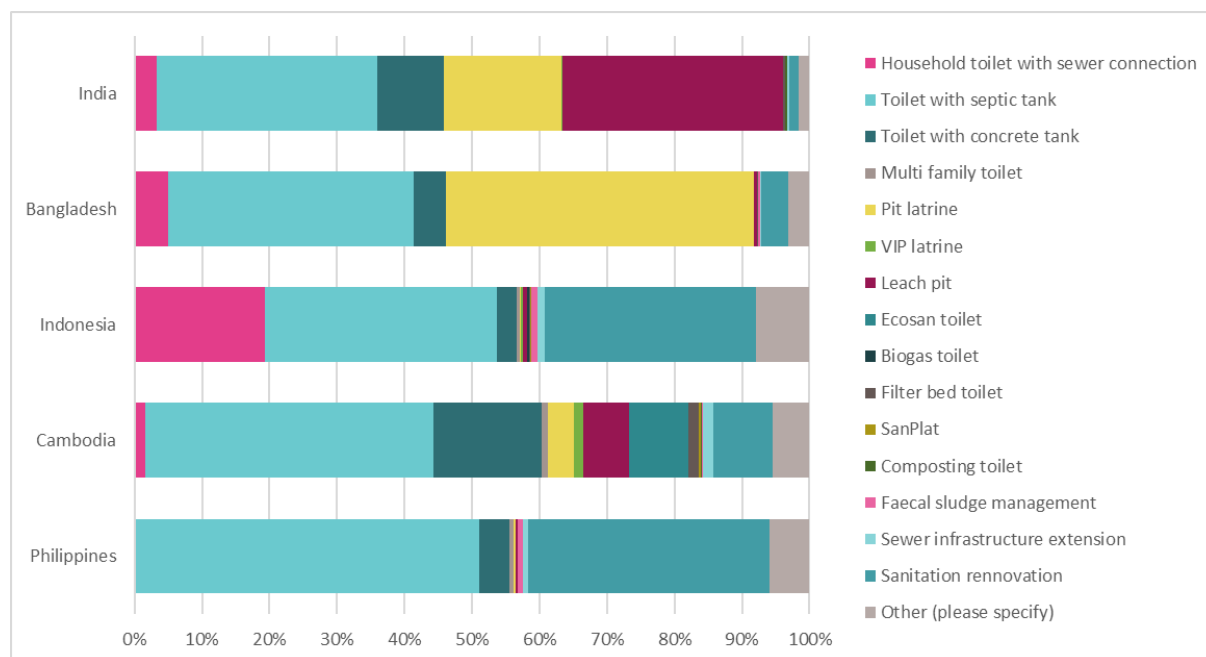
Figure 5 Source of primary sanitation solution prior to improvement¹⁰



⁹ Bangladesh only (n=235) where 29% reported someone in the household open defecated, reducing to 2% after the installation of sanitation improvement.

¹⁰ Philippines (n=284), Cambodia (n=337), Indonesia (n=366), Bangladesh (n=434), India (n=324).

Figure 6 Type of sanitation improvement¹¹



The evidence reported in the evaluations are largely positive, for example:

- In Bangladesh there was reported ‘a dramatic shift in households accessing an improved toilet and not sharing it with other households (basic category)’. Furthermore, there was a shift from 3% to over 83% of households were reported to be within the basic category from baseline to endline (Water.org, 2018);
- For India open defecation dropped from 85% pre-project to 8% following, and individual toilet use increased from 9% before the project to 88% after (Water.org, 2015).

However, some less impressive results were reported for the Philippines and Peru but these were likely due to loans being used to improve facilities already classified as basic or shifting from unimproved to limited sanitation facilities (Mansour, G., et al, 2019). The mWater survey 2.0 data supports this conclusion in relation to the Philippines (n=301) whereby 42.5 % of respondents stated the sanitation improvement as ‘sanitation renovation’ (see Figure 6). In the case of Peru triangulation with mWater survey 2.0 data was not possible due to the small sample size of respondents (n=45).

Linked to improved WSS is the extent to which WaterCredit programs result in households accessing WSS services more resilient to climate change¹². Further insight can be found in the Climate Change Thematic report.

3.4 WSS constructed by HHs with the support of WC are maintained post-construction and provide a safely managed service

Table 12 RAG rating for evidence of the extent to which WSS constructed by HHs through WC loans are maintained post construction and provide a safely managed service.

Internal data		External data	
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¹¹ Philippines (n=301), Cambodia (n=348), Indonesia (n=371), Bangladesh (n=459), India (n=334).

¹² See also [Strategic Framework on WASH Climate Resilience - GWP](#)

Limited long-term evidence (> 12 months) exists that suggests functionality rates are being maintained.

There is evidence of high rate of functionality of both water supply and sanitation facilities however, the extent of sustained services is less evidenced. With evidence reporting that functionality rates are approximately 90%+ for both water supply and sanitation facilities (Water.org, 2015; Water.org, 2018; Water.org, 2019; Mansour, G., et al, 2019; Causal Design, 2020) the results are positive. However, the reporting period of measuring functionality is not clearly specified and potentially limited to within 6-12 months or so of improvement¹³. For example,

- in the case of the evaluation report for India and Indonesia (Water.org & Grameen Foundation 2020) the grant was operating between 2017 & 2019 with the evaluation conducted between October 2019 and March 2020;
- in the case of the Endline Evaluation of Water Credit (Mansour, G et al 2019) which drew on baseline data from 2014/2015 and endline data from 2018 the report does not indicate the period of time between the baseline and installation/improvement of service financed by the loan;
- in the case of the Endline Evaluation of the Program Water Credit in Bangladesh (Water.org, 2018) the baseline survey was conducted 2014/5 and endline survey 2017/8 however, as with the other evaluations, there is not detail about when the improvement was implemented. What is however, reported is that the functionality rates are due, in part to the MFI monitoring efforts.

One exception is the “*India Program Impact Assessment of the 2008-2011 Pepsico Foundation Grant to Water.org*” (2015). The assessment was conducted in April 2014 in order to “understand the extent of program outcomes at a minimum of two years post-construction”. 97% of water and 99% of toilets were found in working condition, with 83% of respondents reporting sufficient water throughout the year.

Where evidence reports examples of functionality issues, these are largely related to sanitation and pit latrines being full (Water.org, 2019). This raises questions around what is happening with fecal sludge management both in terms of technical and awareness raising and are additional educational components required?

There is insufficient evidence to conclude that WSS constructed by HHs with the support of WC provide a safely managed service.

Evidence exists to state that whilst households receiving loans saw significant improvements in the availability of premises of water considered safe and sufficient, similar trends have been seen in non-loan households (ISF, 2019). The mWater data only reports a proxy for quality in terms of perception of quality of water compared to before the water improvement (Figure 7) and the changes observed since the improvement that leads to feeling that the water quality is better (Figure 8).

¹³ In 2015 the sector engaged in an international debate for longer-term post implementation monitoring [JULI 2015 / WASH POST IMPLEMENTATION MONITORING \(susana.org\)](#)

Figure 7. Perception of water quality after water improvement (mWater survey 2.0, Water.org)

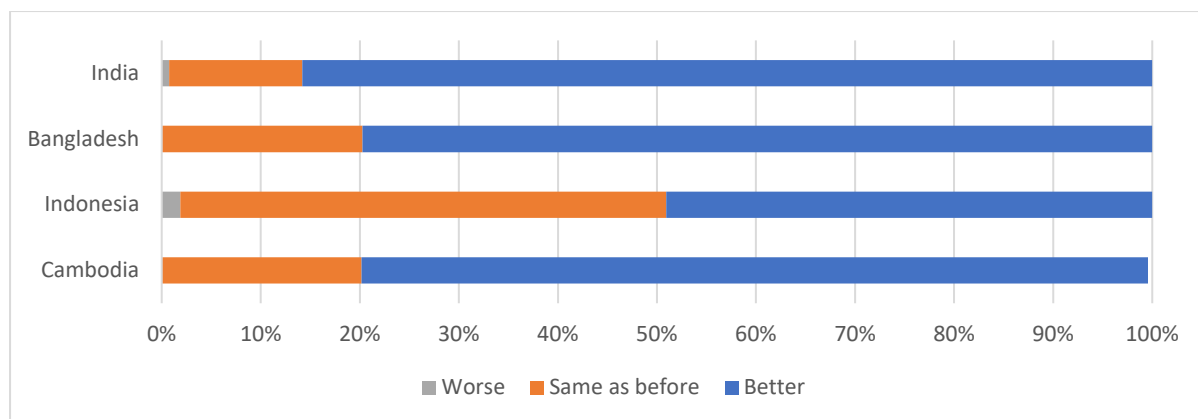
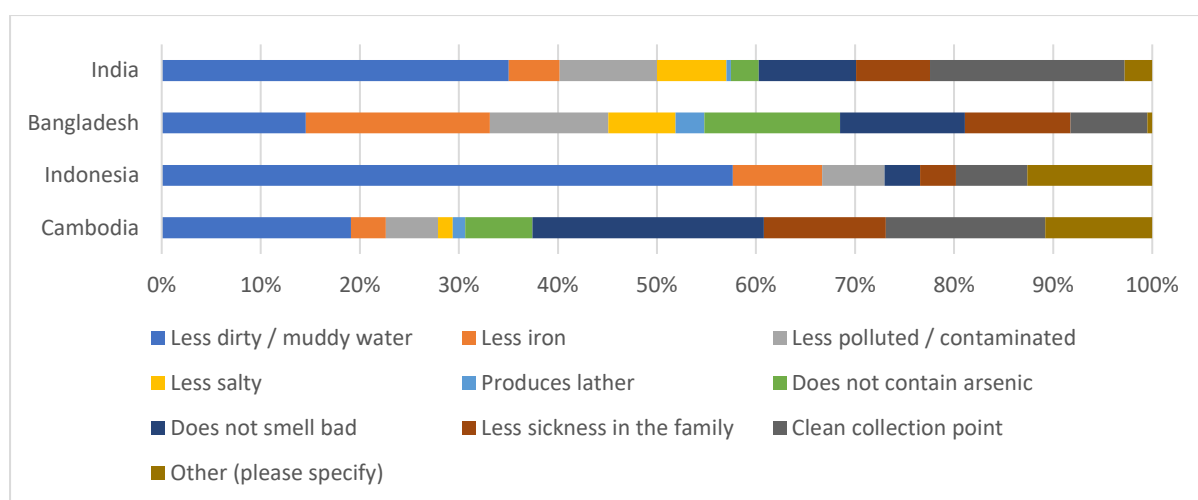


Figure 8. Changes observed since the improvement (mWater survey 2.0, Water.org)



Construction of a safely managed service goes beyond simply construction of the supply and relies of the knowledge, awareness of the household. The internal evidence within the mWater survey 2.0 data provides limited evidence that hygiene education components impart or educates in respect of what is and what are the requirements for safely managed services (see next section for further details).

3.5 Households that improve water supply and sanitation facilities also improve hygiene facilities and practice

Table 13. RAG rating for evidence of the extent that HHs that improve WSS facilities also improve hygiene facilities and practice.

Internal data		External data	
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There is mixed evidence as to whether HH that improve WSS facilities also improve hygiene facilities and practice.

This mixed evidence is in part due to the fact that data is not systematically collected to measure changes in attitudes, behaviors and/or practices (IRC, 2021). Whilst some evaluation reports acknowledge health and hygiene education campaigns were carried out (Water.org, 2018; Institute for Sustainable Futures, 2019) and households report washing their hands at critical times (Causal Design, 2020), it was also found that there is an apparent gap in training and awareness at the client

level in WASH issues (Water.org et al, 2020). Furthermore, in the case of Bangladesh, the evaluation found that health and hygiene training does not seem to have any statistically significant impact on the incidence of open defecation.

The positive evidence reported in terms of the WaterCredit clients and families washing hands at critical times is in the context of contribution as opposed to attribution. Again, the evidence base is mixed with different findings across different countries. In the case of Bangladesh, there is reported to be significant differences between the WC borrower and those who do not receive any WC in their practice of washing hands after using the toilet (Data International Ltd, 2020). However there are also reports that it is not clear on how the training leads to improved hygiene behavior and practice (IRC, 2021). In contrast for India whilst the data suggests that changes in handwashing behavior were observed for those households receiving a loan, evidence states that the WC was not responsible for the changes as were doing so before they took the loan (Institute for Sustainable Futures, 2019). Furthermore, the handwashing practices were also observed for households that did not receive the loan which could indicate other interventions and/or the reach of messaging goes beyond the households taking a loan.

Table 14 Participation in any educational activity through the partner (n=1516)

Country	Cambodia	Indonesia	Bangladesh	India
Sample	501	274	426	315
Percentage of sample	33.05%	18.07%	28.10%	20.78%
Yes	26.60%	29.96%	83.02%	85.02%
No	72.49%	64.87%	16.60%	11.98%
Don't know	1.03%	5.17%	0.00%	2.83%
Check	100%	100%	100%	100%

The above findings are also reported against a recommendation, in the case of the endline for Bangladesh (Water.org 2018) that “attempts should be made to reduce operational expenses on awareness building.....optimizing staff training, demand generation and hygiene education activities”. The report goes on to recommend “Water.org should advance country strategy efforts for advocacy and form coalitions...”. These coalitions could provide the platform to strengthen IEC material, learnings and dissemination and in turn contribute to longer-term sustainability of service provision.

Figure 9. Topics covered under the educational activities (n=837)

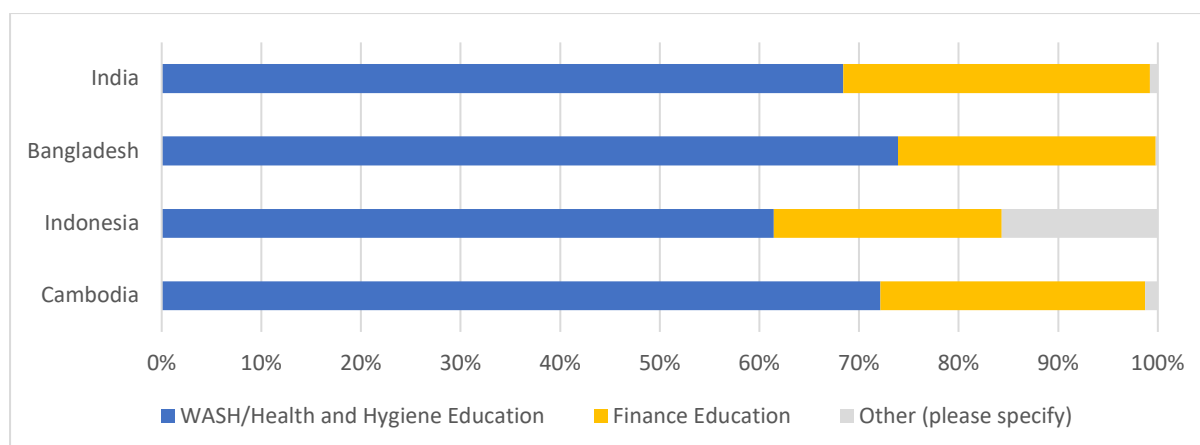
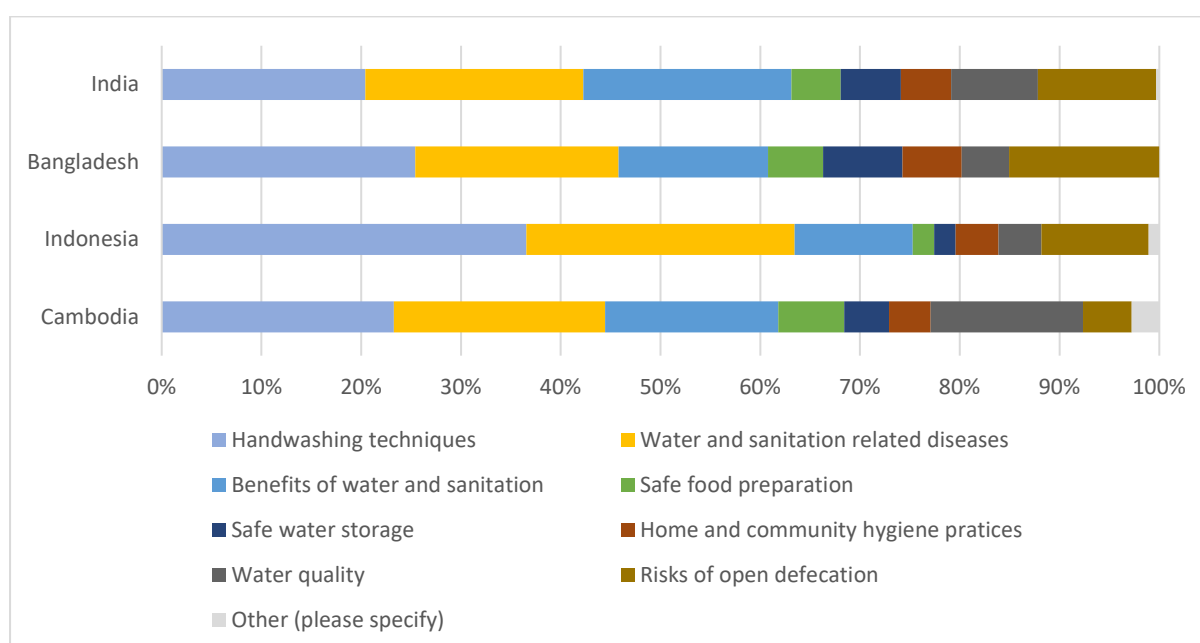


Figure 10. What was learned from the WASH/Health & Hygiene education (n=779)



Whilst data exists in respect of before and after handwashing it is only available for India and therefore not representative for the purposes of this sub-theme.

Referring back to the previous section and the aspect of safely managed service, a question remains in terms of to what extent does water safety planning feature within the learning provided by FI's/TA in addition to the topics of safe water storage, water quality and risks of open defecation. Within the sector there are various resources available around water safety planning¹⁴ which is now also being linked to climate change resilience.

4. Concluding statement

Whilst the evidence base is clearly significant for many of the sub-themes there are gaps that remain within the internal data¹⁵ sets. Given these foundational outcomes form the basis of the other

¹⁴ For example: [Water Safety Portal | Water Safety Plans \(wportal.org\)](http://www.wportal.org)

¹⁵ There is no external data reviewed given the WC model is specific to Water.org.

thematic theories of change, a review and refinement of what data is being collected and the timeline associated with both monitoring and reporting as well as learning and dissemination will have added value across the entire WC program.

5. Theory of Change

The diagram below (Figure 11) depicts the Theory of Change (ToC) for the foundational outcomes that was co-constructed by the research team and Water.org together during the ToC workshop. The ToC shows how change is expected to occur both in regard to the WC (blue arrows) and WASH contributions (black arrows). It also maps out the linkages between related outcomes, the level of impact associated with these connections, and the strength of evidence associated with each outcome, as explored in the report (please see the key for further detail).

Figure 11. Key for the ToC

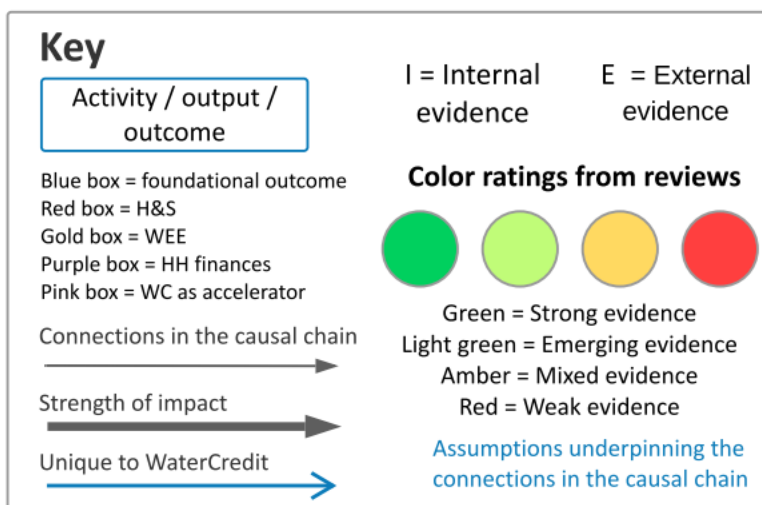
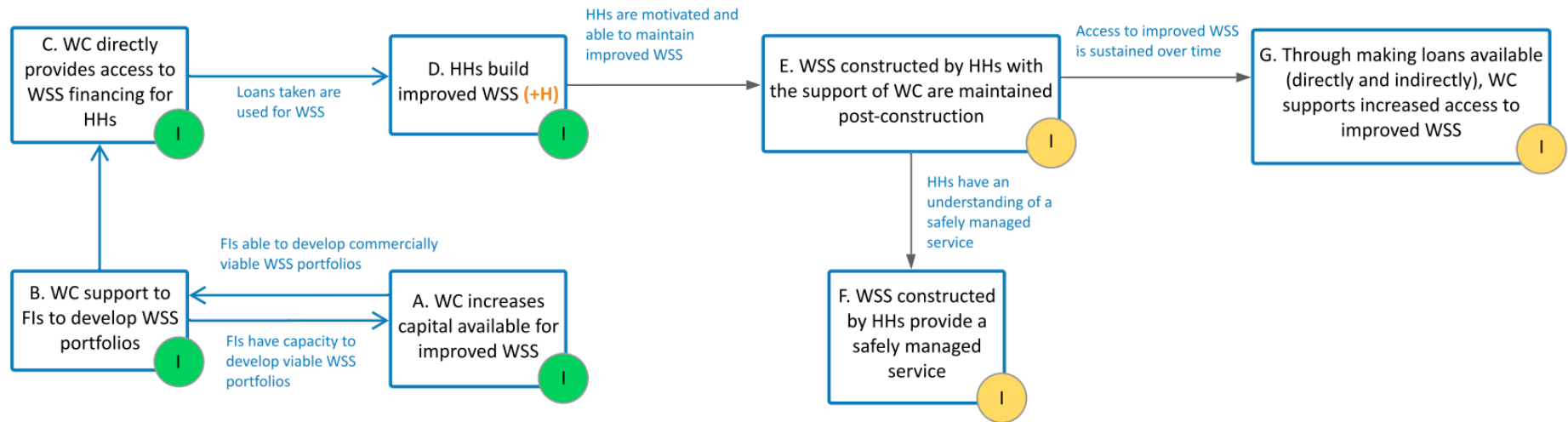


Figure 12. ToC co-constructed for the foundational outcomes



6. Recommendations

The first five recommendations are integrally linked and centered on reviewing and refining what data is being collected and the timeline associated with monitoring and reporting. The remaining two recommendations relate to expanding the awareness of borrowers to what is considered safely managed water and sanitation and to consider the broader community behavior and influence on households and vice-versa.

In the context of the Water.org MEL framework, identify and agree on a core set of recurring indicators that can be measured and where appropriate synthesized systematically over time. There is a need to better understand how many data points actually exist across the various data collection tools (mWater, WaterPortal, WC Sustainability Tool) and consider which ones are systematically collected and/or reported over time.

Ensure that the core set of recurring indicators is systematically measured and reported by all Partners. This is linked to Recommendation 1.

Ensure that the Household borrower survey V3.0 includes questions related to the core set of recurring indicators in order to validate partner reporting. This recommendation cross-cuts each of the Thematic Papers and is detailed as such within the associated recommendations section. This is also linked to Recommendations 1 and 2.

Categorizing improvement type into defined clusters of improved service delivery and track progression up the service ladder for borrowers over time. In addition, these categories should denote to what extent they are climate resilient and can be defined in line with the Climate Change thematic paper findings and recommendations, and be guided by climate resilient WASH frameworks such as the [Strategic Framework on WASH Climate Resilience - GWP](#).

Water.org and partners introduce a longer-term monitoring of sustained access linked to next recommendation of monitoring progress up the ladders. With the majority of evaluations taking place within 6-12 months from the end of implementation (exceptions noted), in order for sustained access to be better understood, this timeline would need to be extended to allow for a period of operation and maintenance. This is especially important noting that 72% of loans are taken by those in rural locations, acknowledging the Myths of the rural water supply sector and functionality rates¹⁶ and the international debate around post-implementation monitoring¹⁷.

Water.org and partners introduce safely managed water component in their TA/education to Households based on the available international guidelines. For example, water safety planning¹⁸ and climate resilience.

Acknowledging community level activities go beyond the remit of Water.org and MFIs, **where feasible encourage when monitoring hygiene behavior and assessing impact, consider the extent of impact at community level as well as individual household level.** This would most appropriately be through collaboration and coordination with other interventions and organizations, given the influence of community wide impact on health.

¹⁶ <https://www.rural-water-supply.net/en/resources/details/226>

¹⁷ [JULI 2015 / WASH POST IMPLEMENTATION MONITORING \(susana.org\)](#)

¹⁸ [Water Safety Portal | Water Safety Plans \(wsportal.org\)](#)

Given the foundational outcomes form the basis of the other thematic theories of change, in addition to a review and refinement of what data is being collected and the timeline associated with both monitoring and reporting Water.org and partners would benefit from **ensuring systematic cross-learning and dissemination is applied across all of the outcome / thematic areas to add value across the entire WC program.**

7. References

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Annex 1. Overview of what Water.org does and impact data it collects

A1.1 What does Water.org do?

Water.org partners with selected institutions, generally microfinance institutions¹⁹, deliver financial services to low-income households (Table 16). Water.org provides capability building support to these institutions, to deliver financial products tailored to customers seeking access to finance water and sanitation improvements (Figure 13).

Figure 13. Theory of Action (simplified)

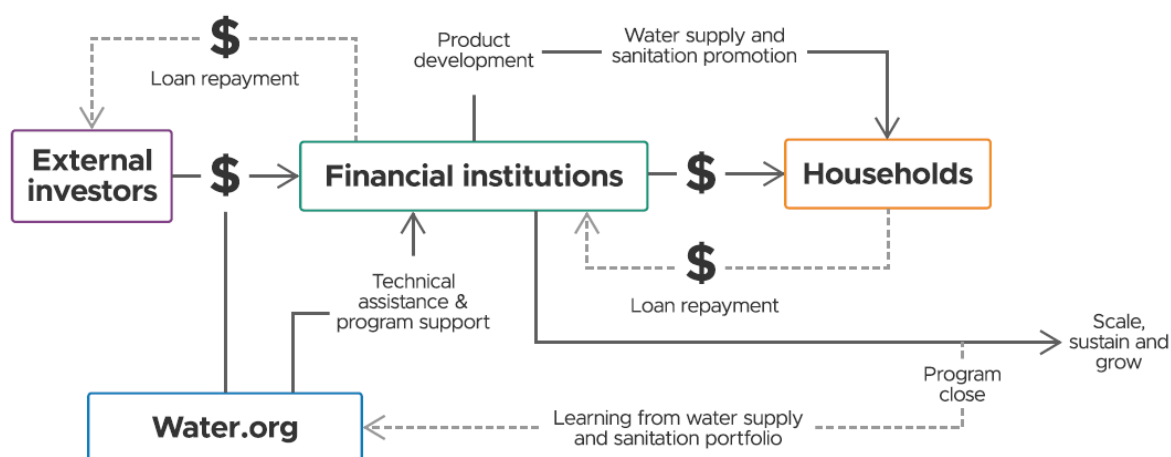
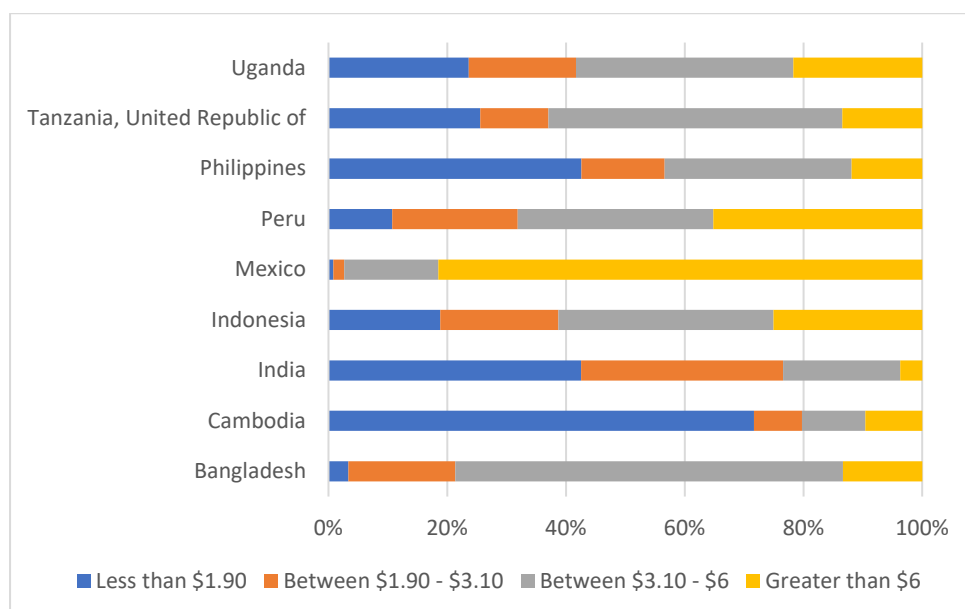


Table 15. Percentage of loans by income group by country²⁰

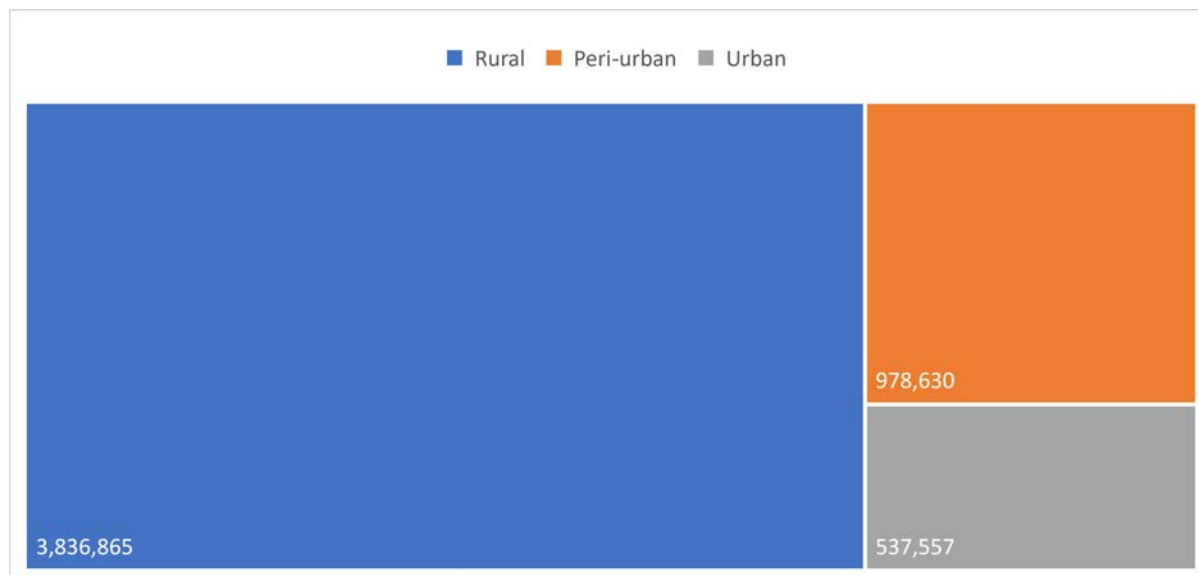


¹⁹ Partners comprise of **financial institutions**, **service provider**, sector engagement, investor, **association of financial institution** and associate of service provider. However, data availability for the purposes of this study is limited to those highlighted in bold.

²⁰ WaterPortal (16 November 2021). Brazil, Ethiopia, Ghana and Kenya data not included as large proportion of total data not available on income group.

These financial services are delivered to men (10%), women (88%) or jointly (2%) who are living in either rural, urban or peri-urban locations (Figure 14).

Figure 14. Loans by geography



The largest proportion of loans are undertaken by borrowers in rural locations (72%) with the balance being split between peri-urban (18%) and urban (10%).

In the majority of cases this is replicated at a country level, where 70% or more borrowers are located in rural areas. However, there are some countries which have a different apportionment. For example, Peru and Ghana whereby loans are mostly taken out by borrowers located in peri-urban areas (90% and 95% respectively) and in Ethiopia where almost 60% of loans are taken out by borrowers from urban areas.

A1.2 What data does Water.org collect?

As mentioned in Section 1.1, there are two types of quantitative data collected by Water.org that this Meta Study draws upon.

Water Portal data

Water Portal data has been collected since 2009 and is entered by partners, verified/spot checked by Water.org staff and used by both Water.org and Partners for fundraising and strategic planning. There are three levels of reporting that go into the WaterPortal online platform (see Table 17):

- Individual Level data: data mostly from FI's on all information on the borrower (including gender, geography, income levels etc.);
- Group Level data: this could be branch level data or district level data. The data could be from FI's and/or Service Providers, CBOs. Indonesia is an example where group level data is uploaded;
- High Level data: this is where minimal data is provided, for example by Equity Banks. These are non-graduated partners. Loan Usage Studies have been used as a follow-up mechanism to get further information. Details are manually entered into the system at which point some loans are discounted as not considered full loans.

Table 16. Top Level Numbers

Top level numbers	16 Sep 21	24 Sep 21	16 Nov 21
Individual & Group Level (total loans data)	5,925,719	5,994,736	6,187,776
High Level	2,701,570	2,715,704	2,763,971
Total Loans	8,627,289	8,710,440	8,951,747

Given the differences in top level data sets and the way the impact is reported, the WaterPortal dash boards contain slight differences in reported data. When using the data for different purposes, the findings therefore suggest that there is a **medium** risk in terms of data accuracy and that Water.org could under-reporting the extent of loan activities.

mWater data

Existing data is largely based on the **mWater Master Survey 2.0** which has been reviewed and superseded by the **Household borrower survey V3.0**. In September and October 2021, a number of remote phone-based surveys were conducted in Bangladesh, Cambodia, India, Indonesia and the Philippines. Remote surveys are also on-going in Kenya, Tanzania and Uganda with an in-person survey scheduled in Brazil for November 2021.

The research team have reviewed the Household borrower survey V3.0 in the context of the individual Thematic Reports and have recommended enhancements to some of the questions as well as in some cases additional questions to strengthen the evidence base (see separate Thematic Reports).

Annex 2. List of Water.org evaluations

This table sets out the Water.org evaluations and impact assessment methodologies and which Thematic papers included references to the evaluations.

Table 17. Water.org evaluations and impact assessment methodologies

Study	Country	Timings	Methodology	Themes covered
WaterCredit Endline Evaluation (Causal Design, 2020)	Cambodia	Project: Dec 2015 – Nov 2019. Evaluation: Not known.	<p>Quasi-experimental matching strategy to develop unbiased treatment effect estimates, or Propensity Score Matching (PSM),</p> <p>This evaluation used Nearest Neighbor Matching as the matching approach with bootstrapped standard errors, or those recalculated iteratively, in order to calculate accurate confidence intervals. We combined this approach with a difference-in-difference (DID) approach which allows for measurement across waves.</p> <p>The treatment variable for the analysis initially was based off of a question in the survey tool which asked, “have you made any water or sanitation improvements to your house”.</p> <p>Estimators, or covariates, were used in the analysis to match households in the comparison group to households in the treatment group.</p>	FO HHF WCA WEE CC
WaterCredit Project: Safe Water and Sanitation in Bangladesh – Endline Evaluation (Data International, 2020)	Bangladesh	Project: Dec 2015 – Nov 2019 Evaluation: Jan – March 2020	<p>Under the endline survey, a total of 1,262 households were covered -- 607 in Sajida and 655 in WAVE locations. The baseline survey covered 8 districts and 21 subdistricts (upazilas) the endline included 12 districts and 55 upazilas. A total of 35 MFI branches were studied under the baseline, the endline covered 97 MFIs branches. Four different groups of respondents were sampled and interviewed under the endline survey. They are:</p> <ul style="list-style-type: none"> (i) households who availed WaterCredit and were sampled under the baseline survey; (ii) households who did not avail WaterCredit but were sampled under the baseline survey; (iii) households who availed WaterCredit but were not sampled under the baseline survey; and (iv) households who are not a member of either Sajida or WAVE programs and did not avail WaterCredit <p>A total of 17 Key Informants were interviewed.</p>	FO WCA
Evaluation of Water.org’s impact on systems change globally (IRC, 2021)	Bangladesh, India,	Project: 25 years	<p>Approach and method applied differs for the different areas of enquiry:</p> <p>Systems change activities: comprehensive inventory of activities undertaken and outputs realized.</p>	None

Study	Country	Timings	Methodology	Themes covered
	Indonesia	Evaluation: Not known.	Reviewing all relevant project documents (annual plans and annual reports) primarily, complemented by interviews with staff of Water.org. The results of the inventory were validated during the interviews with partners of Water.org. Outcomes: Outcome harvesting. Building Block assessment – rapid assessment tool designed by IRC Theory of Change: reconstruct the ToC.	
Midterm Evaluation of the project "Advancing financial innovations in Bangladesh to meet the water and sanitation needs of the poor" (IRC, 2021)	Bangladesh	Project: Not known. Evaluation: Not known.	Approach and method applied differs for the different areas of enquiry: Systems change activities: comprehensive inventory of activities undertaken and outputs realized. Reviewing all relevant project documents (annual plans and annual reports) primarily, complemented by interviews with staff of Water.org. The results of the inventory were validated during the interviews with partners of Water.org. Outcomes: Outcome harvesting. Building Block assessment – rapid assessment tool designed by IRC Theory of Change: reconstruct the ToC	FO H&S
Mid-Term Evaluation: Scaling WaterCredit for Safe Water Access and the Dignity of a Toilet Among the Poor (Micro-Credit Ratings International Ltd, 2018)	India, Indonesia	Project: Aug 2015 – Jul 2019 Evaluation: Dec 2017 to Jan 2018	The evaluation used a mixed-methods approach to data collection and analysis, utilizing a variety of qualitative and quantitative tools Uses OECD-DAC criteria, Relevance, Effectiveness, Efficiency, Sustainability and Impact; WaterCredit Sustainability Tool (WCST); Household surveys among sampled clients of selected MFI partners; additionally key informant interviews were conducted with Water.org PMs and staff of partner organizations at various levels (senior management to field staff).	None
The WaterCredit Initiative in Kenya and Uganda: End-of-Program Evaluation Report (Prime M2i Consulting, 2015)	Kenya, Uganda	Project: Oct 2010 to Sep 2015	Desk review - project docs and MIS data; country visits for client survey & stakeholder meetings: 10 FGDs; 246 Client interviews (with questionnaire) and 155 house visits for verification of product availability and utilization. Purposive sampling: geographic diversity; rural and urban mix; mix of loan products. Also mix of	HHF

Study	Country	Timings	Methodology	Themes covered
		Evaluation: Jul 2015 to no date, report dated Sep 2015.	gender (more female than male)"	
External Evaluation of the Water.org New Ventures Fund (Universalia, 2018)	India, Peru, The Philippines, Bangladesh, Indonesia, Kenya	Project 2011 - 2017	<p>Contribution Analysis, given the study's focus on generating understanding of the NVF's contribution to Water.org's ability to design and implement innovative solutions to the global WSS crisis.</p> <p>A theory-based approach was adopted for this mandate, one that included the reconstruction and testing of an NVF Theory of Change (ToC).</p> <p>Data for this evaluation were collected through a range of methods. semi-structured interviews with 85 respondents representing Water.org leadership, HQ staff, country staff, NVF donors, in-country partners and other experts. An online survey was filled by 23 members (response rate: 92%) of Water.org leadership, senior management and staff.</p> <p>Field missions to India, Peru, and the Philippines; virtual field missions were undertaken with respect to Bangladesh, Indonesia and Kenya.</p>	None
Endline Evaluation of the Program- WaterCredit: Catalyzing Access to Safe Drinking Water and Sanitation in Bangladesh (Water.org, 2018)	Bangladesh	<p>Project: Jul 2014 to Sep 2018</p> <p>Evaluation: Nov 2017 to Jan 2018</p>	Quasi-experimental difference-in-difference estimation with household fixed effects to evaluation the impacts of availing loan for WSS improvements. Includes a list of observable time variant control variables at the HH level, as well as unobservable characteristics which remain constant over time, to overcome selection bias for the treatment group.	FO H&S HHF WEE
WaterCredit in Ethiopia (Water.org, 2020)	Ethiopia	<p>Project: Sep 2014 – Aug 2019</p> <p>Evaluation: Dec 2019</p>	<p>Using a mixed methods approach, based on both quantitative and qualitative analysis, the evaluation used available data from various internal sources and tools (see Annex A for more details):</p> <ul style="list-style-type: none"> ▪ WaterPortal impact data ▪ Program monitoring visits (PMVs) ▪ WaterCredit Sustainability Tool (WCST) ▪ Outcome harvesting ▪ Key informant interviews (KIIs) 	None

Study	Country	Timings	Methodology	Themes covered
Evaluation Presentation and Virtual Partners Visit: Scaling WaterCredit for Safe Water Access and the Dignity of a Toilet Among the Poor in India and Indonesia (Water.org, 2020)	India, Indonesia	Project: Not known. Evaluation: Not known.	Household level: Quantitative Methods: Household survey Research design: Mixed-method; Quasi-experimental (Treatment vs Comparison); panel study Analytical Design: Difference-in-Difference to measure incremental impact of the program Sample Size: India:-4,154; Indonesia:-2,931 Partner level: Key informant interviews and secondary data. System level: Qualitative methods including secondary data, informational interviews, and outcome harvesting	FO H&S WEE
Community Based Organizations Strengthening and Financing Program Indonesia Program Evaluation Design (Water.org 2017)	Indonesia	Project: 2015 - 2019 Evaluation design document	Program monitoring visits and data collected for the program evaluation will take place at the same time when feasible and logical and will include both quantitative and qualitative methods. Photographs will be used to validate loan use and construction for CBOs, while household visits will be used to validate information at the household level.	None
Evaluation of Water and Sanitation Microfinance Program in Odisha, India 2016-17 (Water.org et al, 2017)	India	Project: Jan 2016 to Oct 2017 Evaluation: July 2017	Data were drawn from a range of sources including (a) Water.org's Management Information System (WaterPortal); (b) program documentation (e.g. proposal, progress reports); (c) focus group discussions (FGDs) with program beneficiaries; and (d) key informant interviews (KIIs) with stakeholders from Gram Utthan and local government (branch managers, credit officers, ward members). In total, there were 121 FGD participants across 10 branches and 6 districts. Interviews in each of these locations were conducted with a branch manager and a loan officer. Discussions were also held with Gram Panchayat ward members at two sites.	H&S WCA WEE
Endline Evaluation of "WaterCredit: Strategic	Indonesia, The	Project: Jun 2013 to	WaterPortal data accessed in May 2018; Impact assessment based on results from longitudinal household surveys separately commissioned by Water.org in 3 countries. Potential borrowers interviewed 2014-15 (baseline) and at the end of the	FO H&S

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Expansion and Scaling in Key Geographies" (Water.org; Aguaconsult, - Mansour and Sánchez-Tracón, 2019)	Philippines, Peru	Jun 2018 Evaluation: Data May 2018	program in 2018 (endline). Propensity score matching (PSM) approach was used to estimate causal treatment effects in households. Treatment groups - HH who received a loan and control groups - HHs who did not take a loan; Impact at sector level - interviews with stakeholders.	HHF WCA WEE
Endline evaluation of Watercredit project: Increasing health, dignity & opportunities with access to safe water and sanitation in India (Water.org; Bank of America, - Institute for Sustainable Futures, 2019)	India	Project: Mar 2015 to Feb 2019 Evaluation: January 2019 to ...	Mixed methods approach based on both quantitative and qualitative analysis. The analysis drew on data from (i) wo large household surveys, (ii) 10 focus group discussions, (iii) key informant interviews with staff from Water.org and local partners, (iv) program documentation, (v) loan data from the WaterPortal. 876 Households surveyed in baseline June 2016 and endline Jan 2019; questionnaire largely the same; The difference-in-differences analysis was limited to comparing households that received a WASH loan (i.e. the treatment) with those that did not, as opposed to comparing households in an area subject to a WaterCredit program versus a control group where no such program was implemented.	FO H&S WCA WEE
Endline Evaluation: Scaling Water Credit for Safe Water Acess and the Dignity of a Toilet among the Poor (Water.org; Grameen Foundation, 2020)	India, Indonesia	Project: 2017 to 2019 Evaluation: October 2019 to March 2020	Mixed method research design which included a quantitative survey with clients. KIIs with stakeholders and FGDs with clients, and quantitative data provided by the partners from their MIS to understand outreach and effectiveness of the program. A gender lens and participative approach were applied to discern gender-based impact and triangulate and corroborate findings through multiple lines of evidence. Analysis methodology included Contribution analysis, qualitative analysis and statistical analysis. Quasi-experimental and employed Propensity Score Matching (PSM) to identify one-to-one matched pairs for project and control groups to overcome the selection bias for the project group. Difference-in-Difference (DiD) was used to estimate the client-level impact of the program. To compare the change in outcomes over the project period for households that have received loans (project group) with outcomes of similar households that did not avail loans (the control group) to attribute causality of the observed changes due to availing a WSS loan. Also Average Treatment Effect (ATE) was calculated for variables. Coding used for qualitative analysis.	FO H&S WCA WEE
WaterCredit – Kenya impact assessment: Study report (Davis, J & Gilsdorf, R, 2016)	Kenya	Project: 2014 - 2015 Impact	Limited to comparing outcomes between the 2 groups in the 2014–2015 period (rather than applying a difference-in-differences framework)	FO H&S

Study	Country	Timings	Methodology	Themes covered
		assessment:		WCA WEE
Water and Sanitation Microfinance Operations in India An Assessment of Challenges and Determinants of Success (Skoll Centre for Social Entrepreneurship, not known)	India	Project: 2011 to Sep 2015 Impact assessment: October 2016	Quantitative and qualitative analysis of program documentation and program data, including work plans, budgets, evaluation reports, progress reports, household survey data, and loan disbursement data. Interviews with eight Water.org program staff members and 14 representatives of WaterCredit partner organizations.	None
India Program Impact Assessment of the 2008-2011 Pepsico Foundation Grant to Water.org (Water.org, 2014)	India	Project: Jun 2008 to May 2011 Impact assessment: April 2014	<ul style="list-style-type: none"> ▪ Qualitative and quantitative techniques ▪ Recall method among people served to compare pre- and post-intervention conditions ▪ Focus group discussions, transect walks, and resource mapping ▪ Two-stage random stratified sampling of rural and urban households; ▪ Program sites and respondents were proportionate to water (55%), sanitation (26%), and both (19%) improvements among partners ▪ Sample size based on 95% confidence level and 2% margin of error ▪ 2,360 household interviews, of which 2,075 were used for analysis. 	FO HHF WEE