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Mozambique's Strengthening Communities through Integrated Programming Ex-Post Evaluation

PURPOSE AND OVERVIEW

Long-term sustainability of rural water, sanitation, and hygiene (WASH) outcomes is an ongoing concern for all stakeholders. WASH practitioners continue to debate what approaches lead to improved practices, quality service delivery, and lasting behavior change. This includes whether to integrate WASH programming with other development interventions, and how to incorporate resilience within the system to promote WASH sustainability.

To examine these issues and others, USAID is supporting a series of independent ex-post evaluations of USAID's WASH activities to inform future programming. This brief summarizes the sixth evaluation in the series—USAID's Strengthening Communities through Integrated Programming (SCIP) activity in Mozambique from 2009–2015 in Zambézia Province. The evaluation focuses on SCIP's WASH activities in Zambézia, one component of an integrated, \$46.2-million activity that also included health, HIV/AIDS, nutrition, agriculture, and rural enterprise interventions.

SCIP Zambézia designed WASH interventions to increase hygiene practices, access to safe drinking water, and use of sanitation facilities. Following a needs assessment, SCIP trained local entities to implement either just sanitation

and hygiene interventions (S&H package) or a WASH package. The S&H Package established/strengthened and trained community health committees (CHCs) to assist with community-led total sanitation (CLTS)/participatory hygiene and sanitation transformation (PHAST) triggering and handwashing promotion and follow up. In addition to the S&H interventions, the WASH package established/strengthened and trained water committees, constructed/rehabilitated water points, and trained technicians in repair and established spare parts suppliers.

The findings of the evaluation demonstrate limited sustainability of SCIP water points (WPs). The evaluation team (ET) identified insufficient financial resources to support ongoing operation and maintenance (O&M) and repairs as the primary constraint. Though notably higher than measured at endline, sanitation access remained limited in the areas studied. The poor quality of latrines observed created a significant gap between the share of households (HH) with access to any latrine and those with access to basic sanitation (an improved latrine, not shared with other households). Although respondents self-reported a higher level of handwashing behaviors four years after the endline survey, observational data suggested actual handwashing behavior was substantially lower. Demonstrating signs of resiliency, households replaced and repaired latrines and handwashing stations after the 2019 cyclones and flooding, although

the quality of the replacements remained poor. However, communities faced more difficulties resolving issues with damaged or contaminated WPs.

SCOPE AND DESIGN

The evaluation team conducted data collection in August and September of 2019 in Zambézia Province to answer eight evaluation questions using a mixed methods design in 239 communities:

Water Questions:

What is the level of service of SCIP water points?
Which factors influenced sustainability of water services?

Sanitation Questions:

Are households using and replacing their latrines?
What factors contributed to sustainability?

Hygiene Questions:

What is the status of handwashing stations and hand hygiene practices today?
Which factors influenced sustainability of handwashing behaviors?

Resilience and Integration Questions:

To what extent did SCIP's inputs to CHCs and the integrated approach impact sustainability of WASH interventions?
How have SCIP communities impacted by significant shocks fared regarding WASH?

The ET disaggregated findings by poverty levels based on the Poverty Probability Index (PPI).¹ Where possible, the ET drew illustrative comparisons with the SCIP endline data, though the surveys were not directly comparable.

Key Findings

WATER POINTS

Limited WP sustainability and poor water quality, despite perceptions of safe water:

- Only 65 percent of the observed SCIP WPs produced water.
- Only 41 percent of all HHs had basic water access (drinking water from an improved source requiring less than 30 minutes of collection time). This was similar in S&H and WASH Package communities. In WASH Package communities, 83 percent of water users reported sufficient access to drinking water, compared to 70 percent in S&H Package communities.
- Test results showed poor water quality at the SCIP WPs (47 percent tested positive for *E. coli* and 90 percent tested positive for fecal coliforms), although 94 percent of users believed the water was safe to drink. Water quality testing occurred infrequently after installation. Though SCIP

promoted HH water treatment, only 16 percent of HHs reported treating water, which is similar to what the SCIP endline reported.

Management and financial factors affected water point sustainability:

- **WP Management.** Most WPs had an active water management committee that reported meeting at least once a month. Eighty percent of HHs reported high levels of satisfaction with the committees' services. The women's groups established to sell spare parts for repairs no longer existed; reports of spare part availability varied by district.
- **Financing.** Water fees correlated positively with functionality. Sixty percent of respondents reported paying WP fees, though this was lowest among the poorest HHs.² Qualitative interviews indicated that collected fees proved to be insufficient to cover O&M costs.

HOUSEHOLD SANITATION

Limited latrine access and open defecation still widely practiced:

- **While 52 percent of HHs had a latrine, only 15 percent had basic sanitation access** (nonshared, improved latrine). Though low, this is notably more HHs with access to basic sanitation than SCIP's baseline and endline measurements (6 percent and 5 percent, respectively).³ Households below the national poverty line had significantly lower basic sanitation access.
- The study **found latrine quality to be generally poor**; only 23 percent had observed slabs.
- **Respondents reported low levels of latrine use** (Fifty percent reported that adults in the household use latrines). Seventy-three percent of HHs reported safe disposal of the feces of children under 5. Open defecation occurred in nearly 75 percent of communities.

Financial barriers and poor quality materials affected sanitation sustainability:

- People reported not having a latrine primarily due to a lack of financial resources and materials (51 percent and 43 percent, respectively).

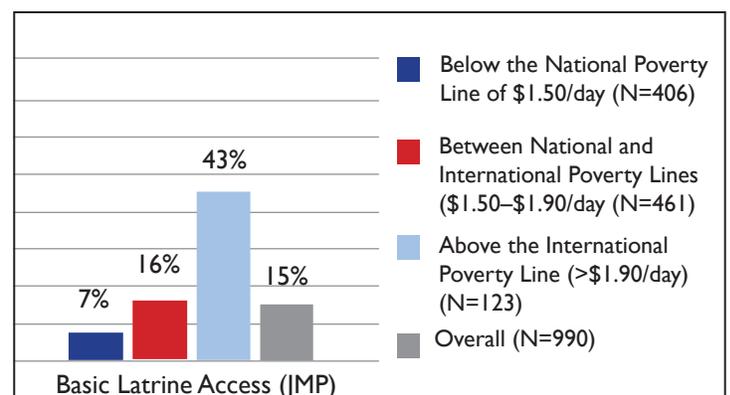


Figure 1. Observed Latrine Access, by Probable Poverty Level

- Latrine access and poverty level appeared to be inversely related. Interviewees noted **frustration with poor-quality materials**. This frequently led to a continuous cycle of repairing or replacing latrines, especially after weather-related shocks.
- CHCs and community WASH activists continued to play a role in sanitation behavior change promotion and district governments have provided ongoing technical assistance.

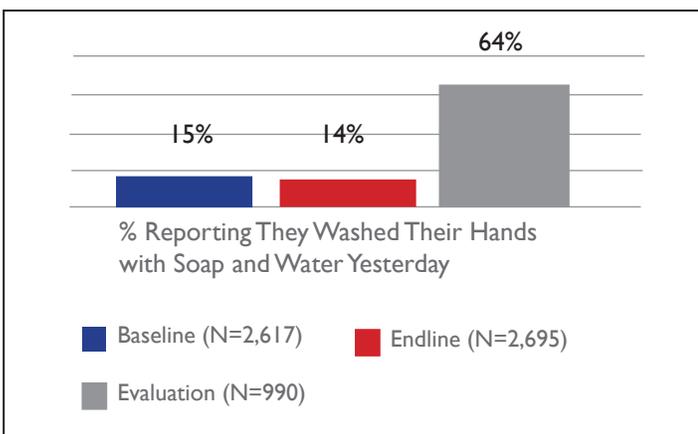


Figure 2. Self-Reported Handwashing with Soap Over Time

HANDWASHING

Few HHs had handwashing stations with both soap and water, though self-reported handwashing had improved since the end of SCIP:

- While 29 percent of handwashing stations showed signs of use, **only 13 percent of HHs had both observable soap and water for handwashing**, which indicated handwashing with soap did not appear to be a widespread normative behavior.
- While 95 percent of HHs had some type of handwashing station, **less than 2 percent of HHs had any type of fixed handwashing station**. Out of 836 observations, the ET only observed two tippy taps, which SCIP had promoted.
- **Respondents self-reported substantially higher rates of handwashing than at endline;**⁴ however, low prevalence of observed handwashing facilities suggests this is an overestimate of behavior and perhaps more reflective of knowledge.

Use of PHAST and financial barriers affected sustainability of handwashing stations and practices:

- The PHAST approach to behavior change has known weaknesses in galvanizing handwashing behavior change.⁵
- **Barriers to good handwashing practices** included financial constraints (which impacted access to soap and water) and tippy tap durability.

WASH CAPACITY, INTEGRATION, AND RESILIENCE

- **CHCs and activists continued to operate** and advocate for good WASH behaviors. They maintained a very high level of confidence within their communities.
- **Women continued to play active roles** in both water committees and CHCs; however, they typically did not take on leadership roles.
- **Cross-sectoral integration likely did not have the intended effect** on outcomes or sustainability. Limited documentation prevented a deep dive into the effects of SCIP's multisector integration; however, interviews and documents available suggest that, while interviewees appreciated integration in theory, SCIP interventions were largely siloed in practice, particularly as it relates to WASH. Studies of other integrated programs show similar findings.
- **Recent cyclones and flooding affected around half of respondents' WASH facilities**. Though damaged handwashing stations had often been repaired or replaced, less than half of respondents said problems with WPs had been resolved.

DISCUSSION

Based on the low levels of basic water access, high rates of nonfunctional WPs, and substantial water quality contamination, the SCIP intervention did not ensure sustainable access to safe water. Though SCIP-trained water committees remained active in WP management, insufficient fee collection to cover O&M hindered their ability to maintain adequate water service, as did a lack of ongoing support and monitoring from the government.

CLTS aims to end open defecation and encourage latrine use; however, it appears that SCIP did not achieve these outcomes in targeted communities. SCIP did not significantly impact latrine use over the course of implementation according to the endline evaluation. The 15 percent of HHs with basic sanitation access observed in this ex-post evaluation is quite low, though it is higher than at the end of the activity. Many HH latrines are unlikely to withstand severe weather events (e.g., no walls, roofs, etc.) due to poor quality construction and materials. SCIP's use of CLTS, without any financial support for latrine construction, did not appear to improve latrine access or quality.

SCIP employed PHAST and CLTS to promote handwashing behavior and the tippy tap as a fixed handwashing station. The ET observed few tippy taps still in use. The low prevalence of observed soap and water for handwashing indicates that despite SCIP activities, handwashing with soap and water has not yet become a normative practice. As with water and sanitation, affordability appeared to be a primary barrier to handwashing.

CHCs and activists reported that they continued to serve their intended function regarding WASH promotion. The slight increases in self-reported sanitation and handwashing practices, compared to the endline survey provincial-level estimates, is a

positive sign. It is unclear to what extent this can be attributed to the work of CHCs and activists vis-à-vis other factors.

It appears that SCIP's integrated approach was ineffectively implemented and a nonfactor regarding sustainability. Implementation challenges similar to those seen in other integrated programs hampered the approach.

The recent cyclones in 2019 adversely affected many SCIP communities. Communities and HHs showed signs of resilience regarding sanitation but less so regarding access to safe drinking water. Given that the SCIP activity did not focus on resilience, weather shocks posed a significant threat to sustainability.

RECOMMENDATIONS

- 1. Promote alternate sanitation approaches to a pure (no subsidy) CLTS-only approach to ensure that financial barriers to basic sanitation access and latrine quality are addressed.** Pay specific attention to local contexts and norms that may impact behavior. Targeted sanitation subsidies are one potential option for reaching the extreme poor and most vulnerable. Though SCIP did not use such subsidies, they deserve further study.
- 2. Explore alternative modalities of working with host governments and local community agents to provide more effective ongoing WASH behavior change support to communities as one of several components aimed at prompting behavior change.** There is growing consensus in WASH literature about the importance of ongoing follow-up behavior change communication, though the effectiveness of local agents in this activity is unclear. Implementers should work with governments to explore results-driven approaches to providing support for ongoing community behavior change promotion, while also addressing other behavioral drivers.
- 3. Work with service authorities to strengthen and increase the frequency of water quality testing and treatment practices for rural water supply,** as the ET noted significant water quality issues across districts and that rural water points are typically only tested during construction and rarely thereafter. Service authorities should regulate water quality and ensure regular monitoring against standards.
- 4. Consider alternate approaches to small, community-managed water supply.** Programs should explore and continue to refine new management, financing (particularly considering wide payment differentials by poverty status), and O&M approaches, aimed at creating professionalized rural water service provision.
- 5. Investigate the impact of local government outsourcing of WASH support to the private sector.** In some cases, the Government of Mozambique

outsources training of water committees as well as WASH behavior change support, approaches that are being explored in the sector. Determining the effectiveness of this type of private sector engagement is an important area of investigation.

- 6. Replace tippy taps in project design with handwashing station models that are durable, aspirational, and responsive to the local context.** Though handwashing infrastructure is only one component of hygiene behavior change, the failure of tippy taps necessitates a new approach to enable handwashing stations to be a sustainable cue to action.
- 7. Incorporate resilience planning for rural WASH investments to enhance sustainability, particularly where recurrent shocks are a risk.** Impacts of climate change (such as increased drought and flooding) on vulnerable populations and rural WASH infrastructure are a threat to sustainable WASH.
- 8. Encourage implementers to keep thorough documentation regarding key aspects of implementation, particularly regarding cross-sectoral integration.** Evaluators need thorough documentation on implementation across communities for effective evaluation.

ENDNOTES

- Mozambique Poverty Probability Index: <https://www.povertyindex.org/country/mozambique>.
- PPI scores between WASH Package and S&H Package communities showed no significant difference.
- Comparisons between the evaluation data and SCIP baseline/endline data have limitations due to differences in sampling and representation.
- Baseline/endline data and the ex-post survey are not directly comparable due to differences in sampling and representation.
- IRC International Water and Sanitation Centre & NETWAS International. 2009. Report of the Evaluation of the PHAST Tool for the Promotion Hygiene & Sanitation in the GOK/UNICEF Programme of Cooperation. UNICEF. https://www.unicef.org/evaldatabase/files/Kenya_2009-008_-_PHAST_Evaluation_Report_final-.pdf.

The Water Communications and Knowledge Management Project is conducting a series of independent ex-post evaluations of closed USAID-funded water activities to further USAID's understanding of why the outcomes of its completed WASH activities have or have not been sustained. This Evaluation Brief summarizes results from the sixth evaluation in the series. For more information and for the complete report visit Globalwaters.org.

Cover Image* A woman collects water in Zambézia Province, Mozambique. (Photo credit: Forcier Consulting)