



Summative Evaluation of BRC-FI WaSH Action Plan Programme 2017–2021 in Burundi, Mozambique, Rwanda, and Tanzania

Final Report

Prepared by Key Aid Consulting for Belgian Red Cross Flanders

May 2022

www.keyaidconsulting.com

KEY
AID
CONSULTING

Acknowledgements

This report was authored by Loic Couasnon and Martin Ossandon under the guidance of BRC-fl.

The authors would like to thank the collaboration of Thandie Harris-Sapp and David Massingue who conducted field data collection in Vilanculos (Mozambique); Singe Day, a WaSH expert that provided quality assurance; and all key informants for their time and insights.

Citation:

This report should be cited as: Couasnon L. and Ossandon M. (2022). Summative Evaluation of BRC-FI WaSH Action Plan Programme 2017–2021 in Burundi, Mozambique, Rwanda, and Tanzania. Flanders, Belgium: Belgian Red Cross-Flanders.

Table of Content

EXECUTIVE SUMMARY.....	6
I. INTRODUCTION.....	10
I.1. THE WASH ACTION PLAN PROGRAMME 2017–2021.....	10
II. EVALUATION OBJECTIVES AND SCOPE	13
III. METHODOLOGY.....	14
IV. FINDINGS.....	16
IV.1. RELEVANCE/COHERENCE	16
IV.1.1. Needs identification	16
IV.1.2. Contextualisation of the RANAS approach	22
IV.1.3. Alignment of the action plan	23
IV.2. EFFECTIVENESS/IMPACT:	25
IV.2.1. To what extent has the program managed to increase the availability of safe and sustainable sanitation and water supply for the target population?	25
IV.2.2. To what extent did the project manage to influence the sustained use of sufficient safe water and sanitation facilities	31
IV.2.3. To what extent did the project manage to trigger a behavioural hygiene change in communities	35
IV.2.4. HNS has increased capacity to implement WaSH-related interventions.....	38
IV.3. EFFICIENCY	39
IV.4. SUSTAINABILITY AND CAPACITY BUILDING:.....	42
IV.4.1. 4.1 How will communities and HNS ensure maintenance and sustainability of the delivered infrastructure	42
IV.4.2. How does the HNS plan to incorporate the RANAS and CHAST methodology after the program's closure.....	46
V. CONCLUSION:.....	46
VI. RECOMMENDATIONS:.....	47
VII. BIBLIOGRAPHY:.....	50
VIII. ANNEXES.....	53
VIII.1. WASH CONTEXT	53
VIII.2. RANAS INTERVENTION IN TANZANIA	56
VIII.3. THEORY OF CHANGE.....	57
VIII.4. ACTIVITIES CARRIED OUT IN THE FOUR COUNTRIES	58
VIII.5. ACTIVITIES CARRIED OUT IN RWANDA.....	60
VIII.6. EVALUATION MATRIX.....	61
VIII.1. AREAS OF INTERVENTION.....	65

List of tables and figure

Figure 1. Purpose of the WaSH Action Plan Programme	10
Figure 2. Summary of WaSH Activities	12
Figure 3. Evaluation Methodology.....	14
Figure 4. Steps of the RANAS Approach	22
Figure 5: Unfinished spring catchment area in Burundi.....	27
Figure 6. Picture of an unfinished latrine	31
Figure 7. % use of an improved water point for drinking – baseline endline	31
Figure 8. Access to improved water sources, baseline endline national average.....	33
Figure 9. Time spent on water collection (incl. queuing).....	34
Figure 10. Own and use an improved latrine	34
Figure 11. Tanzania, percentage of the households with key improved latrines elements at baseline and endline in all wards	35
Figure 12. % of households with clean latrines in Rwanda	36
Figure 13. % of households in the target area whose members wash their hands with water & soap (or acceptable local alternative) at critical times	37
Figure 14. Rwanda, critical moments to wash hands	37
Figure 15: Trends in rural WASH services in Burundi 2010 – 2020	53
Figure 16: Trends in rural WaSH services in Mozambique 2010 – 2020	54
Figure 17: Trends in access to rural WaSH services in Rwanda 2010 – 2020.....	55
Figure 18: Trends in rural WaSH in Tanzania 2010 – 2020	56
Figure 19. Area of Intervention in Burundi.....	65
Figure 20. Area of Intervention in Mozambique.....	65
Figure 21. Area of Intervention Rwanda	66
Figure 22. Area of Intervention Tanzania.....	66
Table 1. Simplified Theory of Change	11
Table 2. Country Summary of the WaSH Programme for the AP 2017-2021	12
Table 3. Summary Methodology.....	14
Table 4. Relevance Score (Self-assessed).....	16
Table 5. Needs Identified before Implementation.....	17
Table 6. Baseline Indicators.....	19
Table 7. Top Priorities to Access Safe Water (Mozambique).....	20
Table 8. Barriers to Sanitation (Mozambique)	20
Table 9. COVID-19 Actions	21
Table 10. Access to water outputs.....	25
Table 11. Access to sanitation	28
Table 12. Significant changes in type of water access per country	32
Table 13. External and Internal Drivers of Efficiency.....	39
Table 14: New approach implemented per countries	46
Table 15. Linking Sessions to RANAS Methodology in Tanzania.....	56
Table 16. Activities Carried Out as Part of the WaSH Programme.....	58

Acronyms

BCT	Behavioural Change Techniques
BRC-FI	Belgian Red Cross-Flanders
BRC-Cf	Belgian Red Cross French-speaking Community
BuRC	Burundi Red Cross
CHAST	Child Hygiene and Sanitation Training
CLTS	Community-Led Total Sanitation
COWSO	Community Owned Water Supply Organisations
CVM	Cruz Vermeilla Mozambique /d Cross Mozambique
DGD	Belgian Federal Government
EAWAG	Swiss Federal Institute of Aquatic Science and Technology
HNS	Host National Societies
JMP	Joint Monitoring Programme
KAC	Key Aid Consulting
PHAST	Participatory Hygiene and Sanitation Transformation
PMERL	Project Monitoring, Evaluation, Reporting and Learning
RANAS	Risks, Attitudes, Norms, Abilities, and Self-regulation
RRC	Rwanda Red Cross
TRC	Tanzania Red Cross
VCA	Vulnerability Capacity Assessment
WaSH	Water, Sanitation and Hygiene
WHO	World Health Organisation
WUC	Water User Committee

Executive Summary

This report is a summative evaluation of the Belgian Red Cross - Flanders (BRC-FI) Water, Sanitation and Hygiene (WaSH) project that was implemented in four countries – Burundi, Rwanda, Tanzania and Mozambique - by Host National Societies (HNS) between 2017 and 2021. The WaSH programme was relevant where implemented, and access to safe water and sanitation were important needs in the communities of intervention in Burundi, Mozambique, Rwanda and Tanzania. On the hardware component, related to the construction of water points and improved latrines, Rwanda and Tanzania managed to deliver the outputs at expected quality while in Burundi and Mozambique the HNS experienced many challenges related to procurement of construction material, delivery of the material on time in communities, drawbacks with the authorities, and supervision of the contracted firm in charge of water points. Previous experience in the WaSH sector and dedicated qualified staff partly explains this difference between countries. While most communities in Mozambique spoke positively about the project, beneficiaries reported that insufficient access to water in communities remained. On top of this, they also complained about the latrines not being finished in their communities and reported issues with the quality of the slab. Key outcomes of the action plan related to safe water access were positively impacted by the programme in all countries. However, access does not guarantee a good level of water service delivery and communities are still spending a significant amount of time fetching water with an average time spent that is above 45 minutes. Above 30 minutes travel time, many research papers¹ have shown that household progressively reduce the amount of water they use and in turn the use less water for hygiene and have a limited role in safeguarding water quality.

As for hygiene, countries that managed to influence the construction of improved latrines did impact the key indicator of latrine ownership and usage. Qualitative evidence suggests that there was a shift in norms regarding open defecation, but it is difficult to confirm this pattern looking at quantitative data. Good handwashing practices were strictly defined and with this indicator design, changes were more related to the existence of an improved washing station than a real shift in handwashing moment practices. This is in line with the current findings of the research literature that finds limited improvement of hygiene outcomes compared to sanitation outcomes².

On the efficiency side, gains could be made on the coordination with authorities, outsourcing of firms and procurement processes to deliver the construction material to communities. The project experienced significant delays, especially on the latrine construction that required a no-cost extension.

There is mixed evidence that the project managed to build sustainable water service delivery in rural areas. In Rwanda and Tanzania that adopted a more holistic approach with many

¹ Cairncross S. More water: better health. *People Planet*. 1997;6(3):10-1. PMID: 12321042.

² Briceño, Bertha, Aidan Coville, and Sebastian Martinez. Promoting Handwashing and Sanitation: Evidence from a Large-Scale Randomized Trial in Rural Tanzania. *Policy Research Working Papers*. The World Bank, 2015. <https://doi.org/10.1596/1813-9450-7164>.

different hardware constructions and a network approach, the increased access to improved water sources has more chances to be sustained over time as roles and responsibility are also clearly defined for maintenance. The findings are more mixed for countries such as Mozambique or Burundi where maintenance of water points is mostly relying on the community shoulders. Indeed, there is strong evidence³ showing that community-based maintenance is failing if there is inadequate external support (technical, managerial and financial) from mandated authorities. In Mozambique interviewed members of the Water User Committee (WUC) while being trained on maintenance raised several unresolved issues. This included risks of theft and spare part sourcing. WUC also reported working more on reactive maintenance than preventive maintenance because of issues with communities not being able to financially participate at the expected level. Willingness and ability to pay for basic WaSH services has been identified as an important bottleneck in the literature⁴, especially in fragile contexts where WaSH is not always the priority. The over-usage of water points in communities raises questions about sustainable yield and over abstraction of groundwater that could lead to higher probability of pump breakdown in Mozambique. Finally, for latrine construction, the strong community engagement will increase the sustainability around hardware maintenance. However, the non-market-based approach raises questions about the ability of the community to further have access to improved slabs.

Our opinion is that a number of the services provided are poorly performing that need reforming and strengthening. In particular, there is limited financial, technical and managerial external support post construction to support community-based management arrangements. This means BRC-FI should focus on a few relatively simple measures to improve the performance of WASH services. The single most important area of improvement should be on the pre-construction and implementation period. The rationale for this is that if services are poorly sited, designed, supervised and tested there will be limited possibility of services performing well. Two other considerations are as follows. First, the technologies provided need to be a good fit for the local context. By this we mean if the technology selected is the wrong option for the setting then it will undermine the prospects of sustainability. The second aspect is that interventions need to be implemented to high professional standards. This means focussing on high quality siting, design, supervision and testing and documenting learning to learn ‘what works.

With this in mind we propose the following recommendations.

Recommendations:

Design	
Recommendation 1: Improve the quality of needs assessments. While working on project proposal, it could be worth investing more time in needs assessment to avoid creating significant delays once the project	HNS

³ Schouten, T. and Moriarty, P. (2003) Community Water, Community Management; From System to Service in Rural Areas, London: ITDG Publishing

⁴ Global WASH Cluster, Evidence-building for cash and markets for WASH in emergencies, UNICEF, Geneva, 202

<p>started and change implementation plans. Needs assessment for WASH programmes include access to improved water source by communities but also more refined indicators on the time spent fetching water, the water quality, and the service delivery all year long. Water could indeed be accessible but not in sufficient quantities or not the entire year. In addition to this, needs assessment of the relevant local authorities could also be included to see what human, equipment and financial resources they require to fulfil their mandate. What are their capabilities to provide rapid and effective external support to community-based management arrangements. Advocacy could then focus on the decentralisation of these resources.</p>	
<p>Recommendation 2: Better integrate a WaSH market-based approach for latrine construction. Supporting market actors or building demand are two frequently used market-based approach. Several countries tried to support local actors such as volunteers or local artisans in building latrines. It is important to support the correct market actors that have a strong incentive in the medium run to continue working on latrine construction while maintaining a certain level of demand via a voucher system for instance.</p>	HNS/BRC-FI
<p>Recommendation 3: Better compute the full lifecycle costs of latrines. It is important to know if rural communities can afford to pay for household latrines, as well as meeting the full recurrent costs. To better know this, it could be interesting to compute the full lifecycle costs to better target and tailor subsidies to the context.</p>	HNS
<p>Recommendation 4: Better plan volunteers' inputs: When working with volunteers on the construction of improved latrines it is critical to deliver the right amount of material at the right moment to strengthen their engagement on the project. In Mozambique it seems that the number of latrine construction was too big for the number of volunteers in the community which resulted in many gaps in terms of brick construction but also incomplete latrines creating tensions in the community.</p>	HNS
<p>Recommendation 5: involve the local authorities early in the programme design. This is to make sure that the intervention is compliant with local WaSH strategy and to avoid possible misunderstandings that could delay the implementation. Although in all countries, the authorities were in support of the action plan, the implementation was not smooth due to some misalignments that could have been prevented.</p>	HNS
<p>Monitoring</p>	
<p>Recommendation 6: Better monitor the quality of slabs constructed by volunteers. Beneficiaries reported issues with the quality of the slabs in Mozambique. This could be due to construction guidance (or supervision) not being respected or material used not meeting the required standard. Issues of quality should be carefully monitored as it</p>	HNS

engages a reputational risk and will undermine any prospect of sustainability.	
Recommendation 7: Collect more data on the service level of water points: The project made a genuine effort to collect high quality quantitative data with clear and comparable indicators across countries. However, the issue of service delivery in terms of access to required quantity and quality was not well monitored. Qualitative feedback could also be organized through the project cycle to gather beneficiaries' opinion on the project. In addition to this the project could collect data on functionality, yield, water quality and periods of breakdown.	HNS
Recommendation 8: Simplify some monitoring indicators and internalise the analysis within HNS to make them actionable. The complexity of some of the chosen indicators required an at scale data collection and advanced analysis using statistical software. To carry out this work a dedicated person was in charge of producing the overall analysis using R. While this analysis was solid methodologically and transparent since the evaluation team could look at the code the level of technicality decreases the data ownership of the HNS M&E department. This outsourcing of the analysis did not help local teams to construct M&E skills and make the data actionable to make specific decisions.	HNS
Implementation	
Recommendation 9: Improve communications with beneficiaries on the expected material to be delivered for latrine construction. In Tanzania, the HNS managed to deliver the construction material in communities with a clear implementation plan. This was not the case in Mozambique where there was confusion around which material should be delivered to who in which quantity. Clarifying implementation plan to avoid confusion and false expectations.	HNS
Recommendation 10: Provide a more comprehensive training to WUC. Several WUC reported not being able to repair other hand pumps as it was a different technology. To increase the sustainability at the village level of the new water point it could be interesting to train WUC on other related technologies.	HNS
Recommendation 11: Test water quality more systematically. To increase awareness of the community on the reasons behind poor taste and avoid the use of unimproved source of water, HNS should systematically test the water before the official handover to communities and explain the main drivers of water quality and how it could change over time because of the seasons of natural disasters.	HNS
Sustainability	
Recommendation 12: Work on a sustainability framework. Besides the theory of change, BRC would greatly benefit in working on a conceptual framework for how sustainability of rural WASH services can be achieved in these challenging environments. Once a framework (similar to	BRC-FI

WaterAid’s sustainability framework ⁵) exists, BRC-FL need to identify where they can maximise their impact with the support of HNS.	
Recommendation 13: Map responses and actions that need to take place when (not if) a water point stops working. Developing a flow chart or logic model that shows what happens when (a) minor breakdowns occur that can be resolved directly by the community and (b) major breakdowns that exceed user capacities and require rapid support ⁶ .	HNS/BRC-FI
Recommendation 14: Offer a clear commitment to support operation and maintenance of WASH services, post construction for at least 3-5 years. This work should be undertaken alongside the local authorities that are mandated to support rural WASH services.	HNS/BRC-FI

I. Introduction

The Belgian Red Cross-Flanders (BRC-FI) supports Red Cross-National Societies with expertise and programme assistance for their Water, Sanitation and Hygiene (WaSH) projects. Between 2017 and 2021 and as part of the programme funded by the Belgian Federal Government (DGD), the BRC-FI aided WaSH projects in rural areas in Burundi, Mozambique, Rwanda and Tanzania.

I.1. The WaSH action plan programme 2017–2021

The WaSH programme has two main purposes: **accessibility** and **behavioural change**. Improving accessibility to safe water and sanitation facilities and changing beneficiaries’ attitudes and practices in this regard optimises health outcomes and can be a catalyst for poverty reduction.⁷

Figure 1. Purpose of the WaSH Action Plan Programme



⁵ WaterAid (2011) Sustainability framework.

⁶ Exemple is available page 118 of Carter, Richard C. (2021) Rural Community Water Supply: Sustainable services for all, Rugby, UK: Practical Action Publishing

⁷ The Action Plan Programme encompasses a WaSH and a First Aid component. This evaluation is only about the WaSH projects in Burundi, Mozambique, Rwanda, and Tanzania. Key Aid Consulting is working on a separate evaluation of the First Aid project.

The WaSH intervention is premised on a Theory of Change, which is contextually different for each country. Table 1 summarises the Theory of Change (ToC) based on the proposal for all four countries. The Red Cross Societies in the ToC provide assistance in the form of hardware (infrastructure) and software (awareness-raising and education), so that the population has the right infrastructure for water and sanitation and is educated on its use and sustainability.

Table 1. Simplified Theory of Change

Input	Process	Output	Outcome	Impact
The Red Cross Society provides expertise and resources for the provision of WaSH hardware and software for the population.	The population is provided with sustainable & safe water supply (new constructions and rehabilitation).	Availability of safe and sustainable water supply with a gender lens (women are represented and involved in design and location).	Sustained use of sufficient safe water.	Allows all to live in good health and promote the right to health and qualitative health care for all ages
	The population is educated on appropriate and sustainable hygiene behaviour .	The population has the knowledge and skills on safe hygiene practices.	Sustained safe hygiene attitudes and practices.	
	The population constructs or is provided with sustainable and safe sanitation facilities (new constructions and rehabilitation).	Availability of safe, sustainable sanitation facilities with a gender lens (sex-aggregated public/communal facilities and women and girls engage in design and location).	Sustained use of safe sanitation facilities.	

Figure 2 summarises those activities carried out with respect to WaSH capacity-building, access to WaSH infrastructure and WaSH promotion and awareness-raising. A more comprehensive list of activities is available in annex VIII.4.

Figure 2. Summary of WaSH Activities

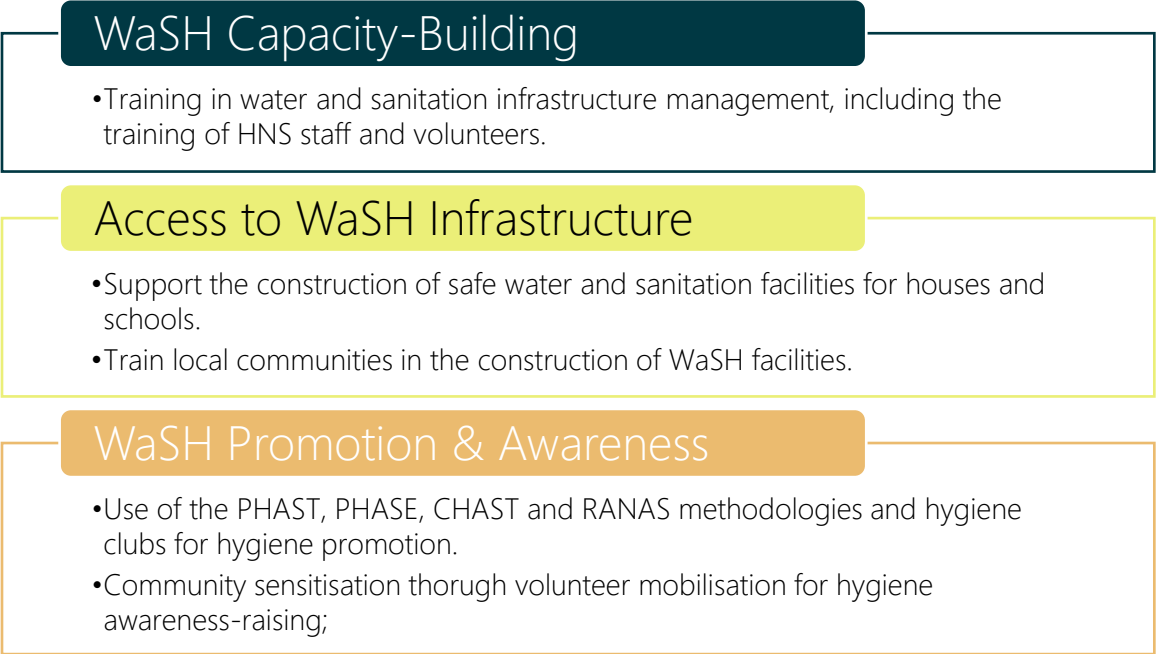


Table 2 summarises the main activities carried out in the four countries. A more detailed overview of the context in each of the countries is available in annex VIII.1, while annex VIII.4 provides a more detailed overview of the activities carried out in each of the countries. The maps of the areas of intervention in the four countries is available in annex VIII.7.

Table 2. Country Summary of the WaSH Programme for the AP 2017-2021

Country	Summary
Burundi	<ul style="list-style-type: none"> ▪ BRC-FI has been responding in Burundi since 2007 in the areas of First Aid and WaSH. ▪ Provided access to safe drinking water and improved sanitation facilities (protected water sources and water distribution systems) to 32,344 direct beneficiaries and 161,720 indirect ones in the Ngozi province (mostly in Nyamurenza. In Mwumba and Gashikanwa communes only a rehabilitations/extension of water supply systems was done). ▪ Ledhygiene behavioural change through volunteers (messaging and assistance to beneficiaries).
Mozambique	<ul style="list-style-type: none"> ▪ BRC-FI intervened in Mozambique in 2001–2014 (field health and disaster response) and in 2017–2021 (First Aid and WaSH). ▪ Provided access to safe drinking water to 7,000 persons and access to improved sanitation to 5,000 persons in one district in the Inhambane Province.

	<ul style="list-style-type: none"> ▪ Led hygiene behavioural change: 84 Red Cross Mozambique (CVMO) volunteers informed and assisted the population to change their behaviour.
Rwanda	<ul style="list-style-type: none"> ▪ BRC-FI intervened in Rwanda in 2003–2010 (First Aid), in 2016–2021 (Disaster Preparedness 1, 2 and 3) and in 2017–2021 (First Aid, WaSH). ▪ Provided access to improved water and sanitation infrastructure to 3,320 persons in the Murunda and Bwishyura sectors (Karongi district), and in the Mubuga sector (Rutsiro district). ▪ Led hygiene behavioural change through volunteers (messaging and assistance to beneficiaries) reaching 11,676 indirect beneficiaries. ▪ In total the project targeted 7,745 beneficiaries
Tanzania	<ul style="list-style-type: none"> ▪ BRC-FI has been working with the Tanzania Red Cross Society (TRCS) since 2017. ▪ Provides access to sufficient safe water and sanitation in a maximum of seven villages the Buhigwe district, reaching 29,683 persons. ▪ Leads hygiene behavioural change through volunteers (messaging and assistance to beneficiaries).

II. Evaluation objectives and scope

This summative evaluation serves accountability and learning purposes. On the one hand, the evaluation will be used to report the programme results to the donor (DGD). On the other hand, the results will inform the phase-out and share lessons learned with the Host National Societies (HNS).⁸

As such, the evaluation will assess the results of the programme against (1) the programme indicators, and (2) the OECD DAC criteria of relevance, effectiveness, efficiency, coherence and sustainability. The consultants will also look at the coordination and capacity-building components of the programme.

The evaluation will cover the 2017–2021 period in the four countries where the interventions took place.

The evaluation seeks to answer the following questions:

- **Relevance:** to what extent were the project objectives in line with the needs of the target population and addressed key barriers towards behavioural change?
- **Effectiveness:** to what extent have the programme objectives been attained? Has the programme led to unattended outcomes?
- **Efficiency, coherence, and coordination:** to what extent has the programme approach brought added value by leading to any efficiency gains, and a better coherence and coordination of the response with other health initiatives?

⁸ The next three years of the programme will be focused on the phase-out of the WaSH intervention. Local partners are expected to take over the intervention while BRC-FI focuses on First Aid.

- **Sustainability and capacity-building:** to what extent did the programme lead to the capacity-building of Red Cross-National Societies and will this lead to the continuation of the programme activities in collaboration with partners?

These questions have been divided into sub-questions and are captured in an evaluation matrix. The matrix also includes the indicators and sources of information that will be used to answer them.

III. Methodology

The methodology consisted of the following steps:

Figure 3. Evaluation Methodology



The evaluation objectives were achieved through a participatory approach combining a quantitative and qualitative methodology and relying on primary and secondary sources of information:

- **Primary data collection** consisted of **key informant interviews (KIIs)** with BRC-FI and Red Cross National Society’s staff in the four countries, and with partners; and **focus group discussions (FGDs)** with water committee members, volunteers and beneficiaries in Mozambique.
- **Secondary data** was retrieved from existing documentation about the programme in the four countries such as the proposal, quarterly and yearly reports, information sheets, baseline, midline and endline reports, etc.

Table 3. Summary Methodology

Inception phase & Desk review	Inception Report: develop the evaluation matrix, data collection tools and evaluation map.	Desk Review: comprehensive review of over 50 documents including the project proposal, monitoring documents, narrative reports, and other relevant documentation.
Data collection	Key Informant Interviews with 21 relevant stakeholders	20 FGDs with 225 persons in total, including beneficiaries, volunteers and water committees in Vilanculos, Mozambique
Data analysis	Qualitative and quantitative data coding and analysis, triangulating the different sources of information.	

Final deliverables

First draft final report: April 29th 2022.

Final report: May 25th 2022

IV. Findings



IV.1. Relevance/coherence

For the relevance and coherence of the action plan, the consultants analysed the process of needs identifications, the contextualisation of the RANAS approach, and the alignment of the action plan to the strategies of the local and national authorities.

IV.1.1. Needs identification

According to the Red Cross Societies in some of these countries, the relevance of the programme decreased as implementation proceeded. As a monitoring exercise, the Red Cross Societies are required to complete a yearly self-assessment of the following categories: efficiency, effectiveness, relevance, and sustainability.⁹ In **Burundi**, the needs remained unchanged throughout the five years of implementation, mostly due to external factors that hampered the action plan. In addition to the low level of sanitation, in 2017 there was prolonged drought, alternated by devastating rains that contaminated drinking water sources. This contamination exacerbated the high prevalence of waterborne diseases, especially among young children. Although the needs increased, the BuRC decreased the relevance score from A to B, because complications with the governorate from Ngozi led to delays and a change in the strategy. These changes made the action plan less pertinent.¹⁰ In **Mozambique**, the CVM decreased the score from A to B in 2019, because after a closer look into the target communities it was found that the water situation was not as bad as initially thought and that safe water sources were available to a significant part of the community. The CVM continued working on the provision of safe water to those who still did not have access to it, but also put a focus on safe sanitation and hygiene.¹¹


Table 4. Relevance Score (Self-assessed)

	Beginning	End
Burundi	A	B 
Mozambique	A	B 

⁹ The performance in relevance is measured through four scores: A: "The relevance of the outcome is still very good. There were no changes in the context and/or internal organisation, or if there were any, they were anticipated very well"; B: "The relevance is good. There were minor changes in the context and/or the internal organisation. These minor changes have a limited influence on the relevance. The necessary measures are taken or scheduled within the term of the intervention. As a result of these adjustments, the intervention is now again largely in line with the priorities of the target group, partner organisation, donor, etc. as provided for in the programming document"; C: "The outcome is only partially relevant. One or more important changes occurred in the context and/or in the internal organisation. If no adjustment is made, the intervention will lose an important part of its relevance for the final beneficiaries, partner organisations and/or donor"; D: "The relevance of the outcome is under threat. The changes in context and/or internal organisation are such that the intervention has or threatens to become completely irrelevant. Major adjustments are required."

¹⁰ Croix-Rouge du Burundi, "RAP Performance Measuring Burundi 2020," 2021.

¹¹ Croix-Rouge du Mozambique, "RAP Performance Measuring Mozambique 2020," 2021.

Rwanda	A	A
Tanzania	B	A 

In Rwanda there were no changes in the relevance self-assessment. Lastly, in **Tanzania** the score given to relevance increased from B to A at the end of the action plan. At the beginning, the TRCS confirmed that the intervention was relevant from the baseline results, however the latter had to align the programme to the government’s priorities. The government mainly expressed an interest in hardware, relegating software to a secondary status. The national sanitation campaign relied on the Community-Led Total Sanitation (CLTS) approach with regards to software, requiring the TRCS to implement it before other approaches in order to meet the government’s requirements.¹² Throughout its implementation, the action plan in Tanzania remained relevant as water samples systematically proved that people were drinking contaminated water (turbidity and E. coli were higher than the Environmental Audit Committee limits) and there was an insufficient number of latrines in schools.^{13 14}

The Red Cross already had a good understanding of the needs in the communities, because of its previous experience working in those specific countries. In that sense, the decision around the areas of intervention was based not solely on need, but also on existing Red Cross capacity and presence in the area. The final selection of the villages in which to intervene was based on a baseline study.

Table 5. Needs Identified before Implementation

Burundi	<p>In 2016 the level of sanitation in rural areas in Burundi was of 16% on average nationally, while the level of sanitation in schools was of 4%. Moreover, in Ngozi, where the BuRC was planning to implement the project, the level of sanitation was of 14%, below the national rural average.</p> <p>More specifically, the Nyamurenza commune was affected by a Malaria epidemic between 2000 and 2010 and suffered from recurring episodes of diarrhoea epidemics.</p>
Mozambique	<p>In Mozambique, the CVM worked under the assumption that about half of the population did not have access to safe water, and that in rural areas this number increased to two thirds. In 2011, it was estimated that 12% of the rural population had access to improved sanitation.¹⁵</p> <p>The two districts considered at the beginning of the project in the Inhambane province, Inhassoro and Vilanculos were selected based on WaSH needs identified in a Disaster Risk Reduction programme implemented there between 2014 and 2016, and based on the existing capacities of the CVM.¹⁶ The scope was</p>

¹² Tanzania Red Cross, “Tanzania - Monthly Programme Progress Report, August 2018,” 2018.

¹³ Tanzania Red Cross, “RAP Performance Measuring Tanzania 2018,” 2018.

¹⁴ Tanzania Red Cross, “RAP Performance Measuring Tanzania 2020,” 2020.

¹⁵ Croix-Rouge du Mozambique, “Mozambique - Proposal AP17-21,” 2017.

¹⁶ Croix-Rouge du Mozambique.

	later reduced to Vilanculos only, due to limited capacities to implement the action plan in the two other districts.
Rwanda	In Rwanda, the selection of the Karongi and Rutsiro districts relied on the lessons learned in a “model village” approach that was implemented there by the Belgian Red Cross French-speaking community (BRC-Cf) between 2014 and 2016. After that project, there were concerns about the quality of the water and there was a need to build improved latrines to replace the ones built during the model village experience, which were found to be of bad quality.
Tanzania	In the case of Tanzania, the selection of the Buhigwe district in the Kigoma region was based on data from the water point mapping system, and on a programme formulation mission that included field visits and meetings at the district and regional levels. This region has a continuous inflow of migrants from Burundi and the Democratic Republic of the Congo (DRC) and is a region prone to cholera outbreaks.

According to staff from the Red Cross in the four countries, access to safe water and sanitation was an important need that needs to be met. However, once the implementation started, it was noticed that additional needs were not being considered. In Burundi, for example, the implementing team noticed that the need for sanitation facilities was not only present in the households, but also in public spaces, such as schools.¹⁷ In addition, they noticed that most of the people in the target community had a precarious behaviour when it came to sanitation.

In the case of Mozambique, the CVM had initially planned to implement the action plan in two districts that it had selected based on needs and the project portfolio. However, the scope had to be reduced to cover only one district, due to limited capacities. Some communities initially targeted were discarded when it was found that they already had a water pipe system, whereas others were included, especially the poorest communities that were not initially considered.¹⁸

The distance to safe water source was also a constraint to the access to safe water. Although safe water is available in sufficient quantity, physical access is a limitation. In Burundi, although the community in Nyamurenza had access to safe water, for most of the people it implied a 20-minute trip to fetch the water.¹⁹ In the case of Rwanda, the quality of the water was not the main problem but accessing the water points (protected and unprotected water springs) could take up to two hours.²⁰

To quantify the WaSH conditions in the areas of intervention and to be able to measure results, the Red Cross teams designed and conducted a baseline. Table 6 captures the baseline results.

¹⁷ Interview with RCB staff.

¹⁸ Interview with CVM staff.

¹⁹ Interview with BRCS staff.

²⁰ Interview with RRC staff.

Table 6. Baseline Indicators

	Baseline
Burundi	
1.1. % of households in the target area using water from an improved water point for drinking	76.8%
1.2. % of households in the target area owning and using an improved latrine	2.6%
1.3. % of households in the target area whose members wash their hands with water & soap (or acceptable local alternative) at critical times	5.5%
1.4. Time required per day for water collection by water collector (incl. queuing time)	50 min
Mozambique	
1.1. % of households in the target area using water from an improved water point for drinking	64.0%
1.2. % of households in the target area owning and using an improved latrine	1.7%
1.3. % of households in the target area whose members wash their hands with water & soap (or acceptable local alternative) at critical times	0.1%
1.4. Time required per day for water collection by water collector (incl. queuing time) (interquartile range)	90 min.
Rwanda	
1.1. % of households in the target area using water from an improved water point for drinking	67.5%
1.2. % of households in the target area owning and using an improved latrine	0.6%
1.3. % of households in the target area whose members wash their hands with water & soap (or acceptable local alternative) at critical times	0.1%
1.4. Time required per day for water collection by water collector (incl. queuing time) (interquartile range)	60 min.
Tanzania	
1.1. % of households in the target area using water from an improved water point for drinking	57.3%
1.2. % of households in the target area owning and using an improved latrine	1.4%
1.3. % of households in the target area whose members wash their hands with water & soap (or acceptable local alternative) at critical times	0.1%
1.4. Time required per day for water collection by water collector (incl. queuing time) (interquartile range)	100 min.
1.5. % of households in the target area with access to an improved water source within 1km or 20min walking (excl. queuing time)	55.7%
1.6. % of households in target area with access to an improved latrine	1.5%
1.7. % of households in the target area with a clean improved latrine	1.1%

The baseline indicators give an idea of the precarious situation in the four areas of intervention at the onset of the action plan. For example, the share of households using water from an improved water point for drinking (indicator 1.1.) was of three quarters at best (Burundi, 76.8%), and above half at worst (Tanzania, 57.3%). Similarly, the share of houses owning and using an improved latrine (indicator 1.2.) was below 3% at best at baseline (Burundi, 2.6%). The share of households whose members wash their hands with water and soap (indicator 1.3.) was 5.5% at best in Burundi, whereas in the other three countries the share was 0.1%. The access to improved water sources was below the rural average at baseline in Burundi and Rwanda, and slightly higher than the rural average in Mozambique and Tanzania (see Figure 8 in the next section).

Lastly, in the areas of intervention the time required for water collection was 50 minutes on average at the lowest in Burundi, and was 100 minutes on average at the highest in Tanzania. A time of water collection that exceeds 30 minutes is categorised as a limited service.²¹

The baseline data above demonstrates that the communities in which interventions were carried out had minimal access to water and sanitation. There was a need for WaSH infrastructure and for behavioural change in the areas of intervention in the four countries.

In the FGD in Mozambique, beneficiaries were asked about the main barriers that their communities face to access safe water. The main barriers highlighted in the discussions are captured in Table 7.

Table 7. Top Priorities to Access Safe Water (Mozambique)

Top Priorities Access Safe Water
<p>The topic that came out the most in the discussions with beneficiaries is the need for more water points. For example, in Cochua, there are four wells, but only three are operational. There is one in a school installed by CVM, one in a church and one on the main road and the distance to access all three is long. Related to the need for more water points is the need to repair the existing infrastructure that is no longer working.</p> <p>A reduction in the distance to the water points is a second priority mentioned throughout the discussion. As supported by the baseline data, it can take people more than an hour to fetch water and some of them spend too much time on trips to get water.</p> <p>A potential solution that beneficiaries see to the accessibility problem is the installation of rainwater collection systems. Lastly, in some of the villages there is a problem with the quality of the water, described as having a bad taste, and in others there is a need to ensure the presence of water channels that connect water sources to livestock.</p>

Discussions with beneficiaries highlighted that in all the villages visited, access to safe water remains an important need, mainly due to a lack of functioning water sources and distance.

As with access to safe water, access to safe sanitation was discussed with the beneficiaries who were asked to describe the barriers faced in this regard by their communities. These are captured in Table 8.

Table 8. Barriers to Sanitation (Mozambique)

Barriers to Sanitation
<p>The most common problem highlighted in the discussions is the conditions of the latrines that were supposed to be built. In some villages, beneficiaries report that the materials, such as bricks and lids, were delivered to the latrine sites, but that the hole was never dug. This can happen because the beneficiary does not have the strength to dig the hole themselves or they do not have the cash to pay for it. In another village, although the latrines were built, they were not finished. The walls were not erected, and because the</p>

²¹ JMP Global Database, available [here](#).

latrines are not enclosed to ensure peoples' privacy, they are not used. Similarly, in many cases the lids are broken, and beneficiaries have been waiting for new parts for months.

If the latrines are not finished, they appear abandoned and might end up being used for other purposes. For example, strangers passing by can use them, throw rubbish in the holes, etc.

Lastly, at least in one of the villages the households with males living in them were able to finish the latrines, whereas the female-led households faced more difficulties and have lagged behind.

COVID-19

Access to safe water and sanitation were important needs in the four countries' communities of intervention. Hygiene has also become key since the onset of the COVID-19 pandemic and in that sense by definition the action plan helped mitigate some of the contagion risks, by promoting handwashing and access to water.

Table 9. COVID-19 Actions

Burundi	<p>To mitigate the risks related to COVID-19, the BuRC established a task force that was in charge of the sanitation promotion and communication efforts. The task force also developed a booklet with COVID-19 information that was distributed in all provinces.</p> <p>Moreover, the BuRC supported the communities with hand-washing kits; sensibilisation of local authorities and community leaders in all the provinces; and radio emissions.²²</p>
Mozambique	<p>The CVM did not implement a COVID-19 strategy as part of the action plan in Vilanculos. They did have a COVID-19 programme in Inhambane, Maputo Province, Maputo City, Nampula and Niassa, with activities such as training volunteers in COVID-19 prevention, purchase of buckets for hand washing and sprayers for disinfection, and the purchase of diffusion material such as pamphlets and posters.²³</p>
Rwanda	<p>In 2020 the RRC conducted 828 community mobilisations over a period of nine months. In 2021 another 552 community mobilisations were conducted between January and June. These mobilisations covered 46 villages and put special emphasis on the prevention measures against COVID-19 established by the government, but they also covered hygiene awareness, nutrition, and disaster risk reduction.²⁴</p>

²² Croix-Rouge du Burundi, "Burundi - Rapport Narratif Annuel 2020," 2021.

²³ Croix-Rouge du Mozambique, "Mozambique - Relatorio Anual Vilankulo WaSH 2020," 2020.

²⁴ Red Cross Rwanda, "Rwanda Community Resilience Programme 2017 -2021: January - June 2021 Report," 2021.

Tanzania

As part of the PHAST approach to improve hygiene behaviour, the TRCS put emphasis on COVID-19 and insisted on the washing of hands at critical moments.²⁵

IV.1.2. Contextualisation of the RANAS approach

The project relied on different methodologies to bring about behavioural change in hygiene practices in the communities of intervention. In Rwanda and Tanzania, the Red Cross implemented the Risks, Attitudes, Norms, Abilities, and Self-regulation (RANAS) approach for behavioural change. BRC-FI had existing capacity to support the implementation of this innovative methodology. BRC-FI has been working with RANAS since 2015 with the Swiss Federal Institute of Aquatic Science and Technology (EAWAG) and since 2016 they have been implementing the RANAS approach in Malawi. Through this intervention, the BRC-FI has identified the factors that lead to certain behaviours and developed tools to change them.

RANAS is not a one-size-fits-all approach and has had to be contextualised to water and sanitation behaviour in the two countries where it was implemented. The approach comprises four phases described in Figure 4.

Figure 4. Steps of the RANAS Approach



In Rwanda, the contextualisation of the RANAS approach started with the baseline. The Rwanda Red Cross Society (RRCS) conducted extensive data collection relying on the Vulnerability Capacity Assessment (VCA), which is a standardised methodology to identify the needs of a community before starting a project. The RRCS conducted a survey with 3,000 respondents to identify behavioural attitudes related to WaSH. The RANAS material was contextualised using the support provided by the EAWAG in the form of methodological fact sheets. Among the materials that were distributed, a guideline on how to use the RANAS approach, a list of behavioural factors and ways to measure them, a manual for doer and non-doer analysis, and a catalogue of behavioural change techniques.²⁶ Based on those guidelines, the RRCS developed storytelling material in the form of designed booklets or flipcharts that volunteers could use to explain some topics to the communities, such as critical handwashing moments.²⁷ The RRCS also took into consideration cultural aspects that

²⁵ Tanzania Red Cross, "Tanzania Monthly WaSH Report June 2020," 2020.

²⁶ Interview with RRCS staff.

²⁷ Interview with RRCS staff.

could have an impact on the results of the RANAS approach. For example, some of the questions about menstrual health were not being covered by volunteers during group discussions, but during household visits. That provided a safer scenario for respondents to answer freely, without any feeling of shame.

In the case of Tanzania, a Randomized Control Trial (RCT) was implemented to better understand the impact of RANAS and contextualisation. Similar to the Rwanda case, the TRCS used the materials provided by the EAWAG to design their response. A delegation from BRC-FI visited the TRCS and presented the RANAS behavioural change model with the field team and the Project Monitoring, Evaluation, Reporting and Learning (PMERL) Head.²⁸ A team of volunteers was trained on both the RANAS and mini-RANAS approach in November 2018.²⁹ A doer non-doer survey was implemented on latrine use and handwashing practices. Based on these tools and survey the TRCS team developed a list of behaviours needing to be changed and how the RANAS methodology could be used to achieve that change. The list of behaviours identified and the BCTs implemented in Tanzania are captured in annex VIII.2. The results of the RCT are not available yet but the design of the experiment will enable the research team to measure the difference in impact between a contextualized versus non-contextualized program.

IV.1.3. Alignment of the action plan

The action plan 2017 – 2021 was aligned with the national strategies of the HNS to the extent that it contributed to the health aspect of the strategies. Although according to the information provided by Red Cross staff in the majority of cases the HNS do not consider WaSH to be a strategic priority (Mozambique, Rwanda and Tanzania), it is nevertheless aligned with their healthcare strategies.³⁰ By ensuring that safe water and sanitation are provided, the health situation in the communities is expected to improve. Moreover, hygiene promotion is part of the curriculum of the Federation of the Red Cross.

In the case of Burundi, one of the pillars of the 2017 – 2021 strategic plan was to improve access to safe water and sanitation, and it continues to be part of the new 2022 – 2026 strategic plan.

In all of the countries, access to safe water and sanitation is a priority for the governments, however, alignment with the government’s strategy has meant that in some cases part of the action plan had to be reworked. The alignment with the government plans is likely to have increased the sustainability and national ownership of the intervention but created delays. This might be because the governmental works at a different pace than humanitarian organisations.

In the case of **Burundi**, the intervention had to reference the national strategy (*Plan du Développement Durable 2018 – 2027*), which specifies the government’s priorities. The plan comprises two pillars around large-scale access to water and sanitation infrastructure and one pillar concerning basic sanitation (at household and community levels). In addition,

²⁸ Tanzania Red Cross, “Tanzania - Monthly Programme Progress Report, June 2018,” 2018.

²⁹ Tanzania Red Cross, “Tanzania - Monthly Programme Progress Report, October 2018,” 2018.

³⁰ KII with HNS in Burundi, Mozambique, Rwanda and Tanzania.

there is a coordination framework with the Ministry of Hydraulics, and they are visited regularly by government representatives. **Although the action plan had been adapted to comply to those guidelines, coordination problems with the authorities delayed the intervention and, in the end, led to lower-than-expected results.** The intervention in Burundi was delayed in 2017, because both the BuRCS and the Ngozi governorate were planning to subcontract the same NGO, namely Protos. Although this specific issue was solved at the end of 2017 when Protos retired from the operation, blockades from the governorate delayed the intervention, for most of 2018 and of 2020.³¹ Before some of the activities could be authorised, the governorate required an agreement between BRC-FI and the Ministry of Hydraulics. The activities were progressively restarted at the end of 2020.

Similarly in **Tanzania**, the action plan aligns with the Tanzania Water and Sanitation Development Plan 2007 – 2020 and the Sustainability Strategy. During the planning of the activities, the TRCS met with government officials to make sure that they were aligned with the government strategy. Nonetheless, four out of the 22 water points meant to be rehabilitated were not, because the government extended the road reserve, and those four water points were dismantled³². The consultants could not verify if this was a communication problem from the government that did not inform the Red Cross in time about this, or the Red Cross did not verify the infrastructure plans with the communities. In addition, there were delays in the phase three of the construction of the gravity flow. This happened because at the end of 2019, the Water Department of the Buhigwe district began the construction of a water intake structure close to the Nyamfisi intake that the TRCS was planning on using for the gravity flow. The new intake would use the same river therefore decreasing the volume of the intake of the gravity flow scheme. After months of discussion, it was decided that the gravity flow would use one of the outlets of the government intake. In addition, the water scheme that was constructed as part of the project to bring safe water closer to the communities, was delayed, because it needed to be connected to the main water tank and making that connection required crossing a road, for which government approval was needed.³³

In **Mozambique**, the interventions were aligned with the national plan to the extent that the CVM has permanent communications with the district government, who also has to approve the activities before their implementation. Lastly, regarding **Rwanda**, the government has developed a National Handwashing Sub-Strategy (2019 – 2024) that is aligned with the National Health Sector Strategic Plan IV that emphasises the need to improve demand, access, and quality of essential health services.³⁴ The government seeks to ensure access to water supply for the entire population by 2024 and also to ensure that every household has a latrine by that same year. The RRCS coordinates the different activities with the Ministry of Infrastructure to make sure they align with the government's guidelines. Since the action plan was to be handed over to the local authorities, all of the infrastructure had to align to

³¹ Croix-Rouge du Burundi, "RAP Performance Measuring Burundi 2020."

³² 2 water points out of these 4 could be connected to the system but not rehabilitated to the ideal standard but will be dismantled in the year following the project.

³³ Tanzania Red Cross, "RAP Performance Measuring Tanzania 2020."

³⁴ UNICEF & Rwanda Ministry of Health, "National Handwashing Sub-Strategy 2019 - 2024," 2019.

government standards. The government set strict guidelines in this regard, all the way to the painting of the latrines.³⁵

The development of the Child Hygiene and Sanitation Training (CHAST) manual in Rwanda filled a gap in the school curricula by improving the WaSH behaviour and overall knowledge about the topic of children and teachers. However, the school curricula is not easy to change, and CHAST sessions had to be attended voluntarily outside school hours. Nonetheless, participation on the sessions was high, which is a positive sign that reflects interest in the subject.

IV.2. Effectiveness/impact:






The following section discusses the achievement of the program objectives and outcomes as outlined in the Logic Framework, the contribution of the activities to access and use of sufficient safe water and sanitation facilities. Behavioural hygiene change in communities and HNS increased capacity to implement WaSH related interventions will also be discussed

IV.2.1. To what extent has the program managed to increase the availability of safe and sustainable sanitation and water supply for the target population?

Increase access to water sources

Each country adopted a different approach to increase access to water in their target communities via water supply construction. The type of water point created or rehabilitated, and the number greatly varies between countries and community needs, as displayed in Table 10. In some countries such as in Burundi, the HNS decided to focus its effort on the rehabilitation of water sources while in Rwanda the HNS took a more systematic approach working on the network of rural water services in two communities. This latest project involved the construction of new water points, the construction of three water tanks, break pressure chamber and washouts but also the entire refecton of pipes across more than 20 kilometres.

Table 10. Access to water outputs

				
	Burundi	Mozambique	Rwanda	Tanzania
Self-Assessment	C/D	C	A	B

³⁵ KIIs with RRCS staff.

Performance DGD ³⁶ :				
Nb of districts (name):	1 district (Ngozi)	1 district (Vilankulos)	2 districts (Rutsiro and Karongi)	1 district (Buhigwe)
Hardware water points construction: ³⁷ (Achieved/Target) ³⁸	Spring catchments 88/100	Protected boreholes 7/8	Water point with tap 29/10	Domestic water delivery points 8/10
Water points rehabilitated: (Achieved/Target) ³⁹		Protected boreholes wells 6/6	Water point with tap 15/10	Water Delivery points. 15/15
Other	8 Water collectors in schools		Construction and rehabilitation of two water systems ⁴⁰	4 Schools water tanks Treatment plant Distribution pipes and 6 water kiosks

The work around water points is very limited geographically. In all countries the construction or rehabilitation of water points is limited to one district except in Rwanda, which included two districts. Having a small geographical coverage enabled HNS teams to facilitate monitoring visits while spending less time travelling. It is moreover easier to focus on one district to try and obtain the buy-in of all decentralised levels of the water administration. In Mozambique in the initial proposal two districts were included but the HNS and PNS management boards finally decided to focus their efforts on a single district to increase efficiency.

³⁶ Scores are derived from the 2020 performance measuring systems of each country, which is a self-assessment with four levels A: Very good, the situation is going according to plan; B: Good, the situation is largely going according to plan; C: Certain problems must be tackled in order to avoid negative effects; D: serious shortcomings.

³⁷ Global WASH Cluster. 'Compendium Of Water Supply Technologies In Emergencies', 2021.

³⁸ Target refers to what was agreed on in the proposal. Green if target is met, orange if target not achieved

³⁹ Target refers to what was agreed on in the proposal. Green if target are met, orange if target not achieved

⁴⁰ for an exact list please see annex 5

Half of the countries managed to reach their target indicators in terms of water point construction. Projects experienced significant delays, nonetheless, most of the constructions were finalised in 2020. Key informants reported three main reasons behind the delays in hardware constructions. First, it took some time for country teams to work on a more precise needs assessment and feasibility study. In some countries such as Rwanda where the renovation of the water supply system was complex, an external firm was commissioned to deliver specific expertise on the feasibility of the project creating additional delays. **Second, there was a need to coordinate the precise choice of location with local authorities.**

Quote 1: Key Informant Interview
If the communities don't ask for water, then they don't really need it

According to a key informant, finding the right balance between taking the community's needs into consideration and maintaining the local authorities' ownership is a challenge. Indeed, some authorities have very radical views on how to assess community needs as presented in quote 1, which is not aligned with Red Cross principles. In addition to this, informants reported that "Water is politics," and

that officials were sometimes pushing for water point constructions in communities in which they had an interest rather than in communities most in need. Therefore, a detailed needs assessment during joint field visits had to be organised. **Finally, procurement processes to select the firm that would oversee the construction took some time,** this was for instance the case in Mozambique where the 8 water points were finalised in 2020.

Major deviations from targets for the water points in Burundi are driven by the failure of the contracted company or partner to deliver the expected output at the expected quality.

Figure 5: Unfinished spring catchment area in Burundi



In Burundi where two partners failed to support the delivery of the hard and soft component. Protos (now Join for Water) a Belgian NGO that was supposed to implement the soft component in Mwumba and Busiga left the province in 2018 because of tensions with local authorities. In 2021, the private company, Burundi Development Impact, contracted to work on the water sources, dropped the project being unable to finish the work that started on water sources

catchments. Internal documents⁴¹ revealed a significant discrepancy between what the companies said they would deliver and what the supervisory visit discovered in the field. In 2021, the Burundi Red Cross organised a supervisory visit to all 82 water sources. They discovered that none of the spring catchments were finished (see Figure 5) at expected quality and that 30% represented a serious risk to water quality. The total estimated cost to finish the work reached 40,382 euros.






⁴¹ Croix Rouge du Burundi. 'RAPPORT D'ETAT DES LIEUX DES SOURCES AMENAGEES A NYAMURENZA POUR LE PROJET WASH-OD NYAMURENZA.', 2021.

Interventions on water access points in schools were more successful: they were smaller in number and complexity. In most countries, schools were also supported via the installation of a water collector. These projects, which had more visibility and with a lower level of complexity, were usually implemented at the expected level of quality and quantity.

Increase access to sanitation

The approach for latrine construction differed from one country to another in the type of support and intensity of subsidy covering the construction costs. Indeed, supporting the construction of latrines has been approached differently by each country based on prior experience of the HNS, environment, and availability of resources on the local market. Improved latrines are made of three components, **the pit** that needs to be large and deep enough to last for a few years, **the slab**, which is hygienic and separates waste from human and insect contact and the **superstructure** that provides privacy and protection from the rain. In all countries the work around the pit relied on the community's and volunteers' efforts for vulnerable households. One exception was CVM that needed to deliver cement blocks to construct the pit in the target communities. This is due to the sandy nature of the soil that increases the risk of collapse. Most of the subsidies in each country relied on the delivery of the slabs that are not available in local markets (see Table 11). In Burundi SanPlats were provided while in Tanzania it was SaTo Pans. Finally for the superstructure, no specific subsidy mechanism was in place in any of the countries except for Rwanda.

Table 11. Access to sanitation

				
	Burundi	Mozambique	Rwanda	Tanzania
Self-Assessment Performance DGD ⁴²	C/D	C	A	B
Improved latrine construction (Achieved/Target) ⁴³	ECOSAN latrine: 68 ⁴⁴ /200	Improved Latrine support: 753/1000	Improved latrine support: 574/364 HNS support No HNS support	Improved latrine support: 3900/2340

⁴² Scores are derived from the 2020 performance measuring systems of each country, which is a self-assessment with four levels: A: Very good, the situation is going according to plan; B: Good, the situation is largely going according to plan; C: Certain problems must be tackled in order to avoid negative effects; D: serious shortcomings.

⁴³ Target refers to what was agreed on in the proposal: Green: achieved target, Orange: target not achieved.

⁴⁴ Finished with a roof according to the last monitoring visit we had access to. Simple latrines were more common, and a total of 1221 simple latrine with a sanplats were constructed, target was 1200.

			463/656	
Pit	No subsidy	Subsidy: Cement blocks	No subsidy	No subsidy ⁴⁵
Slab	Subsidy: SanPlat	Subsidy: Cement slabs	Subsidy Cement	Subsidy ⁴⁶ SATOPANS Cement
Superstructure	No subsidy	No subsidy	Subsidy Iron sheets	No subsidy ⁴⁷
Sanitation for institutions	4 schools		4 schools	8 schools

Improved latrine construction was a big challenge in communities and most countries did not manage to reach target numbers at the expected quality because of delays and gaps in construction material delivery. Most HNS did not work on subsidies that were based on local markets. Therefore, they had to go through lengthy procurement processes and cover high transportation costs to deliver the construction material to communities. Bringing construction material from the headquarter to communities was the main challenge, and this created delays and gaps in the construction of improved latrines. Such was for instance the case in Mozambique, which faced significant challenges to work on the procurement process of the cement, in turn delaying the ability of volunteers to construct the slabs that would be used in the community for building improved latrines. The lack of construction material is also a reason many latrines were not fully finished in Burundi. During a monitoring visit in March 2021⁴⁸, only 36% of the visited latrines had a superstructure. Cheaper local material could be used but the project promoted the use of bricks to construct the walls. In addition to this, certain specific pieces of the improved latrines were missing. This was for instance the case of the SanPlats in Burundi that were constructed in 2019 but only distributed to households in 2021. This two-years delay was due to the failure of the contracted company to deliver SanPlats at the required quality.

Engaging communities over volunteers in the construction of latrines has been more successful. In Rwanda and Tanzania, the work predominantly relied on the community's efforts. In Rwanda for instance, community work was organised to support vulnerable households in digging a pit. In Mozambique, the HNS had a different approach and wanted volunteers to drive the construction process with the idea in mind that they could create an Income Generating Activity (IGA) out of it in the future. The reality was a bit different as volunteers were too few in numbers to work on all of the latrines and to dig a pit for all of

⁴⁵ Except for the latrines constructed for disabled households, 22 HH received subsidy

⁴⁶ Except for the latrines constructed for disabled households, 22 HH received subsidy

⁴⁷ Except for the latrines constructed for disabled households, 22 HH received subsidy

⁴⁸ Croix Rouge du Burundi , « RAPPORT D'ETAT DES LIEUX DES SOURCES AMENAGEES A NYAMURENZA POUR LE PROJET WASH-OD NYAMURENZA » Mars 2021

the households that needed it. This resulted in many latrines not being finished and created confusion on who is responsible for constructing what. In two villages, volunteers and community leaders could not really agree on a clear implementation plan whilst prioritising some households, in turn creating tensions. Focus group beneficiaries reported that they had the feeling volunteers were taking advantage of the situation while charging vulnerable community members for latrine construction or maintenance.

Latrine construction for institutions such as schools were successful in their delivery. All countries managed to build new sanitations in schools at the expected quality. Building latrines in schools creates more visibility and requires a higher level of coordination with governments and local authorities. This in turn increases the accountability towards communities. Construction of sanitations in schools is considered as a priority by the staff and discussions with informants revealed that many joint construction supervisions with local authorities were organised. In turn stronger monitoring of the construction work progress and quality enabled HNS to meet their target.

Communities' perception of water points and latrines

While most communities spoke positively about the project, in Mozambique beneficiaries reported that insufficient access to water in communities remained. In the six villages visited

Quote 2: Beneficiary

Sometimes the wait for water can be three hours and early in the morning when it is still cool, you will find 30+ people waiting.

in Mozambique, communities reported that access to water was still insufficient for the size of the population. In all villages it was reported that they had to queue for hours sometimes to get access to water (see quote 2). Distance to the water point was also often reported as a major barrier.

Quality of the available water is also questionable for some water points in Mozambique and Burundi. Field visits revealed that for some communities, namely the one of Munavalete in Mozambique, the quality of the water is very poor. KAC consultants indeed observed floating particles in the water coming from the tap and the taste was indeed very bad even when the water was boiled (see quote 3). In Moabassa, another village, the community complained about a salty taste. The FGD revealed that beneficiaries think the borehole is not deep enough, hence the salty taste. In Burundi, no FGD was organised but the result of the water quality test revealed that 15 water points had above 1 E.coli/100 ml.

Quote 3: Beneficiary Munavalete:

We prefer to drink and cook with rainwater when possible as the taste is much better.

Figure 6. Picture of an unfinished latrine



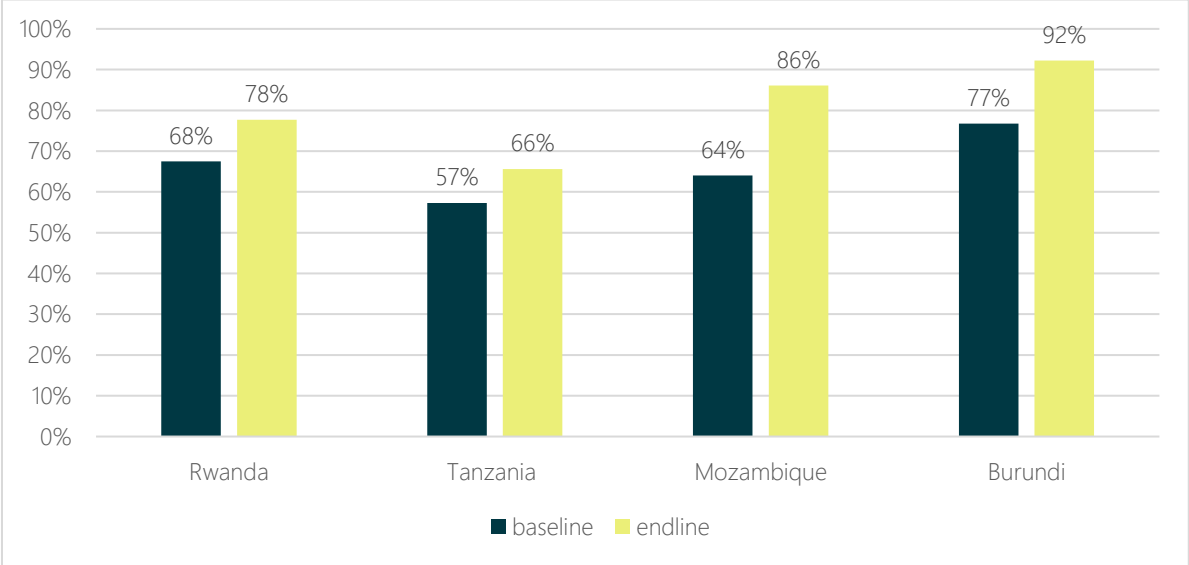
Most interviewed beneficiaries in Mozambique complained about the latrines not being finished in their communities and reported issues with quality of the slab. In all villages some focus groups members complained about their latrine not being 100% finished. Despite many latrines having a pit and lid, the superstructure was often lacking, impacting in turn privacy and usage (see Figure 6). Discussions with beneficiaries revealed that the communities thought the HNS would build a superstructure of concrete block walls and an iron roof. This expectation was set because the first latrines constructed for the most vulnerable households followed this design. Some households worked with local materials to construct mud walls, but the majority of respondents was waiting for the Red Cross to provide extra resources to finish the latrine.

IV.2.2. To what extent did the project manage to influence the sustained use of sufficient safe water and sanitation facilities

Use of an improved water source in sufficient quantity and quality

There is an increase in the use of improved water sources in all countries. As displayed in Figure 7, between 2017 and 2021 in each surveyed community there is an increase in the use of improved water points. The biggest difference is in Mozambique with a 22% percentage point increase.

Figure 7. % use of an improved water point for drinking – baseline endline







In two countries there is strong heterogeneity in access to water within the different communities targeted by the programme. This is namely the case in Mozambique and Tanzania where some communities are doing significantly better than others. In

Mozambique, in Chitetimane for instance, the percentage of surveyed households using an improved water source is 99% while in Chibuene it is 70%.

Most of the changes in the type of access to water points between baseline and endline can be linked to the WASH programme. Changes related to water access between baseline and endline can be explained by three main drivers. First, the increase in access to improved water sources can be due to a reduction in the use of unimproved water sources. This shift in behaviour may come from the community awareness campaigns that exposed risks related to unsafe water. Data reveals a sharp decrease of the use in unimproved water sources such as rivers in Rwanda or unprotected dug wells in Mozambique (see Table 12). The second factor behind this increase is related to an increase in the use of improved sources. For Burundi, the trend is clear. There is sharp increase in access to protected springs which is the core of the project. For Rwanda and Mozambique, we also observe an increase in access to protected water sources. The third driver of change could be related to dynamics that are outside the scope of the project such as households having a better access to pipes through government programmes, household investments or other NGO activities. This was particularly the case in Mozambique where we observed a strong increase in access to piped water in the yard (from 1.8 % at baseline to 17.8% at endline), which was not in the scope of the project. To conclude, in all countries there is a clear pattern showing that the project contributed to the increase in access to improved water sources, with a higher contribution in Burundi.

Table 12. Significant changes in type of water access per country

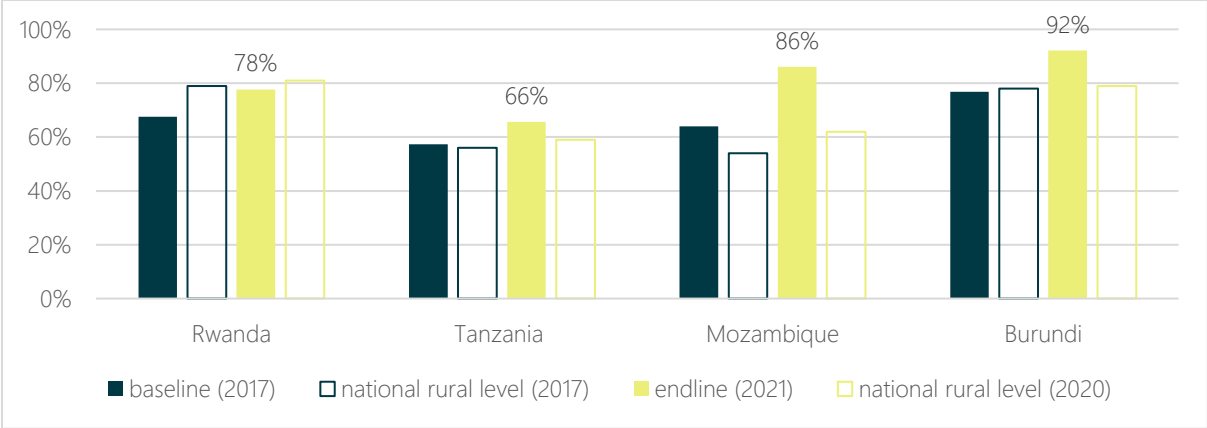
				
	Burundi	Mozambique	Rwanda	Tanzania
Type of water point created	Protected springs	Public tap	Protected water source	Public tap and rehabilitated water system
Biggest change in unimproved water source	Unprotected spring ↓ B:15% → E:5%	Unprotected dug well ↓ B:35% → E:14%	River ↓ B:25% → E:7%	River ↑ B:6% → E: 27%
Biggest change in improved water source	Protected spring ↑ B:69% → E:85%	Public tap ↑ B:7% → E:34%	Protected water source ↑ B:0% → E:15%	Tap from gravity ↑ B:33% → E:62%
Non project-related change	Other ↓ B:6% → E:0%	Piped into yard ↑ B:2% → E:18%	Private	
Project attribution	Strong	Medium	Medium	Medium

A seasonal component might impact the access to water in certain countries. In Tanzania we see a sharp increase in the number of households using unimproved water sources and

in this example river water (see Table 12). In baseline only 6% of households reported using river water while at the endline it increased to 27%. During dry seasons some wells or springs could provide less water, in turn pushing households to use unsafe water sources again. This seasonality in access to water confirm the need to monitor service delivery throughout the year.

Most of the communities that followed the programme are doing better than the national average in terms of access to improved water in rural areas. As displayed in Figure 8, all countries except Rwanda now have better access to improved water when compared to 2020 national rural averages⁴⁹. The difference in Rwanda can be partly explained by the fact that the target communities were more vulnerable than the national rural average, in turn requiring much higher investments to fill the gap with the national rural average. The opposite dynamic is observed in Mozambique where access was better than the national rural average and turned out to be much better at endline.

Figure 8. Access to improved water sources, baseline endline national average⁵⁰

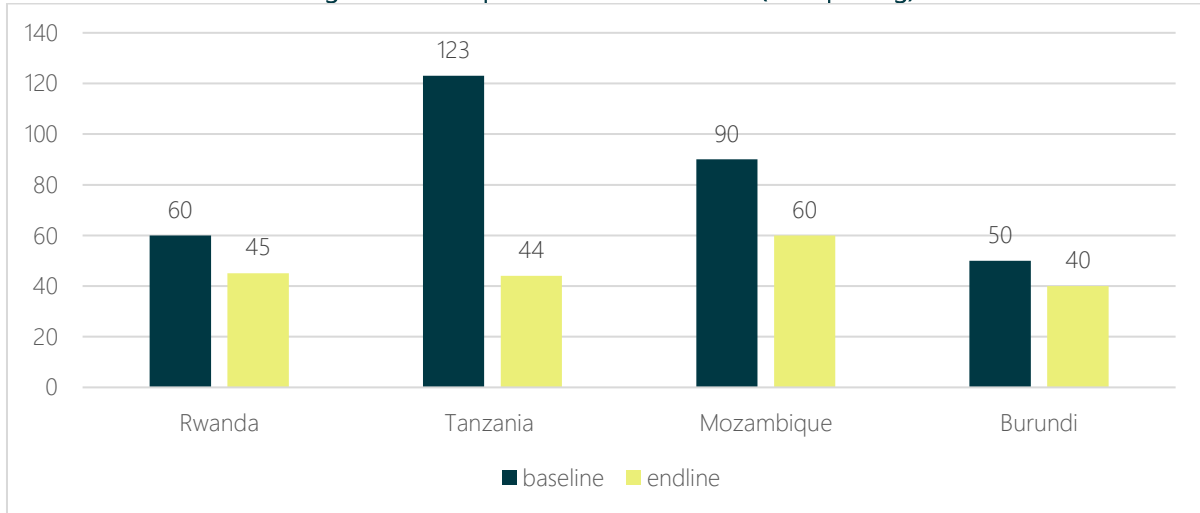


Time spent collecting water has been reduced in all countries, but access is still considered as limited for many households as water collection time exceeds 30 minutes in all countries. Collection time has been reduced in all countries and sometimes significantly, such as in Tanzania. Collection time is mainly driven by three factors: distance between households and respective water points, water flow, and long queues at water points. Projects that reduced distances to water points tended to have the biggest impact. This was the case for Tanzania for instance where new water points were created while in Burundi springs were only protected, in turn increasing water flow and reducing waiting time.

⁴⁹ National averages were taken from the JMP website for rural areas. Improved includes, limited, basics and safely managed (unclear)

⁵⁰ National averages were taken from the JMP website for rural areas. Improved includes, limited, basics and safely managed (unclear, as above)

Figure 9. Time spent on water collection (incl. queuing)

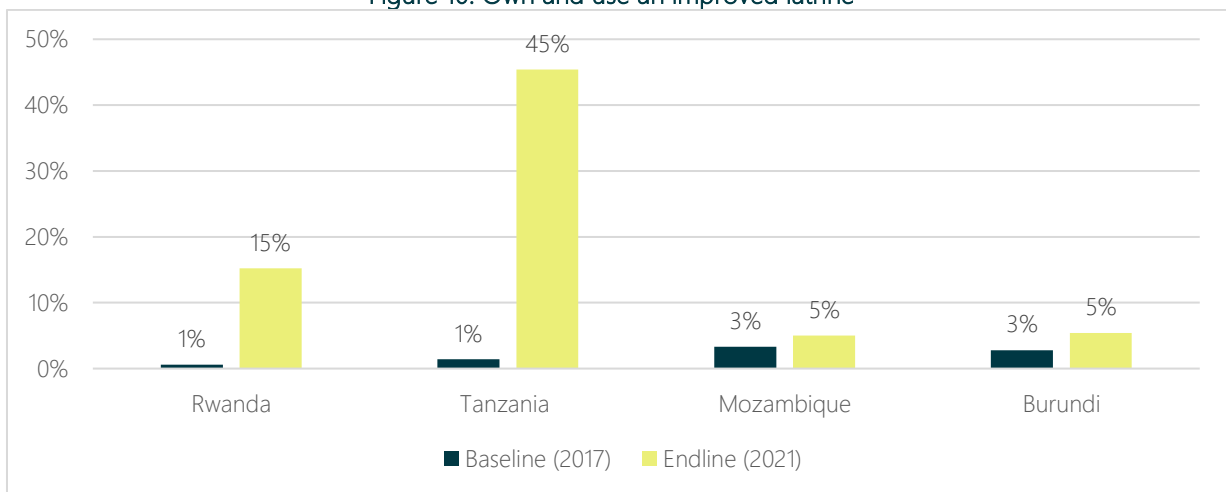


While access and use improved, all focus group participants in Mozambique agreed that there were not enough water points to satisfy the community's demand. Beneficiaries were unanimous in that there is a need for more functioning water points. They reported that too many households rely on too few water points, creating long queues and over-usage of the pumps.

Use of improved latrines

Usage of improved sanitation significantly improved in two countries, namely Tanzania and Rwanda. Improved sanitation refers to a specific definition of "improved latrine." This requires that the latrine be used only by the household and meets certain construction requirements. Meaning that there needs to be a wall, a slab, curtains/door and a roof. It is worth noting that measurement of the size and depth of the pit is not included in these criteria. The two countries that managed to deliver most of their outputs in terms of sanitation experienced a significant increase in ownership and usage of improved sanitation as displayed in Figure 10.

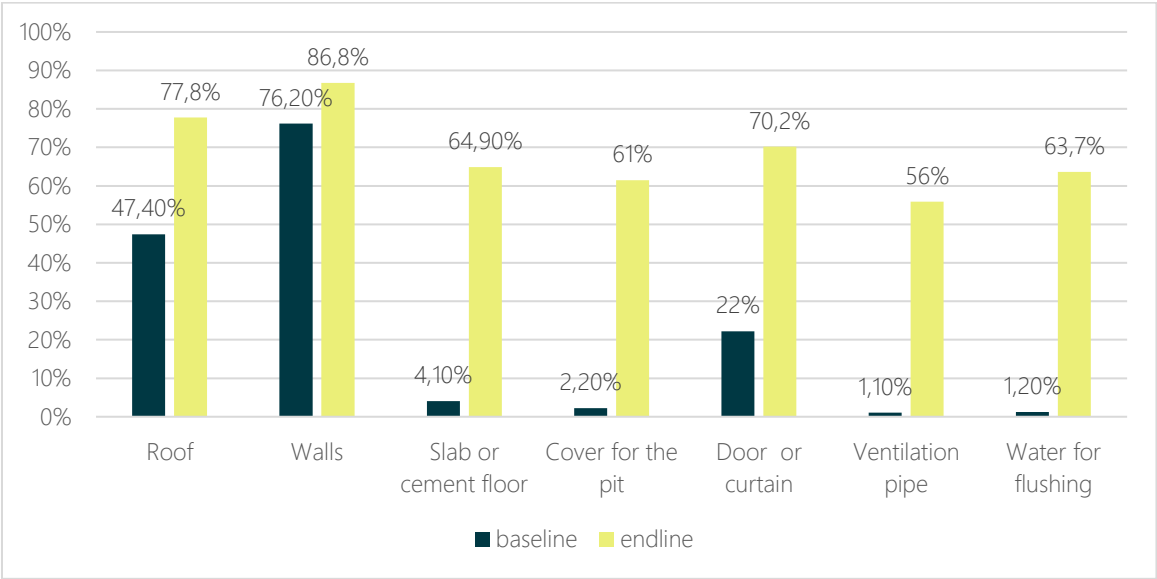
Figure 10. Own and use an improved latrine



For Rwanda and Tanzania most of the increase presented above is related to the availability of an improved toilet rather than the use of a toilet. In both Rwanda and Tanzania, the use

of toilets between baseline and endline did not vary a lot. In Rwanda we observe a small increase in general toilet ownership⁵¹ and use (from 87% to 95%). In Tanzania at baseline 85% of households have a latrine, but the latter is classified as unimproved for most of them. As presented in Figure 11, most of the change is coming from the upgrade of toilets due to the existence of a slab and a door or curtain. We observe the same trend for other countries like Burundi where only less than 5% of households owning a toilet have a slab. Slabs and doors are the two items that are the less present on latrines especially in Mozambique and Burundi where this concerns less than 10% of the households on average.

Figure 11. Tanzania, percentage of the households with key improved latrines elements at baseline and endline in all wards



IV.2.3. To what extent did the project manage to trigger a behavioural hygiene change in communities

Open defecations and latrine hygiene

The CLTS intervention changed norms towards open defecation in Mozambique. All focus group participants in the visited villages reported a sharp decrease in open defecation in communities.

Quote 4: Beneficiary
 They (volunteers) actually took food and feces and put them side by side and asked if the people wanted to eat the food that flies were attacking. People were repulsed. Was a good lesson. The old people were traumatised by this lesson

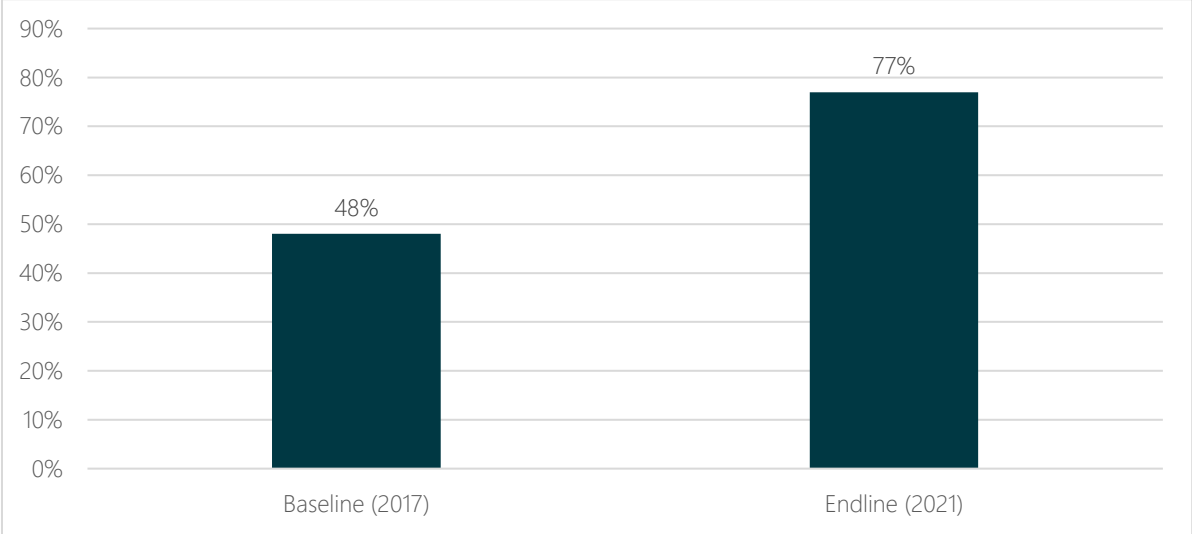
Two major drivers of change were reported. First many FGD participants recalled the lesson of volunteers on the “Cycle of flies from poop to food” that increased individual awareness on the risks of water and food contamination by flies. The second channel concerns the increase in social norms related to open defecation. In two out of the six villages visited, focus group participants reported that there was

a stronger social norm and that communities “embarrass people who are caught doing this”.

⁵¹ This includes improved and unimproved toilets.

Quantitative evidence suggests that there was an increase in the tidiness of latrines in Rwanda. Tidiness of latrines⁵² was measured both at baseline and endline by RRC volunteers and an increase was noted, as displayed in Figure 12.

Figure 12. % of households with clean latrines in Rwanda

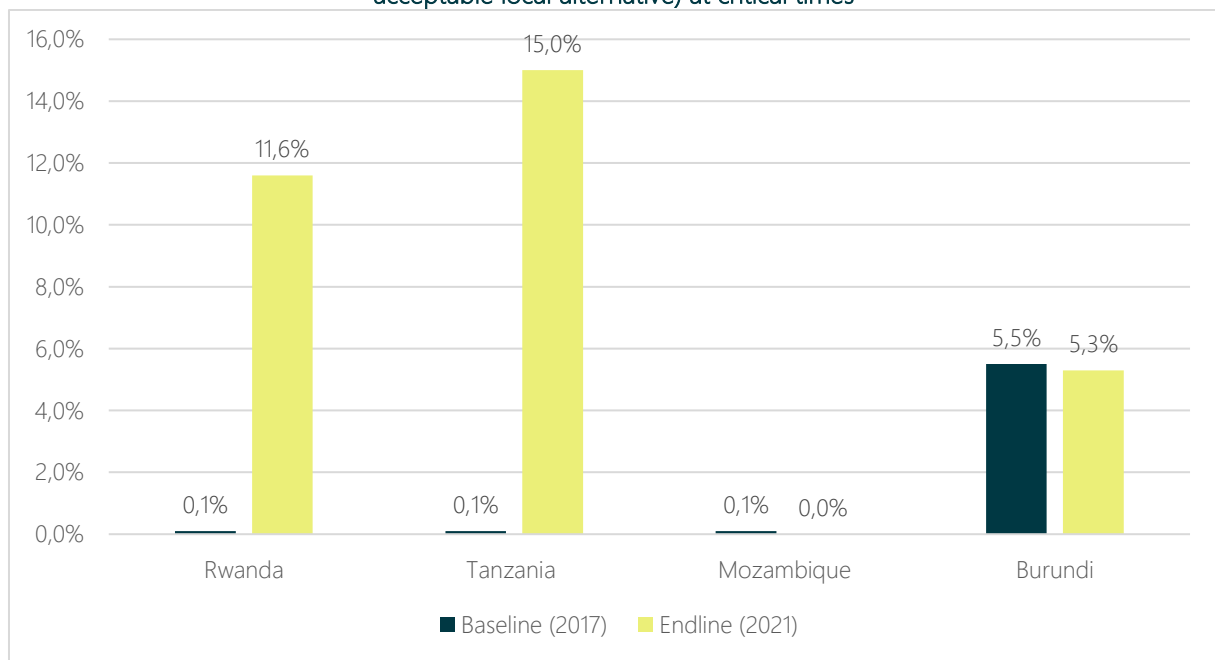


Hygiene and handwashing

The project managed to trigger changes in good handwashing practices in Tanzania and Rwanda. Good handwashing practices are defined by the project in a specific manner. Households should wash hands at critical times⁵³ and have access to an improved washing station also called “Tippy tap” in some countries. When combining both these indicators, barely any household reached the requirement at baseline as displayed in Figure 13. After the project there is a sharp increase in Rwanda and Tanzania but nothing in Mozambique and Burundi. The main reason for this discrepancy between countries comes from the availability of an improved washing station.

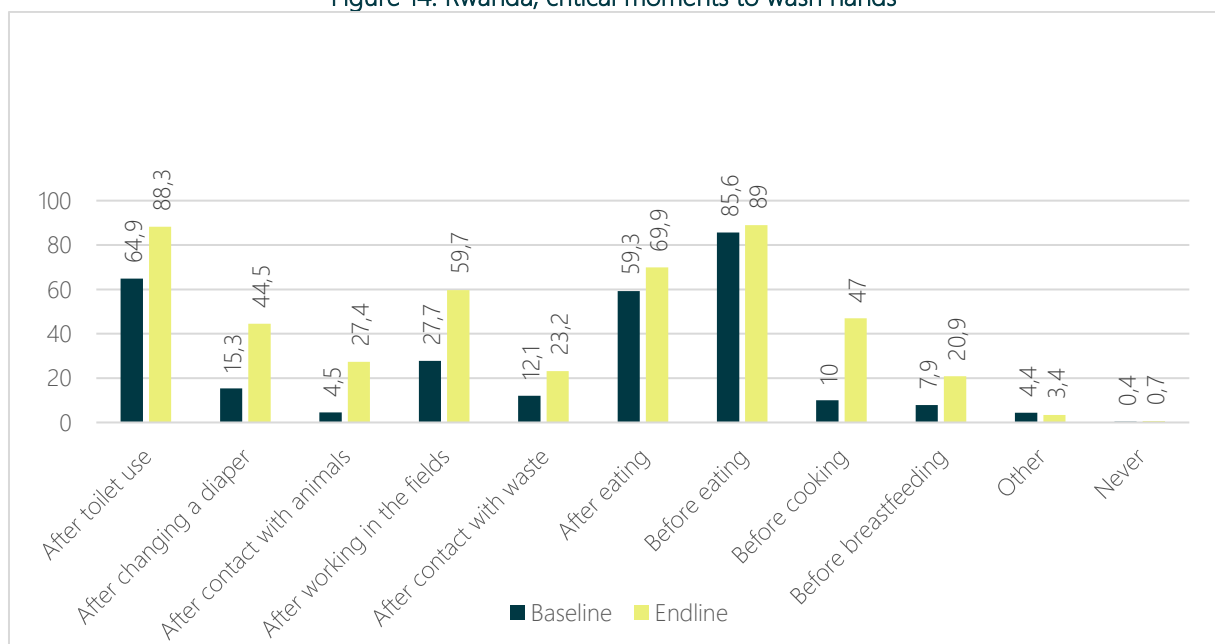
⁵² Tidiness was measured by the presence of faeces or more than two flies in the latrine.
⁵³ Critical times are the following: (1) after defecation/using toilet, (2) before eating and (3) before cooking/handling food/feeding a child.

Figure 13. % of households in the target area whose members wash their hands with water & soap (or acceptable local alternative) at critical times



Most households wash their hands, but some knowledge gaps remain across countries, namely on washing hands before feeding a child and cooking. Most households easily identify the two main moments for washing their hands, which are after toilet use and before eating. These figures reach an average of 80% across countries. The third critical moment, i.e., before cooking or feeding a child, is less easily identified and there is a big change for those moments in Rwanda between the baseline and endline as displayed in Figure 14. In Mozambique and Tanzania, endline data indicates that washing hands before feeding a child remains the hardest key time for the community to integrate.

Figure 14. Rwanda, critical moments to wash hands



A key area of improvement in Burundi and Mozambique is the availability of an improved washing station in the community. As for the latrines, in Mozambique and Burundi the project struggled to deliver the required material to communities to create tippy taps. A genuine effort was conducted in Mozambique to communicate around the importance of having an improved washing station while taking pictures with officials washing their hands. Despite this effort to increase awareness, very few improved washing stations were built by the community with the support of volunteers. As for the latrines, the gap in tippy tap construction is partly related to the limited number of volunteers in the community when compared to Rwanda and Tanzania and the lack of access to required materials such as a plastic water tank.

Hygiene promotion through volunteers in community was not implemented in Burundi. Due to the issues with getting official approval to work in the target areas the Burundi Red Cross could not implement the Participatory Hygiene and Sanitation Transformation (PHAST) approach at the community level with volunteers. Instead, a mass media campaign was organized using radio and video but with limited impact on indicators such as good washing practices.

IV.2.4. HNS has increased capacity to implement WaSH-related interventions

New WASH tools were adopted

The RANAS approach was implemented in Rwanda and Tanzania. This methodology requires a strong engagement on behalf of the staff in a first phase to identify the key constraints in the community and in a second phase to monitor progress. The consulting team did not have access to the baseline study also called “doer/non-doer survey” but informants reported implementing it. According to informants in Rwanda and Tanzania, the major added value of the approach is that volunteers are making home visits to directly observe and correct good hygiene and sanitation practices. These visits increased the social pressure to adopt good behaviour and according to informants in Rwanda enabled volunteers to follow-up with households that were lagging behind or going through difficulties.

The CLTS approach was implemented in all countries but with a lot of variations and adaptations. In Tanzania, the CLTS approach is already part of the national WaSH guidance while in Mozambique it was relatively new and left a strong impression on communities. The HNS in Mozambique designed specific cards for the trainings, and trained volunteers on the different types of demonstration to implement in communities to increase awareness around the threat of open defecation. The component around increasing awareness in community was most often implemented, whereas guidelines around latrine construction were not. Indeed, the CLTS approach recommends **not** to promote particular latrine design and to offer hardware subsidy.

The CHAST approach has been successfully contextualised and implemented in Rwanda. Rwanda worked on this approach and implemented it in four schools. A contextualised manual was created with clear drawings and a translation in Kinyarwanda. Feedback from

teachers was good and they appreciated delivering the training to students. However, very few teachers were trained by the project and informants reported that more of this training could be relevant as the impact of youth health was perceived as positive.

Gaining in WaSH capacities

Informants reported that the strongest added value of the project was related to volunteers training. In all countries the project worked with a significant number of volunteers to implement the hygiene promotion component in communities. In Rwanda, the project was implemented in synergy with another Belgium Red Cross project that was already working around hygiene in communities, in turn strengthening the package of activities implemented in villages. In Tanzania, more than 70 volunteers were trained on good hygiene practices, and this was reported as a major achievement by informants and turned out to be critical during the COVID-19 period.

IV.3. Efficiency

The action plan faced both internal and external challenges that hampered the efficiency of the implementation. The consultants identified internal and external drivers of efficiency, both positive and negative.

Table 13 summarises the main external and internal drivers of efficiency identified in the evaluation:

Table 13. External and Internal Drivers of Efficiency

Internal	External
Burundi	
<p>Technical expert (+): the implementation was favoured by the presence of a project manager in the BuRC that is an engineer and could oversee all the technical part of the intervention. His presence allowed for the intervention to run more swiftly, since an expert was readily available.</p> <p>Innovation (+): in Burundi some innovations were made in order to make the best use of the resources available. A new type of water tanks was installed that required less iron and concrete, improving financial efficiency.</p>	<p>Local materials (+): in Burundi the Red Cross relied on both locally produced and imported materials. According to one key informant, there were materials that are produced locally, but of less quality which could hampered the infrastructure. Hence, materials like sand and gravel were obtained locally, but cement, for example, was imported.</p> <p>Coordination (-): In Burundi the main reason the action plan was delayed in 2017 was because the governorate of Ngozi did not agree with the partnership between the BuRC and the NGO Protos. Protos was planning on subcontracting other Belgian and local NGOs. The problem was resolved when Protos left the Ngozi region at the end of that year.</p> <p>Outsourcing (-): In addition, the construction firm that was hired to build the water sources and latrines could not fulfil they contract responsibilities and the contract was terminated. The construction</p>

had to be finished by the BuRC, volunteers and using local resources, which had additional costs.

Mozambique

Recruitment (-): in Mozambique the implementation was first delayed in 2017 because of the recruitment of the in-country project manager. Nonetheless, the CVM worked with an external consultant in the implementation of the first activities to mitigate the absence of a project manager.

Scope Reduction (+): in Mozambique, the action plan was adjusted quickly by reducing the area of intervention to one district instead of two, as originally planned. This decision was taken based on the capacity of the CVM and to ensure quality and sustainability of the intervention.⁵⁴ As a result, the budget was more than sufficient to complete the intervention (construction and rehabilitation of 14 water points).

Some remaining budget was destined to sanitation through the construction of additional latrines for the most vulnerable, drinking basins for livestock and washing stations.⁵⁵

Construction material (-): according to volunteers the latrines require additional materials such as more cement to accommodate the lid and bricks to elevate the walls.⁵⁶

Procurement (-): initially in Mozambique the idea was for volunteers to produce the slabs themselves. However, the procurement of the cement took too much time, and the slab and pits were not constructed. The main issue was the delay in the signing of the contracts with the providers, because headquarters could not work on the procurement of such quantities of money. Under this uncertainty the communities had not started to build the latrines. Hence, the Belgian Red Cross started a parallel procurement process to secure the bricks needed to construct the latrines.

Cyclones and pandemic (-): Additional delays came in 2019 and 2020 because of external factors, such as two cyclones in 2019 (Idai and Kenneth), and the COVID-19 pandemic since the beginning of 2020. Nonetheless, the CVM managed to deliver the planned outputs on time.

Rwanda

Volunteers (+): the intervention relied on an important number of volunteers: 460 at the village level (10 per village), cell and sector level volunteers, and other supportive volunteers totalling almost 1000.⁵⁷

Local authorities (-): in Rwanda, the design and construction of the infrastructure had to be changed several times in order to comply with the guidelines and feedback from local authorities. This usually increased the cost of the intervention.

Outsourcing (-): In Rwanda, the RRCS contracted an external firm to conduct a feasibility study of the project, which led to some delays.

⁵⁴ Croix-Rouge du Mozambique, "Mozambique - RAP Performance Measuring 2018," 2018.

⁵⁵ Croix-Rouge du Mozambique, "RAP Performance Measuring Mozambique 2021," 2021.

⁵⁶ FGD with volunteers in Mozambique.

⁵⁷ Red Cross Rwanda, "Rwanda Community Resilience Programme 2017 -2021: January - June 2021 Report."

Tanzania

Volunteers (+): having a good number of volunteers (40 volunteers distributed in seven villages⁵⁸) made it possible to run the intervention more efficiently.

Procurement (-): in Tanzania the initial plan was to use sanitation slabs (SanPlat), but they proved hard to transport and were costly. Hence, they were replaced by SATO pans.

Cost-sharing (+): in Tanzania most of the materials used were procured locally or within the country. The communities contribute with sand, stones bricks and labour for the construction of the eight sanitation blocks in schools, while households have to secure the bricks, roof and door, and dig the pit in order to receive the SATO pan, a three meters pipe and a bucket of cement. Sharing the project costs with the beneficiaries supports the financial efficiency of the intervention.

Local authorities (-): There were delays in the construction of the water scheme, because it required additional authorisation from the government and also the menstrual hygiene management activity set for 2020 had to be postponed to 2021.

As captured in the table above, all countries experienced delays in the implementation of the action plan. **In Burundi, Rwanda and Tanzania, there were problems with the local authorities that postponed the construction of latrines and water systems.** In Rwanda and Tanzania the issues with local authorities were mostly about getting the authorisations and complying with the guidelines, whereas in Burundi the problem lasted longer, because the authorities in Ngozi did not approve the collaboration with the NGO Protos. In the first two cases these delays could have been prevented with a better planification before the implementation. In Burundi, the problem with the governorate of Ngozi was harder to anticipate.

The procurement of materials was in some cases a positive driver of efficiency and sometimes a negative one. In Burundi, getting the right combination of local and imported materials ensured that infrastructure of quality was being built. The BuRC also made innovations in the water tank, that required less iron and concrete. In Mozambique, there were problems with the procurement of cement and the slabs and pits were not constructed. Similarly in Tanzania the SanPlat slabs proved too difficult to transfer and were replaced by SATO pans. However, in Tanzania most of the materials had to be procured by the communities and households. By putting more responsibilities on the households, the TRCS guaranteed that most of the materials will be available for latrine construction and lead to financial efficiency too. Although securing locally available materials would have led to efficiency gains and would have been in line with the CLTS approach, it was not possible to have constructions made solely of local materials.

The human resources available, mostly in the form of volunteers, were a driver of efficiency the four countries. The Red Cross achieved a good number of volunteers in Rwanda and Tanzania, where there were around ten and six volunteers per village. In Burundi, according to a key informant, the fact of having a project manager that was an engineer allowed for

⁵⁸ Tanzania Red Cross, "RAP Performance Measuring Tanzania 2020."

the programme to run more swiftly, because he could oversee all the technical parts of the intervention. Lastly, in Mozambique there were some delays early in the implementation because the recruitment of the in-country project manager had not been successful. Nonetheless, the TRCS worked with an external consultant in the meantime to start some of the initial activities.

Lastly, working with external firms and outsourcing services resulted in efficiency losses in Burundi and in Rwanda. In Burundi, the firm that was meant to construct spring catchments did not fulfil its responsibilities, whereas in Rwanda, contracting an external service provider to run a feasibility study also led to some delays in the project. Working with external service providers for the first time must always be done cautiously, and in the case of Burundi, too much responsibility was put on the construction firm and the partner Protos, which led to major adjustments to the intervention.

The staff interviewed in the four countries agrees that it would not have been possible to achieve the same results with less inputs. If any, more resources are required to respond to

Quote 4: Beneficiary

We knew that the water sources were not sufficient, the communities are populated and there are long lines for waiting for water. We had to plan to put wells where the population was the greatest, and we considered the distances people had to travel for water.

the amount of people in need and to attain the objectives of the action plan (see quote 4 from Mozambique).

Some of the informants point to an increase in the population density and a lack of resources to scale up the project.

The discussion about efficiency shows that there were different challenges in the four countries and that it was not possible to implement a one-size-fits-all strategy to fix them. Nonetheless, some of the efficiency losses could have been avoided with better planning ahead, ensuring that all contracts are ready to be implemented, and by testing the capacity of external service providers progressively, by first doing a pilot.

IV.4. Sustainability and capacity building:

IV.4.1. 4.1 How will communities and HNS ensure maintenance and sustainability of the delivered infrastructure

Clear handover:

In Mozambique and Tanzania, the project did not work on a clear handover to communities. The significant delays in latrine construction have extended the project duration in Mozambique and during the consultant field visit, communities did not report having received a clear handover. The level of expectation to finish the latrines was still very high. In Tanzania, a key informant reported that the handover could have been more anticipated

to better manage the expectation of communities. This means that four months before the project closure, communities were not aware that the project would end.

A systematic handover was organised with local authorities in all countries. Strong ownership of local WaSH authorities is a priority to ensure sustainability of the water points. In this respect, in each country a formal handover was organised with local authorities. In countries that required a high level of accountability such as in Rwanda, the handover was combined with an audit by the government to see if infrastructures met the required standards.

Asides from Burundi, there was no systematic water quality test conducted before the project handover. Issues with water quality were raised in Mozambique but no formal water testing of the water point was implemented before the complete handover to communities. This is a missed opportunity as some communities do not trust the quality of the pumps and prefer to use unimproved sources such as rainwater for cooking purposes.

Water User Committee (WUC):

To enhance sustainability, each HNS created a **Water User Committee (WUC)** for each **constructed water point**. These WUC have a different agenda depending on the institutional context. In Mozambique for instance WUC were trained on how to repair pumps and collect money to finance the maintenance. In Rwanda WUC will not oversee maintenance as the created water systems will be handed over to a private company. However, the WUC will be in charge of monitoring the water service at village level and report any default or breakdown to the private company.

Quote 5: WUC member

We are doing maintenance every 6 months, we open the pumps whether broken or not to assess quality, rather than waiting for the break to occur. It gives us time to source parts and come up with a repair plan

WUC in Mozambique received extensive training, required equipment, and regularly refresh their skills. WUC received a three-day training delivered by a dedicated private company. Participants reported having learned important skills that they regularly put in practice (see Quote 5). Each WUC received maintenance equipment such as tubes, rubber parts and rubber seals.

The training approach of WUC was very project-focused and could have been more holistic. Training on how to repair a pump was specific to the project delivered pumps in Mozambique. Interviewed WUC reported that they could only repair one type of pump (AFridev Model), while there were older pumps in the communities that remained non-operational because they were not taught how to repair them or how to source parts.

WUC reported two major threats for sustainability, namely theft and spare part sourcing. One WUC in Munavalante reported that theft of pump parts is common in the area and that pumps should be put under lock or made operational only during certain hours (see quote 6). One WUC in Chitetimane reported that rubber seals are difficult to source and are not easy to adapt. Because of the intense use of the pumps, they need to be changed regularly and the WUC has to go to different cities to find the exact parts.

Quote 6: WUC Munavente

We Would like to buy locks to secure the pumps. If parts are stolen and the pump is unusable it may take years to get it operational again.

The quality of the water was seriously questioned in Mozambique and WUC feel they are not equipped to deal with this issue. Out of the four WUC surveyed two reported major

Quote 7: Munavalente

The water quality in the area is terrible, some wells are worse than others but all of them are still bad. We can see particles floating in the water and it tastes like medicine

issues with water quality as reported in quote 7. One WUC reported that the water source was treated 30 years ago but nothing has been done since then. Beneficiaries also reported that the water was not mixing with soap which could indicate a high mineral content or “hard water”.

Corrosion of handpumps is an important threat to the quality of water. Documented

evidence reported that corrosion⁵⁹ is a major issue for handpumps and that this phenomenon increases with the salinity of water. Indeed, “*Corrosion may lead to structural failure, leaks, loss of capacity and deterioration of chemical and microbial water quality*”. WUC reported observing corrosion on pipes and declared that they were not equipped to deal with this issue.

WUC reported working more on reactive maintenance than preventive maintenance. Preventive maintenance is a more complex service delivery model than reactive as it requires water users to prepay for maintenance in turn requiring important levels of trust within the community⁶⁰. WUC reported that contributions were collected when there is a need and no WUC reported using a dedicated bank account with advance payment of the community to pay for preventive maintenance. To some extent preventive maintenance is ensured right after the project closure as the HNS delivered the required spare parts but the sustainability of the model is questioned by the inability of the WUC to collect payments regularly.

Water point and latrines:

⁵⁹ Danert K. ‘Stop the Rot Report I: Handpump Reliance, Functionality and Technical Failure. Action Research on Handpump Component Quality and Corrosion in Sub-Saharan Africa’. Ask for Water GmbH, Skat Foundation and RWSN, 2022.

⁶⁰ USAID ‘Emerging Lessons on Sustaining Rural Water Services in Uganda-A Case Study of Whave_s Preventive Maintenance Model’, Research Brief 2019

The over-usage of water points in communities raises questions about future service delivery and the probability of pump breakouts. As mentioned in a recent report,⁶¹ the quality of handpumps is generally taken for granted. However, evidence suggests that there is a sizeable drop in functionality in the first one to two years after installation. Measuring the performance of a pump goes beyond the binary approach of “functioning” and “non-functioning”. Also, a pump can work yet provide insufficient yields or be unreliable. Communities and water communities have raised this concern.

Strong community engagement will increase the sustainability around hardware maintenance. In Rwanda, sustainability is supported by the village model approach. This is a highly participatory approach that mobilise communities. The approach considers not only access to water and sanitation, but also disaster risk reduction and environmental protection, livestock support, savings & loans, and agriculture.⁶² In fact, towards the end of the action plan the RRC spent almost a year and a half working with the community on the best way to sustain the infrastructure that had been put in place.⁶³ This is partly possible because in Rwanda there is a high concentration of volunteers in each village (around 10 for 200 inhabitants).

Build on existing market actors such as artisans to deliver slabs in communities seems more promising than working with volunteers. Creating new market actors delivering slabs in community has been approached through two different ways. In Mozambique the CVM tried to train volunteers on how to construct slabs so that they could generate revenues from it while creating an Income Generating Activities (IGA). This approach did not meet expectation. First because the concentration of volunteers in each village is limited (on average there are 2 volunteers for 1000 inhabitants) hence it was difficult for them to deliver at the expected rate, second most of the volunteers are women with little interest to work on labour intensive tasks such as digging a pit or constructing a slab. The approach taken by the TRCS training local artisans that already have a knowledge of construction work seems more promising and in Tanzania target number of constructed latrines were met.

The sustainability of the slabs was questioned in Mozambique. The quality of the improved slabs constructed by volunteers was questioned by focus group participants in Mozambique. In half of the focus groups, it was reported that slabs broke down and that it was not possible to replace them. An informant reported that slabs were fragile because they were made with cement only and were not reinforced with rebar.

The depth of the pit was often reported to be insufficient. In some countries such as Rwanda, government guidelines on pits are clear. Pits need to be large and deep enough to last ten years and should be one meter large and six meters deep. Several beneficiaries reported that the pit was less than one meter deep in Mozambique.

⁶¹ Danert K. ‘Stop the Rot Report I: Handpump Reliance, Functionality and Technical Failure. Action Research on Handpump Component Quality and Corrosion in Sub-Saharan Africa’. Ask for Water GmbH, Skat Foundation and RWSN, 2022.





⁶² Red Cross Rwanda, “Rwanda Community Resilience Programme 2017 -2021: January - June 2021 Report.”

⁶³ KII with RRCS staff.

IV.4.2. How does the HNS plan to incorporate the RANAS and CHAST methodology after the program's closure

Rwanda and Tanzania managed to successfully implement RANAS and informants reported that this methodology will be used in future programming. Key Informants reported being satisfied with the RANAS methodology implementation and that they were already using it on another project in the Eastern province of Rwanda. In Tanzania, KII reported that the RANAS approach was also used on another ENABEL project and raised the interest of the government.

Table 14: New approach implemented per countries

				
	Burundi	Mozambique	Rwanda	Tanzania
CHAST: <i>Child Hygiene and Sanitation Transformation</i>			X	
PHAST: <i>Participatory Hygiene and Sanitation Transformation</i>		X	X	X
RANAS: <i>The Risks, Attitudes, Norms, Abilities and Self-regulation</i>			X	X

V. Conclusion:

In most African countries a strong urban rural equity gap in terms of water service delivery remains. Weak sustainability of rural water service provision has been identified as a major shortcoming for the past decade⁶⁴ and there is now a consensus around the fact that a demand responsive approach with a community management model is not sufficient to build sustainable water service delivery. As identified by the World Bank⁶⁵, institutions, financing, asset management and regulatory oversight are important components to build sustainability. In this respect the sustainability of the project greatly varies from one country to another. It is easier to build sustainability when there is strong regulatory oversight and clear contract agreements such as in Rwanda and Tanzania than in countries mostly relying on community engagement such as in Mozambique. Financing models are also key and

⁶⁴ WaterAid (2011) Sustainability framework

⁶⁵ World Bank Group. Sustainability Assessment of Rural Water Service Delivery Models. World Bank, Washington, DC, 2017. <https://doi.org/10.1596/27988>.

should not be limited to capital investment but enable full-life cycle cost with capital maintenance and recurrent costs being covered, which is not currently the case. Improving rural water service delivery requires many building blocks that are sometimes out of the sphere of influence of the different HNS. In this respect while implementing WaSH programmes, KAC suggest to better tailor interventions to the delivery context and focus resources and efforts where county teams have the best added value and expertise while relying more on market actors. In line with the global agenda for more localised humanitarian action, market-based programming (MBP) should be integrated at all stages of the project cycle, during programme design and assessments to monitoring⁶⁶. Complementary approaches including CVA, market support and direct service delivery are usually necessary to address the complex problem of sanitation, hygiene, and water services in rural area.

VI. Recommendations:

Design	
<p>Recommendation 1: Improve the quality of needs assessments. While working on project proposal, it could be worth investing more time in needs assessment to avoid creating significant delays once the project started and change implementation plans. Needs assessment for WASH programmes include access to improved water source by communities but also more refined indicators on the time spent fetching water, the water quality, and the service delivery all year long. Water could indeed be accessible but not in sufficient quantities or not the entire year. In addition to this, needs assessment of the relevant local authorities could also be included to see what human, equipment and financial resources they require to fulfil their mandate. Advocacy could then focus on the decentralisation of these resources.</p>	HNS
<p>Recommendation 2: Better integrate a WaSH market-based approach for latrine construction. Supporting market actors or building demand are two frequently used market-based approach. Several countries tried to support local actors such as volunteers or local artisans in building latrines. It is important to support the correct market actors that have a strong incentive in the medium run to continue working on latrine construction while maintaining a certain level of demand via a voucher system for instance.</p>	HNS/BRC-FI
<p>Recommendation 3: Better plan volunteers’ inputs: When working with volunteers on the construction of improved latrines it is critical to deliver the right amount of material at the right moment to strengthen their</p>	HNS

⁶⁶ Global WASH Cluster, Evidence-building for cash and markets for WASH in emergencies, UNICEF, Geneva, 2020.

<p>engagement on the project. In Mozambique it seems that the number of latrine construction was too big for the number of volunteers in the community which resulted in many gaps in terms of bricks construction but also incomplete latrines creating tensions in the community</p>	
<p>Recommendation 4: involve the local authorities early in the programme design. This is to make sure that the intervention is compliant with local WaSH strategy and to avoid possible misunderstandings that could delay the implementation. Although in all countries the authorities were in support of the action plan, the implementation was not smooth due to some misalignments that could have been prevented.</p>	HNS
<p>Monitoring</p>	
<p>Recommendation 5: Better monitor the quality of slabs constructed by volunteers. Beneficiaries reported issues with the quality of the slabs in Mozambique. This could be due to construction guidance (or supervision) not being respected or material used not meeting the required standard. Issues of quality should be carefully monitored as it engages a reputational risk and will undermine any prospect of sustainability</p>	HNS
<p>Recommendation 6: Greater commitment to monitoring service levels to see how services perform. The project made a genuine effort to collect high quality quantitative data with clear and comparable indicators across countries on outcomes. However, the issue of service delivery in terms of access to required quantity and quality was not well monitored. Qualitative feedback could also be organized through the project cycle to gather beneficiaries' opinion on the project. In addition to this the project could collect data on functionality, yield, water quality and periods of breakdown.</p>	HNS
<p>Recommendation 7: Simplify some monitoring indicators and internalise the analysis within HNS to make them actionable. The complexity of some of the chosen indicators required an at scale data collection and advanced analysis using statistical software. To carry out this work a dedicated person was in charge of producing the overall analysis using R. While this analysis was solid methodologically and transparent since the evaluation team could look at the code the level of technicality decreases the data ownership of the HNS M&E department. This outsourcing of the analysis did not help local teams to construct M&E skills and make the data actionable to make specific decisions.</p>	HNS
<p>Implementation</p>	
<p>Recommendation 8: Improve communications with beneficiaries on the expected material to be delivered for latrine construction. In Tanzania, the HNS managed to deliver the construction material in communities with a clear implementation plan. This was not the case in Mozambique where there was confusion around which material should be delivered</p>	HNS

to who in which quantity. Clarifying implementation plan avoid confusion and false expectations.	
Recommendation 9: Provide a more comprehensive training to WUC. Several WUC reported not being able to repair other hand pumps as it was a different technology. To increase the sustainability at the village level of the new water point if could be interesting to train WUC on other related technologies.	HNS
Recommendation 10: Test water quality more systematically. To increase awareness of community on the reasons behind poor taste and avoid the use of unimproved source of water, HNS should systematically test the water before official handover to communities and explain the main drivers of water quality and how it could change over time because of the seasons of natural disasters.	HNS
Sustainability	
Recommendation 11: Work on a sustainability framework. Besides the theory of change, BRC would greatly benefit in working on a conceptual framework for how sustainability of rural WASH services can be achieved in these challenging environments. Once a framework (similar to WaterAid's sustainability framework ⁶⁷) exists, BRC-FL need to identify where they can maximise their impact with the support of HNS.	BRC-FI
Recommendation 12: Map responses and actions that need to take place when (not if) a water point stops working. Developing a flow chart or logic model that shows what happens when (a) minor breakdowns occur that can be resolved directly by the community and (b) major breakdowns that exceed user capacities and require rapid support ⁶⁸ .	HNS/BRC-FI
Recommendation 13: Offer a clear commitment to support operation and maintenance of WASH services, post construction for at least 3-5 years. This work should be undertaken alongside the local authorities that are mandated to support rural WASH services.	HNS/BRC-FI

⁶⁷ WaterAid (2011) Sustainability framework.

⁶⁸ Example is available page 118 of Carter, Richard C. (2021) Rural Community Water Supply: Sustainable services for all, Rugby, UK: Practical Action Publishing

VII. Bibliography:

- Abdul Latif Jameel Poverty Action Lab (J-PAL). 'The Impact of Price on Take-up and Use of Preventive Health Products'. J-PAL Policy Insights, 2018.
- Braimoh, Ademola; Manyena, Bernard; Obuya, Grace; Muraya, Francis. 'Assessment of Food Security Early Warning Systems for East and Southern Africa. Africa Climate Business Plan Series'; World Bank, Washington, DC, 2018.
- Briceño, Bertha, Aidan Coville, and Sebastian Martinez. *Promoting Handwashing and Sanitation: Evidence from a Large-Scale Randomized Trial in Rural Tanzania*. Policy Research Working Papers. The World Bank, 2015. <https://doi.org/10.1596/1813-9450-7164>.
- Buck, Emmy De. 'Promoting Handwashing and Sanitation Behaviour Change in Low- and Middle-Income Countries A Mixed-Method Systematic Review', n.d., 519.
- Carter, Richard C. (2021) *Rural Community Water Supply: Sustainable services for all*, Rugby, UK: Practical Action Publishing
- Cohen, Jessica, and Pascaline Dupas. 'Free Distribution or Cost-Sharing? Evidence from a Randomized Malaria Prevention Experiment*'. *The Quarterly Journal of Economics* 125, no. 1 (February 2010): 1–45. <https://doi.org/10.1162/qjec.2010.125.1.1>.
- CRB-CRB. 'Système de Mesure de Performance - Burundi', 2017.
- Croix Rouge du Burundi. 'RAPPORT D'ETAT DES LIEUX DES SOURCES AMENAGEES A NYAMURENZA POUR LE PROJET WASH-OD NYAMURENZA.', 2021.
- Danert, Dr Kerstin. 'ACTION RESEARCH ON HANDPUMP COMPONENT QUALITY AND CORROSION IN SUB-SAHARAN AFRICA', n.d., 52.
- Danert K. 'Stop the Rot Report I: Handpump Reliance, Functionality and Technical Failure. Action Research on Handpump Component Quality and Corrosion in Sub-Saharan Africa'. Ask for Water GmbH, Skat Foundation and RWSN, 2022.
- Dockx, Kim, Hans Van Remoortel, Emmy De Buck, Charlotte Schelstraete, An Vanderheyden, Tiene Lievens, John Thomas Kinyagu, Simon Mamuya, and Philippe Vandekerckhove. 'Effect of Contextualized Versus Non-Contextualized Interventions for Improving Hand Washing, Sanitation, and Health in Rural Tanzania: Study Design of a Cluster Randomized Controlled Trial'. *International Journal of Environmental Research and Public Health* 16, no. 14 (15 July 2019): 2529. <https://doi.org/10.3390/ijerph16142529>.
- Garn, Joshua V., Gloria D. Sclar, Matthew C. Freeman, Gauthami Penakalapati, Kelly T. Alexander, Patrick Brooks, Eva A. Rehfuess, Sophie Boisson, Kate O. Medlicott, and Thomas F. Clasen. 'The Impact of Sanitation Interventions on Latrine Coverage and Latrine Use: A Systematic Review and Meta-Analysis'. *International Journal of Hygiene and Environmental Health* 220, no. 2, Part B (2017): 329–40. <https://doi.org/10.1016/j.ijheh.2016.10.001>.
- Guiteras, Raymond, James Levinsohn, and Ahmed Mushfiq Mobarak. 'Encouraging Sanitation Investment in the Developing World: A Cluster-Randomized Trial'. *Science* 348, no. 6237 (22 May 2015): 903–6. <https://doi.org/10.1126/science.aaa0491>.

- Hope, Rob, Patrick Thomson, Johanna Koehler, and Tim Foster. 'Rethinking the Economics of Rural Water in Africa'. *Oxford Review of Economic Policy* 36, no. 1 (6 January 2020): 171–90. <https://doi.org/10.1093/oxrep/grz036>.
- Hubert Department of Global Health and Gangarosa Department of Environmental Health, Emory University, Bethany A Caruso, Gloria D Sclar, Gangarosa Department of Environmental Health, Emory University, Parimita Routray, Independent Consultant, Corey Nagel, et al. 'Impacts of Low-Cost Interventions to Improve Latrine Use and Safe Disposal of Child Faeces in Rural Odisha, India'. 2020th ed. International Initiative for Impact Evaluation (3ie), April 2020. <https://doi.org/10.23846/TW14IE119>.
- Huston, Angela, and Patrick Moriarty. 'Understanding the WASH System and Its Building Blocks', n.d., 40.
- Igaki, Satoshi, Nguyen Tran Minh Duc, Nguyen Hai Nam, Tran Thi Tuyet Nga, Parshal Bhandari, Amr Elhamamsy, Caroline Ibrahim Lotify, et al. 'Effectiveness of Community and School-Based Sanitation Interventions in Improving Latrine Coverage: A Systematic Review and Meta-Analysis of Randomized Controlled Interventions'. *Environmental Health and Preventive Medicine* 26, no. 1 (December 2021): 26. <https://doi.org/10.1186/s12199-021-00934-4>.
- International Initiative for Impact Evaluation. 'Mapping the Evidence on WASH Promotion in Communities, Schools and Health Facilities'. 2018th ed. International Initiative for Impact Evaluation (3ie), August 2018. <https://doi.org/10.23846/B/EGM/201810>.
- Kar, Kamal, Robert Chambers, and Plan UK. *Handbook on Community-Led Total Sanitation*. London: Plan UK, 2008.
- NSHIMIYIMANA, Ladislas & Onyambu, Peris & Rutayisire,. 'Diarrhoeal Diseases in Children under Five Years Exhibits Space-Time Disparities and Priority Areas for Control Interventions in Rwanda', 2020.
- Patil, Sumeet R., Benjamin F. Arnold, Alicia L. Salvatore, Bertha Briceno, Sandipan Ganguly, John M. Colford, and Paul J. Gertler. 'The Effect of India's Total Sanitation Campaign on Defecation Behaviors and Child Health in Rural Madhya Pradesh: A Cluster Randomized Controlled Trial'. Edited by Paul R. Hunter. *PLoS Medicine* 11, no. 8 (26 August 2014): e1001709. <https://doi.org/10.1371/journal.pmed.1001709>.
- Rud, Juan Pablo, Francisco Oteiza, Melanie Lührmann, Britta Augsburg, and Laura Abramovsky. 'Community Matters: Heterogenous Impacts of a Sanitation Intervention'. The IFS, 6 June 2019. <https://doi.org/10.1920/wp.ifs.2019.1119>.
- Solsona, F, South Africa, and Water Research Commission. *SanPlat: An Alternative Low-Cost Pit Latrine System for Rural and Peri-Urban Areas: Technical Guide*. Pretoria: Water Research Commission, 1998.
- Trisos, C.H., I.O. Adelekan, E. Totin, A. Ayanlade, J. Efitre, A. Gameda, K. Kalaba, C. Lennard, C. Masao, Y. Mgaya, G. Ngaruiya, D. Olago, N.P. Simpson, and S. Zakieldean,. 'Africa. In: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change'. Cambridge University Press, 2022.

Vivacqua, Gabriela. 'WFP – Forecast-Based Financing in Eastern Africa', 2021, 20.

Winter, James C., Gary L. Darmstadt, and Jennifer Davis. 'The Role of Piped Water Supplies in Advancing Health, Economic Development, and Gender Equality in Rural Communities'. *Social Science & Medicine* 270 (2021): 113599. <https://doi.org/10.1016/j.socscimed.2020.113599>.

World Bank. 'Assessment of Food Security Early Warning Systems for East and Southern Africa', n.d.

World Bank Group. *Health Impact and Effectiveness of Distribution Models for Plastic Latrine Slabs in Kenya*. World Bank, Washington, DC, 2017. <https://doi.org/10.1596/26231>.

———. *Sustainability Assessment of Rural Water Service Delivery Models*. World Bank, Washington, DC, 2017. <https://doi.org/10.1596/27988>.

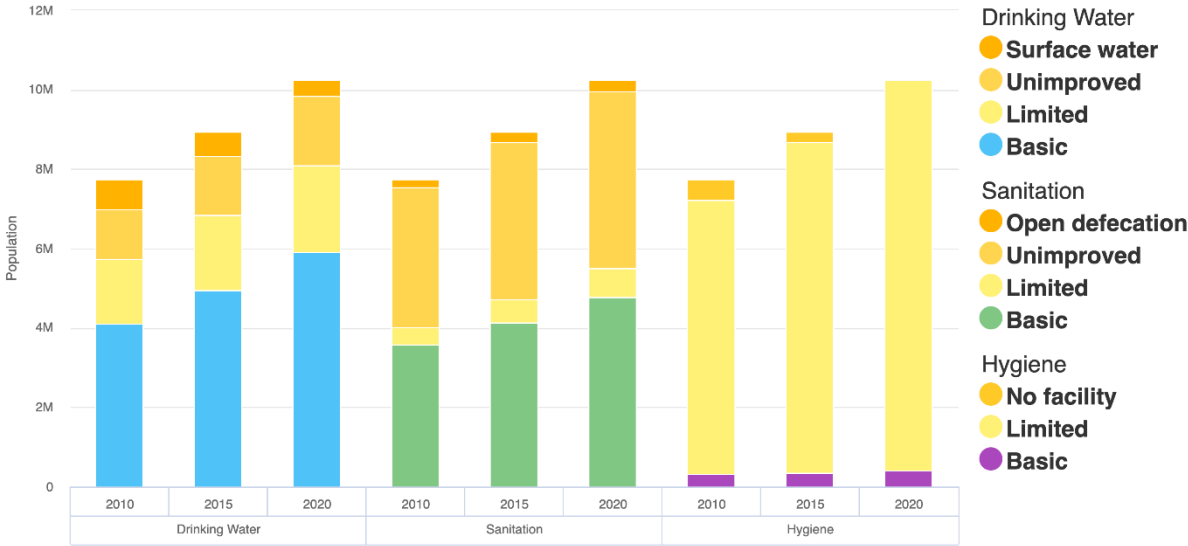
VIII. Annexes

VIII.1. WaSH context



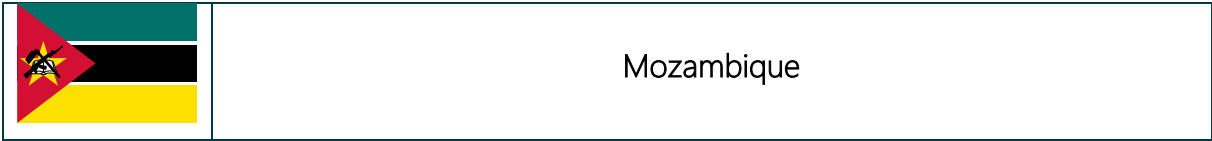
The Joint Monitoring Programme (JMP) data of the World Health Organisation (WHO) and UNICEF shows that a large proportion of the rural population in Burundi still lack an improved water supply service. Figure 1 shows a slow increase in access to water supply in rural areas during the 2010 to 2020 period. 52% of the rural population had access to basic water supply in 2010, this increased marginally to 56% in 2015 and to 58% in 2020. This latter figure for 2020 equates to 5.2M people. However, this still means that 48% of the rural population does not have access to a basic water supply service in 2020. 4% of the rural population (53ituate. 427,000) is still reliant on surface water and 18% on unimproved water supply services; while 21% of rural residents are reliant on limited water supply services.

Figure 15: Trends in rural WASH services in Burundi 2010 – 2020
Household data - Burundi - Rural - Service Levels



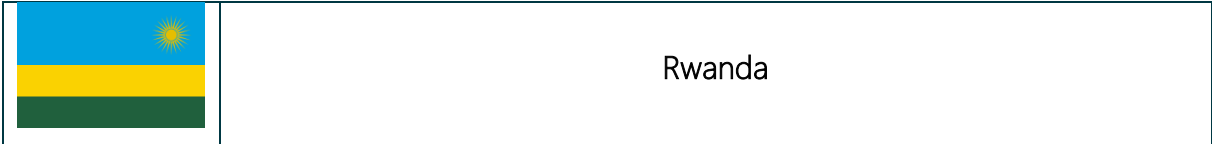
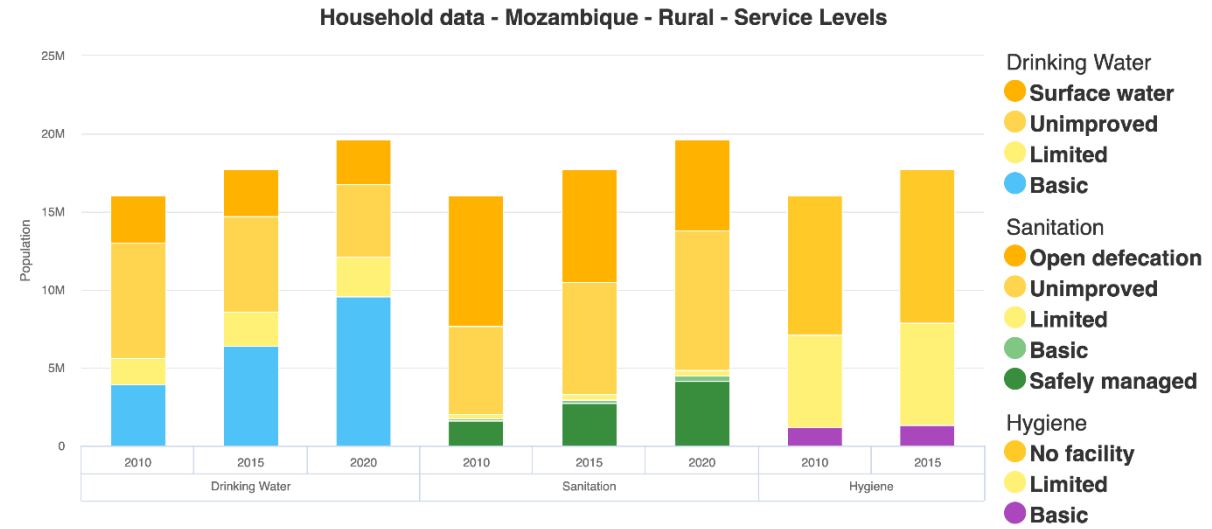
The figures for rural sanitation and hygiene in Burundi are even more alarming. In 2010 only 46.3% of the rural population had access to basic sanitation services in 2010. This increased to only 46.4% by 2020. This means access to sanitation services has virtually stagnated and that sanitation coverage is struggling to keep pace with population growth. In 2020, nearly 300,000 people practiced open defecation and 4.45M were reliant on unimproved sanitation services. Access to safe hygiene services is also alarming with just 4% of the

population receiving said service. This means 9.84M people only have access to a limited hygiene service.



The figures for Mozambique (Figure 2) appear to be a little more promising with, for example, a doubling in access to rural water supply during the 2010 to 2020 period. In 2010, 24.4% of the population had access to basic water supply services, which figure increased to 48.9% in 2020. However, this still means more than 2.9M people were reliant on surface water sources for their main water supply in 2020. The figures for sanitation and hygiene show much slower progress. Access to safely managed sanitation services stands at just over 20% in 2020 (up from 10% in 2010) with nearly 5.9M people engaged in open defecation. Improvements in access to basic hygiene have stagnated and probably even regressed when factoring in population growth.

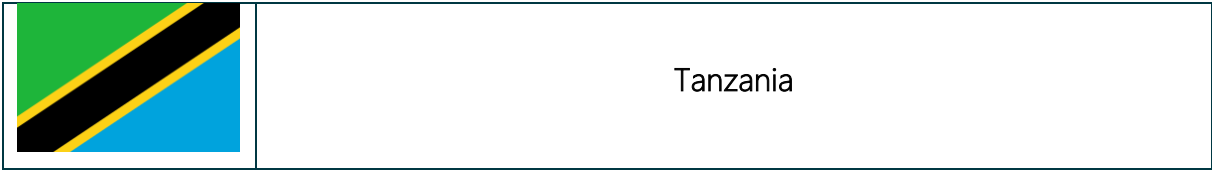
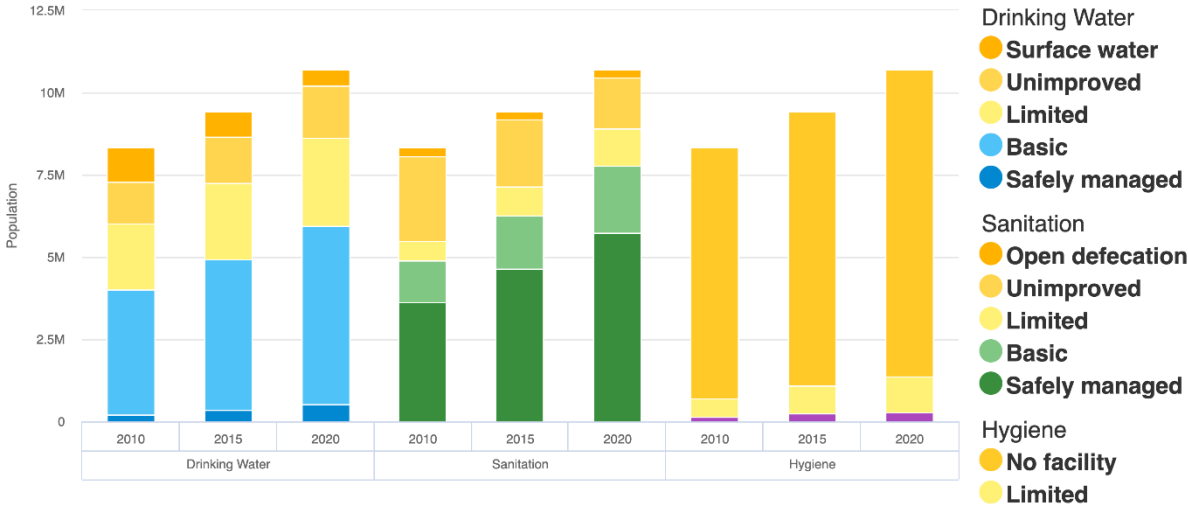
Figure 16: Trends in rural WaSH services in Mozambique 2010 – 2020



The figures for rural areas in Rwanda (Figure 3) show gradual improvements in WaSH during the 2010 to 2020 period. For example, access to basic water services increased from 46% to 51% during this period, and access to safely managed sanitation went from 43% to 54% during the same time period. However, more than 222,000 people still practice open defecation. Improvements in access to basic hygiene are also still minimal with only 2.8% of

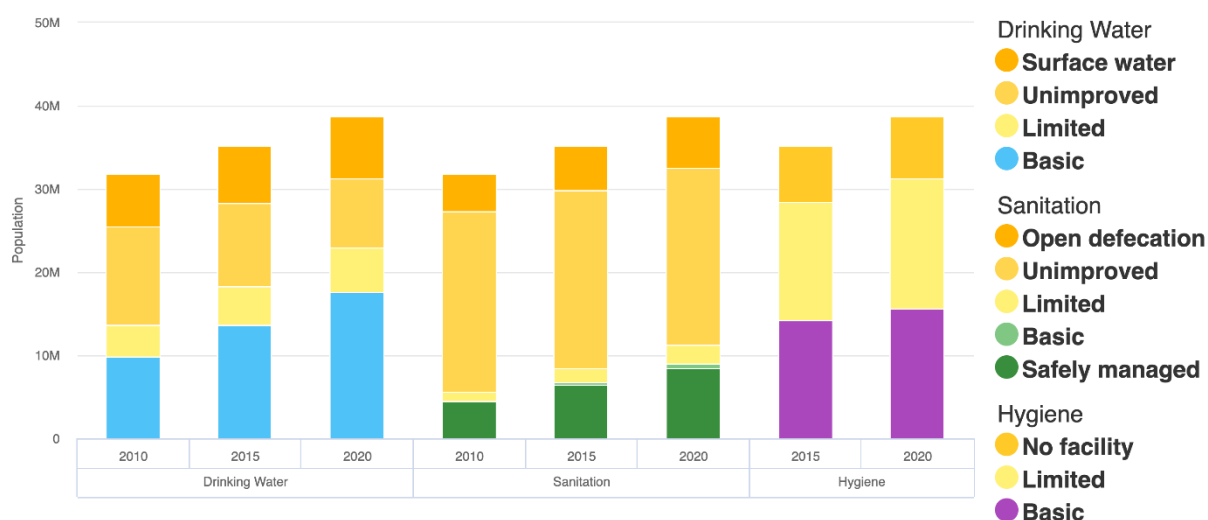
the population covered in 2020. This means 9.3M people do not have access to handwashing facilities after using the latrine.

Figure 17: Trends in access to rural WaSH services in Rwanda 2010 – 2020
Household data - Rwanda - Rural - Service Levels



The general picture of trends in Tanzania (Figure 4) shows that during the 2010 to 2020 period access to basic water supply services increased from 31% to 45%. However, 19.4% of the rural population still relies on surface water sources, which equates to 7.49M people. Access to safely managed sanitation has also increased during this period from 14% in 2010 to 21.8% in 2020. Nevertheless, 16% of the rural population (5.5M people) still practices open defecation. The downside to Tanzania’s efforts is that access to basic hygiene services has also stagnated and is struggling to keep pace with population growth. This means 7.4M rural people in 2020 do not have access to such services.

Figure 18: Trends in rural WaSH in Tanzania 2010 – 2020
Household data - United Republic of Tanzania - Rural - Service Levels



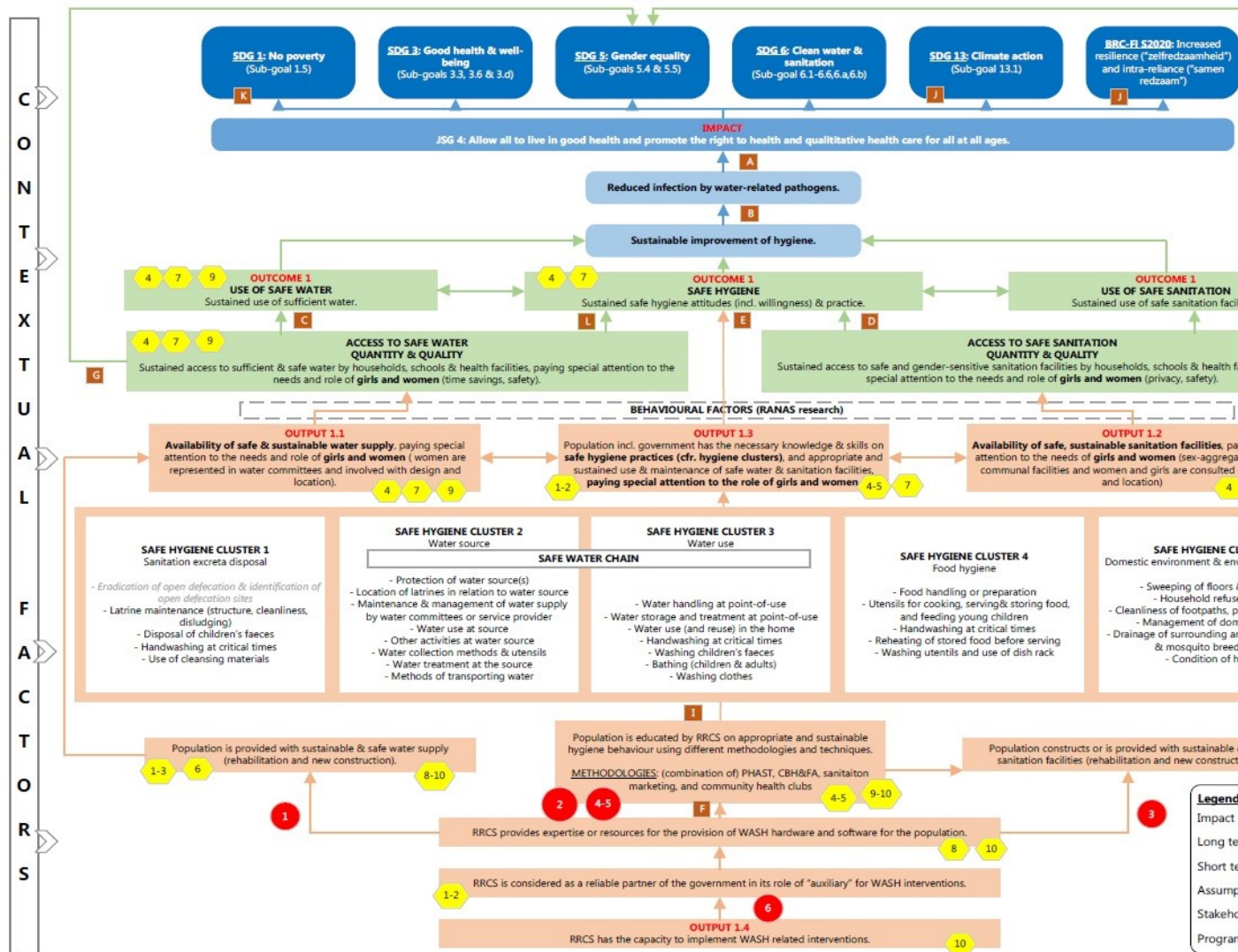
VIII.2. RANAS Intervention in Tanzania

Table 15. Linking Sessions to RANAS Methodology in Tanzania

Session	Behavior	Behavioral Factor	Specific Factor	Specific Topic	BCT
1	Latrine Use	Risk	Vulnerability	Risk even when always using the latrine	BCT 3 - Inform about and assess personal risk
2	Handwashing	Risk	Health Knowledge	Causes & Prevention Diarrhea	BCT 2 - Present Scenarios
		Ability	How-to-do Knowledge	Focus on food hygiene & IYC	BCT 15 - Provide Instruction
3	Latrine Use	Self-Regulation	Action Planning	Clean & maintain	BCT 26 - Prompt specific behavior
4	Latrine Use	Attitude	Feelings	Smell (cleanliness)	BCT 8 - Describe feelings about performing and about consequences of the behavior
	Handwashing	Self-Regulation	Remembering	Forgetting	BCT 34 - Use memory aids & environmental prompts
5	Handwashing	Attitude	Beliefs about costs and benefits	No specific target question	BCT 5 - Inform about and assess costs & benefits
		Norms	Others' Behavior	Handwashing in the household	BCT 9 - Inform about others' behavior

6	Latrine Use	Norms	Others' Behavior	Latrine use in HH and community	BCT 9 - Inform about others' behavior
7	Handwashing	Self-Regulation	Barrier Planning	General	BCT 30 - Prompt coping with barriers
8	Latrine Use	Self-Regulation	Remembering	Forgetting	BTC 34 - Use memory aids & environmental prompts
9 – 10	Repetition – preferred focus on handwashing (primary outcome), cancelled due to COVID-19				
1 → 10	Latrine Use	Ability	Beliefs about costs & benefits	Effort	BCT 6 - Use subsequent reward
		Self-Regulation	Action Control	Latrine Use outside the house	BCT 27 - Prompt monitoring of behavior

VIII.3. Theory of Change



VIII.4. Activities Carried Out in the Four Countries

Table 16. Activities Carried Out as Part of the WaSH Programme

Country	Activities
Burundi	
Capacity building related to WaSH	
<ul style="list-style-type: none"> ▪ Training in water infrastructure management; ▪ Training in use and maintenance of familiar and institutional latrines; ▪ Training in water treatment; ▪ Training and support of the Hill Units in income generating activities; ▪ Support the Red Cross structures (provincial, communities, hill units). 	
Provide access to sanitation infrastructure	
<ul style="list-style-type: none"> ▪ Construction of familiar and institutional Ecosan latrines; ▪ Construction and distribution of sanitation platforms (SanPlats); 	
Provide access to safe water infrastructure	
<ul style="list-style-type: none"> ▪ Development of the water supply (water sources); ▪ Test of the quality of the water; ▪ Establishing, equipping and training Water User Committees; ▪ Installation of rainwater collection systems in schools; 	
Hygiene promotion at household and community level	
<ul style="list-style-type: none"> ▪ Awareness-raising activities (mass media), including billboards, radio spots and flyers; ▪ WaSH promotion day in schools; ▪ Setting up and training hygiene committees in schools; ▪ Training volunteers on sensitisation related to WaSH 	
Mozambique	
Capacity building related to WaSH	
<ul style="list-style-type: none"> ▪ WaSH technical expertise through training and learning opportunities; ▪ Provide HR and financial resources to CVMO for implementation; ▪ Capacity building for volunteers (training, tools, incentive, transport, materials); ▪ M&E of the programme; ▪ Support innovation and evidence-based practice. 	
Provide access to safe water infrastructure	
<ul style="list-style-type: none"> ▪ Feasibility study for water infrastructure (risk and gender informed); ▪ Construction and rehabilitation of water points; ▪ Test of the quality of the water; ▪ Establishing, equipping and training Water User Committees; ▪ Deliver chlorine solution to vulnerable households; 	

<ul style="list-style-type: none"> Map the water infrastructure and water needs;
Provide access to sanitation infrastructure
<ul style="list-style-type: none"> Encourage the investment in latrines by less vulnerable households; Provision materials for latrine construction; Training locals for the construction of latrines; Build other sanitation infrastructure (washing platforms, tippy tap, drainage systems and drinking basins for livestock) Research and implement innovative latrine construction.
Increase awareness, knowledge and skills on safe hygiene practices
<ul style="list-style-type: none"> Awareness-raising activities such as door-to door visits, PHAST sessions and mass communication (e.g. radio, billboards, flyers, mobile cinema, and hygiene and COVID-19 awareness sessions for schools)⁶⁹; Volunteer mobilisation to influence the behaviour of 25 surrounding households; Training volunteers and community members on sensitisation related to WaSH (PHAST-CLTS)⁷⁰.
Rwanda
Provide access to safe water infrastructure
<ul style="list-style-type: none"> Construction of new water infrastructure in the Karongi and Rutsiro districts and the extension and rehabilitation of an existing water infrastructure in the Karongi district; Operation and maintenance of existing water systems in Karongi and Rutsiro districts in 16 villages; Sensitisation and education on safe water; Training of water committees.
Provide access to sanitation infrastructure
<ul style="list-style-type: none"> Construct sanitation infrastructure at household level and in schools; Sensitisation and education on sanitation; Implement the PHAST, CHAST and RANAS methodologies and hygiene clubs for the promotion of hygiene at the household and community level.
Capacity strengthening activities of RRCS
Tanzania
Provide Access to safe water infrastructure
<ul style="list-style-type: none"> Rehabilitation, operation and maintenance of the water supply system in Buhigwe district;

⁶⁹ The Participatory Hygiene and Sanitation Transformation (PHAST) is an innovative method developed by the WHO to promote hygiene behaviours, sanitation improvement and community management of water and sanitation infrastructure.

⁷⁰ The Community-Led Total Sanitation (CLTS) is an approach used to improve hygiene and sanitation behaviour through community participation. The approach relies on the process of “triggering”, to attract the interest of the community in sanitation practices (instead of only building toilets).

<ul style="list-style-type: none"> ▪ Setting up and training the Community Owned Water Supply Organizations (COWSO).
Construction of sanitation infrastructure (including handwashing) in schools and houses.
Sanitation software interventions in schools and with households. ⁷¹
Hygiene promotion at household and community level
<ul style="list-style-type: none"> ▪ Implement the PHAST and PHASE methodology; ▪ Test the RANAS methodology; ▪ Use the CLTS approach for latrine construction; ▪ Community sensitisation by volunteers using information education and communication (IEC) materials. ▪ Menstrual hygiene promotion including the distribution of reusable pads for girls in eight schools.
Capacity Strengthening
<ul style="list-style-type: none"> ▪ Provide WaSH expertise to TRCS, including training to volunteers and staff; ▪ Set-up a M&E system for the programme; ▪ Conduct a baseline, midline and endline evaluation; ▪ Annual financial audit.

VIII.5. Activities Carried Out in Rwanda

WATER ADDUCTION IN RUTSIRO /MURUNDA SECTOR

- Excavation, supply and installation of pipeline 13.5km
- Intake of 4 water sources
- Construction of 1 treatment unit
- Construction of 4 water tanks:
- Construction of 11 Water points
- Hydraulic structures:
 - Two (2) Collection chambers: a collection chamber to collect water from the sources was constructed, the collection chamber has different compartments for the removal of sediment that come with water.
 - Four (4) break pressure chambers
 - Five (5) washout chambers were constructed
 - Three (3) air release valve chambers
 - One (1) Chlorination unit chamber

WATER SOURCE REHABILITATION IN KARONGI/BWISHYURA SECTOR

- Excavation, supply and installation of 4.7km
- Construction of water tank of 15m³ capacity

⁷¹ Software interventions are related to raising awareness and education through community volunteers/village health teams and community systems for referral, for hygiene promotion/health facilities.

- Construction of 10 water points
- Rehabilitation of 5m³ water tanks
- Pipe protection and anchors fixing
- Other hydraulic infrastructures:
 - Construction of three (3) washout chambers
 - Construction of one (1) air release valve
 - Construction of one (1) sectioning chamber
 - Rehabilitation of one (1) Break pressure chamber (Nyarugenge).

VIII.6. Evaluation Matrix

Working questions	Indicator/ how judgement will be formed	Sources of information
Relevance/Coherence: to what extent were the project objectives in line with the needs of the target population, HNS and government and addressed key barriers towards behavioural change?		
1.1 To what extent were access to safe water and sanitation aligned with the most important remaining WaSH needs in the community	1.1.1 HNS and PNS staff consider that access to safe water and sanitation are important needs that are not met in the community	Desk review, KII with Red Cross staff
	1.1.2 Beneficiaries and water committees consider that access to safe water of good quality and quantity is a priority in the community	Desk review, FGD with beneficiaries and water committees
	1.1.3 Beneficiaries and water committees consider that access to safe sanitation in good quantity and quality is a priority in the community	Desk review, FGD with beneficiaries and water committees
1.2 To what extent the design of the project was based on evidence and tailored to address key behavioural factors	1.2.1 Research was carried out to ground the intervention on evidence tailored to the context. Technology has been fit for purpose.	Desk review, KII with HNS and PNS
	1.2.2 Beneficiaries and water committees acknowledge that the key behavioural factors identified by the project are barriers for better WaSH practices (RANAS Approach)	FGD with beneficiaries and water committees
1.3 To what extent the design of the project was aligned with the national strategy and HNS activities.	1.3.1 The activities within the programme were aligned with the organisational priorities and strategy of the HNS	Desk review, KII with HNS and PNS
	1.3.2 The activities within the program were aligned with the national strategy and targeted priority areas	Desk review, KII with HNS and PNS
	1.3.4 To what extent is the RANAS approach (Tanzania & Rwanda) is complementary to the standard methodologies used by the HNS?	Desk review, KII with HNS and PNS

	1.3.5. Does the development of the CHAST Manual (Rwanda) fill a gap or need in the curricula of primary schools?	Desk review, KII with HNS and PNS
Effectiveness/Impact : to what extent the programme objectives have been attained?		
2.1 To what extent has the program managed to increase the availability of safe and sustainable sanitation and water supply for the target population?	2.1.1 Number of water points and latrines constructed/rehabilitated delivered as planned at expected quantity and quality in the logframe	Desk Review: program proposal, yearly reports to DGD, quarterly narrative reports, indicator trackers, database files KIIs with HNS and BRC-FL FGD with water committees and beneficiaries
	2.1.2 Perception of communities that the quantity and quality of delivered water points and latrines is meeting expectations	Desk Review: yearly reports to DGD, quarterly narrative reports FGD with beneficiaries and water committees
2.2 To what extent the project managed to influence the sustained use of sufficient safe water and sanitation facilities	2.2.1 Comparisons of results of indicator 1 of the logical framework	Desk Review: program proposal, yearly reports to DGD, quarterly narrative reports, indicator tracker
	2.2.2 Communities report using sufficient safe water due to the project infrastructure and new project knowledge	KIIs with HNS and BRC-FL Desk Review: yearly reports to DGD, quarterly narrative reports FGD with beneficiaries and water committees
	2.2.3 Communities report using improved sanitation thanks to the infrastructure delivered by the project and new knowledge	FGD with beneficiaries and water committees
	2.2.4 Project staff and volunteers consider that some of the improvement in use of safe water and sanitation is attributable to the project infrastructure	KIIs with HNS and BRC-FL
2.3 To what extent did the project managed to trigger behavioural hygiene change in communities?	2.3.1 The number of people trained, and sessions organised in communities is aligned with the logical framework	Desk Review: yearly reports to DGD, quarterly narrative reports, indicator tracker database

	2.3.2 Communities and HNS staff report changes in the beneficiaries' hygiene behaviour	<p>KIIs with HNS and BRC-FL</p> <p>Desk Review: yearly reports to DGD, quarterly narrative reports</p> <p>FGD with beneficiaries and water committees</p>
2.4 HNS has increased capacity to implement WaSH related interventions?	2.4.1 Number of WASH tools adopted (RANAS and CHAST) in line with the log frame	Desk Review: yearly reports to DGD, quarterly narrative reports
	2.4.2 HNS staff reported knowing and using new WASH tools (RANAS and PHAST) that were efficient to trigger behavioural change at the community level	KIIs with HNS and BRC-FL
	2.4.3 HNS staff reported gaining more capacities to implement WaSH projects	KIIs with HNS and BRC-FL
Efficiency: to what extent the programme approach brought added value by leading to any efficiency gains, and a better coherence and coordination of the response with other health initiatives?		
3.1 The programme approach was efficiently implemented	3.1.1 The project managed to find innovative materials to reduce constructions costs while maintaining quality and sustainability	<p>Desk Review: yearly reports to DGD, quarterly narrative reports</p> <p>KIIs with HNS and BRC-FL</p>
	3.1.2 Could the same output have been achieved with less	KIIs with HNS and BRC-FL
	3.1.3 Staff report main trade-offs between in kind and cash support for latrine construction	KIIs with HNS and BRC-FL
Sustainability and capacity building: to what extent did the programme lead to the capacity building of Red Cross National Societies and will this lead to the continuation of the programme activities in collaboration with partners.		
4.1 How will communities and HNS ensure maintenance	4.1.1 HNS worked on an exit strategy and a clear handover was organised in the communities with positive water tests	<p>KIIs with HNS and BRC-FL</p> <p>FGD with beneficiaries and water committees</p>

and sustainability of the delivered infrastructure	4.1.2 Water User Committee have the necessary expertise and access to material to continue ensuring maintenance of water points autonomously	KIIs with HNS and BRC-FL FGD with beneficiaries and water committees
	4.1.3 HNS staff has put measures in motion to continue supporting maintenance of infrastructure after the project closure	KIIs with HNS and BRC-FL Desk Review: activity reports HNS, quarterly narrative reports
4.2 How does the HNS plan to incorporate the RANAS and CHAST methodology after the program's closure?	4.2.1 HNS staff report that the RANAS and CHAST methodology was tailored enough to the country so that it will be used in future programs.	KIIs with HNS and BRC-FL Desk Review: activity reports HNS, quarterly narrative reports
	4.2.1 PNS staff report that the HNS has enough knowledge and resources to implement RANAS and CHAST methodology after the end of the programme.	KIIs with HNS and BRC-FL Desk Review: activity reports HNS, quarterly narrative reports

VIII.7. Areas Of Intervention

Figure 19. Area of Intervention in Burundi

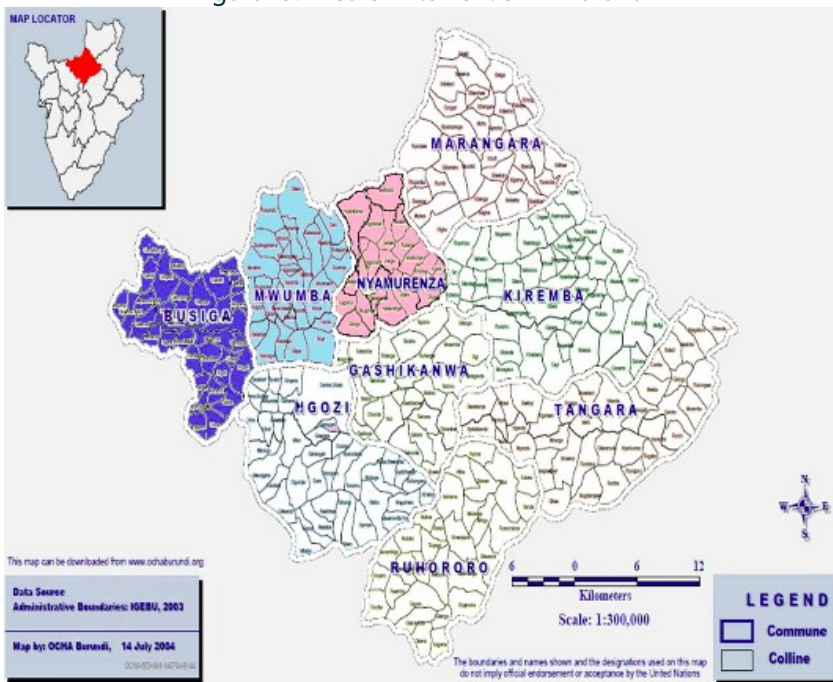


Figure 20. Area of Intervention in Mozambique

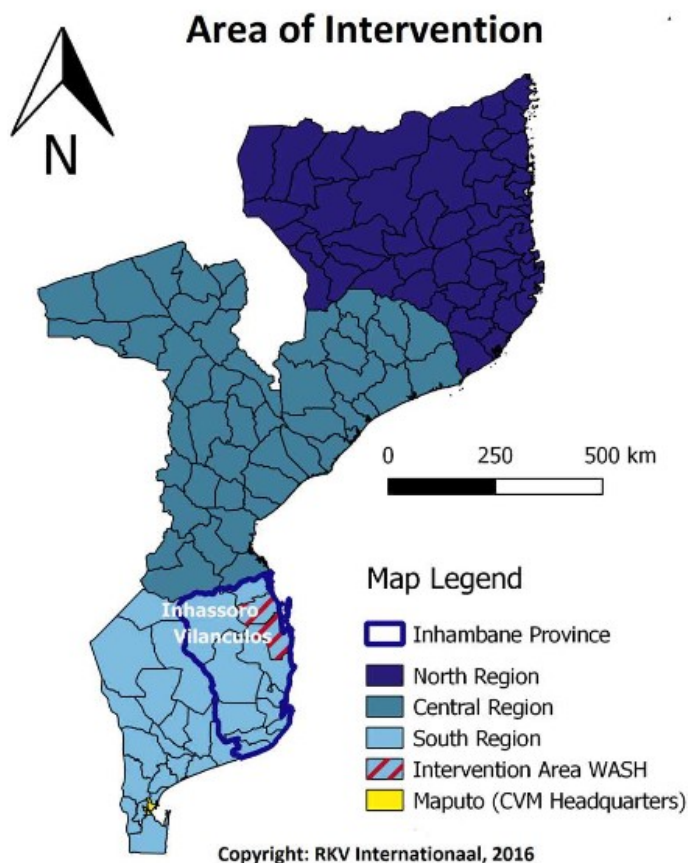


Figure 21. Area of Intervention Rwanda

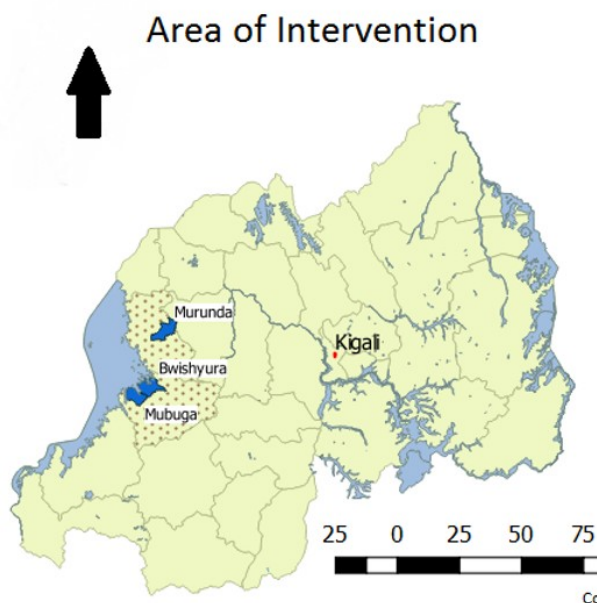
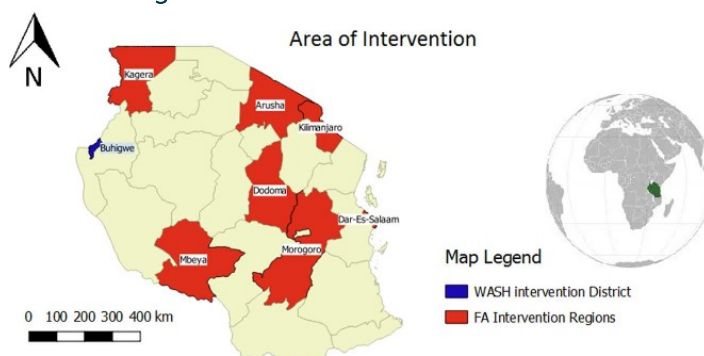


Figure 22. Area of Intervention Tanzania



VIII.8. Primary Data Collection

Primary data collection consisted of KIIs with relevant stakeholders and FGDs with communities, beneficiaries, and volunteers. Primary data from HQ, Burundi, Rwanda and Tanzania was collected remotely, whereas a field visit is planned to conduct in-person KIIs and FGDs in Mozambique.

Key Informant Interviews

Remote semi-structured KIIs were conducted with 21 key informants in Burundi, Rwanda and Tanzania. This includes country HNS country staff, volunteers and PNS staff. Semi-structured interviews were conducted remotely (using Skype, Zoom or any other free means of communication) in English or French. The interviews lasted approximately 1 hour. KII participants were selected by country teams and the list is available. KIIs with volunteers were conducted using **paired interviews** (from the same stakeholder group). The emphasis of the paired interview is to create a dynamic in which the participants interact with each other and built on each other's feedback to arrive to new findings

In-country semi-structured KIIs were conducted by KAC's local consultant with the HNS staff members in Mozambique (6 KIIs) and with external stakeholders (3 KIIs). Interviews with BRC-FI (2 KII) will be done from remote. The in-country KIIs were conducted in-person, while carefully adhering to the COVID-19 gesture barriers, and will be conducted in English, Portuguese, or Chichewa, depending on the preference of the key informant. The interviews lasted approximately 1 hour staff.

For these interviews, the evaluation team developed two data collection tools (available in annex [Erreur ! Source du renvoi introuvable.](#)):

- Guide with Red Cross staff;
- Guide with external stakeholders.

Table 17. Number of Key Informants per Country

Country	Number of informants
Burundi	7
Mozambique	11
Rwanda	5
Tanzania	8
Total	31

Focus Group Discussions in Mozambique

18 In-country focus group discussions were conducted by KAC's local consultants with project beneficiaries, water committee members and volunteers in Mozambique. The FGDs were conducted in-person, while carefully adhering to the COVID-19 gesture barriers, and will be conducted in, Portuguese or Chichewa, depending on the preference of the group. The discussions lasted approximately 45-minutes. To ensure that the opinions of both men and women are heard, the consultants will conduct FGDs separately with men and women. In addition to the inclusion of boys and girls who are among the main target population; the consultants will also aim to include older people and people living with disabilities in the FGDs.

Table 18. Proposed Breakdown of FGDs

Category	Sex	Number of FGDs
Beneficiaries	Women	6
	Men	6
Water Committee		3
Volunteers		3
	Total	18



www.keyaidconsulting.com

18 bis Rue Tiquetonne 75002 Paris