EVALUATION BRIEF

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Madagascar Rural Access to New Opportunities for Health and Prosperity (RANO-HP) Ex-Post Evaluation

PURPOSE AND OVERVIEW

USAID is supporting a series of independent ex-post evaluations of USAID–funded water, sanitation, and hygiene (WASH) activities to inform future USAID programming. This brief summarizes the first of the evaluations in the series, which examines the sustainability of sanitation and hygiene outcomes associated with the Madagascar Rural Access to New Opportunities for Health and Prosperity (RANO-HP) activity. RANO-HP was active from October 2009 to June 2013 and was implemented by a consortium led by Catholic Relief Services (CRS). The activity was designed to increase sustainable access to safe water supply, improve sanitation coverage, and expand hygiene practices in 26 communes. The results of the evaluation indicate that in most cases the positive effects were lasting, however, significant slippage on key indicators was universal. Barriers and enabling factors associated with sustaining sanitation and hygiene behavior change in Madagascar are described in more detail in this brief.

SCOPE

This evaluation focused on the sanitation and hygiene components of RANO-HP, which included:

1. Community-led total sanitation (CLTS)
2. Behavior change promotion focused on teaching three key sanitation and hygiene practices (handwashing with soap, safe water storage, and water treatment)
3. Increasing investment in household (HH) WASH through the introduction of village savings and loan associations (VSLA) and the creation of a loan product available at microfinance institutions
4. Training of local masons to support HH latrine construction and maintenance
5. Construction of public "monoblocks"—combined public water point, latrine, shower, and laundry stations—and establishment of public-private partnerships (PPP) to manage them
6. Creation of stakeholder groups that developed Commune Water and Sanitation Business Plans for WASH investments

Two specific questions framed the evaluation design and analysis:

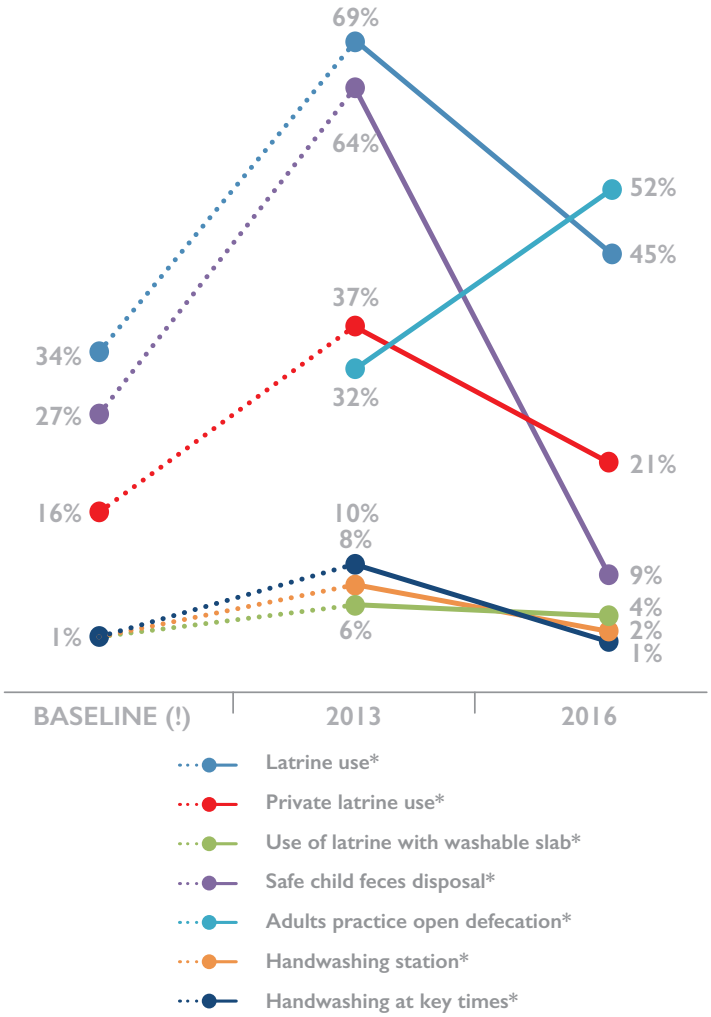
1. To what extent are the levels of sanitation facility functionality and hygiene usage/behaviors that were measured at the close of the RANO-HP activity still observed three years later?

2. What factors influenced the ability to sustain sanitation and hygiene facilities and behaviors?

DESIGN

This evaluation employed a mixed-methods design that included quantitative data collection on sanitation and hygiene in affected communes, along with targeted qualitative interviews. Primary quantitative data collection included a replication of the RANO-HP endline HH survey and sampling methodology in all 26 communes (n=688),[1] and reverification of 15 villages previously declared to be open defecation free (ODF) using endline methodology. Qualitative data collection consisted of 53 qualitative interviews in five regions: Atsimo Atsinanana, Vatovavy Fitovinany, Anosy, Atsinanana, and Analanjirofo. Fieldwork occurred during a four-week period in September and October 2016 across the intervention areas of RANO-HP in Madagascar.

Figure 1. Three-year sustainability of key RANO-HP sanitation and hygiene outcomes (HH survey)



**indicates significant difference at p<0.05*

(!) Baseline values, shown to illustrate prior trends, were derived from a report. Measurement or sampling methodology differed; therefore, results are not directly comparable to 2013 and 2016 results.

[1] The team eliminated from household survey and ODF verification analysis all four affected communes in Analanjirofo Region, as well as two in Anosy Region, two in Atsimo Atsinanana Region, and two in Vatovavy Fitovinany Region

Both the latrine and handwashing station in Sampona Sud are made of local materials. (Photo credit: Annette Fay/Water CKM Project.)

KEY FINDINGS

Quantitative data on RANO-HP sanitation and hygiene outcomes and evaluation results are shown in Figure 1. Slippage for both sanitation and hygiene indicators relative to the activity's endline occurred in all regions, with the greatest slippage relative to endline values occurring in Atsimo Atsinanana Region, and the smallest decline in Atsinanana Region. None of the outcomes slipped back to baseline levels or below, with the exception of safe disposal of child feces, which experienced a sharp, significant decline between 2013 and 2016. Further details on specific outcomes are provided below:

Latrine Use: RANO-HP outcomes as measured in 2013 included a high level of latrine use and behavior change in CLTS-triggered communities. However, three years after the conclusion of RANO-HP, communities in four of the activity's five targeted regions experienced statistically significant slippage in latrine use, in both shared and individual HH contexts. Thus, while CLTS achieved high initial latrine adoption and sustained behavior for some, many individuals fell back into prior open defecation habits over time.

ODF Status: At the community level, open defecation was still being practiced in most communities declared as ODF during the RANO-HP activity. In fact, out of five communities fully evaluated in 2016, only one still met ODF criteria. Fifteen additional communities were partially evaluated in 2016. Of those, 14 showed signs of open defecation.

A group of children wash their hands in Anteza, Madagascar. (Photo credit: Jocelyn Rakotonirina/Water CKM Project.)

Handwashing: Possession of a handwashing station, as well as reported handwashing at key times (i.e., before eating, after using the latrine, before preparing food) decreased to baseline levels between 2013 and 2016. This suggests selected hygiene promotion activities—including community health workers conducting house visits focused on teaching three key sanitation and hygiene practices (handwashing with soap, safe water storage, and water treatment)—were not able to achieve sustained behavior change around handwashing.

Vulnerable HHs: HHs with a non-literate respondent (a partial reflection of socio-economic status) were less able to sustain most WASH outcomes compared to those with literate respondents. This finding indicates socio-economic status may be a factor in sustained uptake of new WASH behaviors in the former RANO-HP intervention areas.

Gender: Female-headed households had lower rates of slippage in latrine use and handwashing stations over time compared to male-headed households and also opted for higher quality latrines over time by a small margin. This may be interpreted to mean that women in RANO-HP zones place greater value on the privacy, convenience, health benefits, or aesthetics of a latrine.

Finance: Twenty-nine percent of households kept their savings in either a bank, microfinance institution, or VSLA in 2016 compared to 38 percent at the end of RANO-HP. At follow-up, 19 percent of respondents had participated in a VSLA before, and women and men participated equally. Among those in a VSLA, 18 percent reported that someone in their group had borrowed money for WASH-related activities in the past two years. The microfinance product introduced during RANO-HP had minimal use by activity beneficiaries during implementation and is no longer being used in former intervention zones, but use has been reported in regional urban centers outside of RANO-HP zones.

A RANO-HP trained local mason puts the finishing touches on a latrine slab. (Photo credit: Neila Andry/Water CKM Project.)

DISCUSSION

FACILITATORS TO SUSTAINABILITY

Several considerations seem to have factored into the sustainability of latrine maintenance and use: simple technology, the focus on training local masons, a community's social norms, and repeated follow-up. The simple technology of pit latrines and tippy taps made it relatively feasible for many community members to build and maintain them without continued intervention, depending on the financial situation of the household and availability of local materials. Sixty-five percent of presently used private latrines were constructed after 2013, showing continued motivation and ability to maintain or construct latrines after RANO-HP ended. However, few of the activity's targeted households moved up the "sanitation ladder" by improving their latrines' structural quality. It is likely that these lower quality structures became vulnerable to decay and thus have required replacement. Training local masons appears to have provided additional capacity for maintenance and reconstruction that was used beyond the life of the activity, as our interviews indicate that 45 percent of households that improved their latrine in the past two years used skilled labor to make the improvements.

Children gather under a Caritas/RANO-HP plaque in Anteza. (Photo credit: Jocelyn Rakotonirina/Water CKM Project.)

Pre-existing (i.e., baseline) social norms around sanitation behavior appear to have influenced sustainable latrine use in RANO-HP communities. The lowest level of slippage in latrine use was found in Atsinanana Region, which had substantially higher baseline levels of latrine coverage, perhaps reflecting an acceptability and normalcy of latrine use that laid the groundwork for greater sustainability in the long term. Conversely, the highest level of slippage was in Atsimo Atsinanana Region, which had the lowest baseline latrine coverage. Furthermore, a common response among non-latrine adopters to questions about why they did not use a latrine was that latrines are "not common" in their communities.

Repeated recent follow-up support was also correlated with higher access levels and lower slippage at the time of the evaluation. Overall, communes excluded from our primary analysis due to recent CLTS interventions by other donors (including a partnership with the Ministry of Water, Sanitation and Hygiene[2]) showed significant improvement over 2013 levels of latrine use and handwashing station adoption compared to communes with no additional intervention since RANO-HP ended in 2013. Qualitative interviews also emphasized that regular behavior change reminders may help to provoke lasting hygiene and sanitation behavior change. However, while continual support over time may improve results, it may not represent a sustainable approach to behavior change, particularly if this support is from external donors rather than local government or other local institutions.

[2] The Ministry of Water, Sanitation and Hygiene has recently been reduced to the Ministry of Water and absorbed into the Ministry of Environment.

BARRIERS TO SUSTAINABILITY

Financial constraints, environmental factors, poor management, insufficient participation, and limited government funding all appear to contribute to slippage and thus represent barriers to sustainability. Respondents noted that key barriers to sustaining and improving household sanitation were financial: 27 percent of households reported a desire to construct or improve their sanitation in the past two years but were unable to, most often due to lack of money or other priorities for household spending. Continued use of VSLAs by 19 percent of HH survey respondents indicates some value of village savings groups in overcoming financial barriers. While microfinance loan products for latrines may also help address financial barriers, in Madagascar this approach seems most viable in urban centers where road networks exist and purchasing power is stronger than in rural areas.

Other barriers to sustained HH sanitation and hygiene were regional environmental factors such as space or natural material constraints, storms that damaged latrines, and water scarcity that inhibited handwashing. While these barriers were known during implementation and attempts were made to mitigate them by RANO-HP—including sensitizing communities to the need to rebuild following weather shocks and substituting ash for soap and water during drought—these challenges may have contributed to slippage on sanitation and hygiene after 2013.

In the case of public monoblocks constructed by RANO-HP in Ilaka Est Commune in the Atsinanana Region, poor management on the part of the service provider was a major barrier to functionality. The service provider in Ilaka Est only signed a contract with the commune and built the three monoblocks in the final year of RANO-HP, 2013. This may have contributed to poor management as there was little time for the activity to reinforce and build capacity of both the service provider and the commune on roles and responsibilities in a PPP management model. Insufficient participation on the part of the Ministry of Water, Sanitation and Hygiene, a key signatory and enforcer of the PPPs, may have also contributed to this problem.

Finally, though only one of six Commune Water and Sanitation Business Plans examined through this evaluation was still being referenced, stakeholders credited these plans with introducing stakeholders at the commune level to water policy and helping the commune objectively identify priorities for WASH investment. The realization of these plans, however, was a challenge given the limited government and external funding available for WASH during activity implementation.

KEY IMPLICATIONS AND RECOMMENDATIONS

1. Given the proportion of recent latrines built with the help of skilled labor, future programs can improve the sustainability of latrine construction and maintenance by training a local skilled workforce to construct latrines and maintain them beyond the life of the activity. Future activities may benefit by supporting local masons over a longer period of time to establish themselves as a business that truly responds to community needs.
2. Future programs might achieve modest improvements in sustainability by promoting the use of VSLA or other local savings and loan groups to finance continued WASH improvements. Microfinance options may provide similar opportunities in urban areas. However, these mechanisms alone may not be sufficient to overcome financial barriers to maintaining sanitation and hygiene facilities and should be implemented in tandem with activities focused on increasing demand.
3. Future programs that use a PPP model to manage public sanitation infrastructure should consider building in at least one year of overlap between activity close and introduction of the PPP so that all parties are sufficiently informed of their rights and responsibilities. Additional overlap would also provide time for capacity building that might lead to higher quality management of facilities after construction.
4. Ensuring long-term sanitation and hygiene behavior change (BC) may require long-term reinforcement of BC messages. Local government, community health workers, or other local leaders are a valuable resource in this effort, and future activities can bolster sustainability by working with local community champions to identify and establish systematic methods to sustain WASH behavior change beyond the life of an activity. Planning for such follow-up and reinforcement should be incorporated into activity design from the start.
5. Strategies to facilitate sustained WASH behavior might benefit from addressing gendered decisionmaking dynamics, as women able to make these decisions independently (i.e., female-headed households) were slightly more inclined to adopt improved WASH practices, despite facing other socio-economic challenges.
6. Future programs may also benefit from adapting programming to the needs of poorer or vulnerable population segments, such as illiterate households, which appear to have greater difficulty contributing labor or cash to maintaining WASH facilities. Layering or sequencing with livelihood and education activities specifically targeting the most vulnerable households may improve the sustainability of sanitation and hygiene interventions in these communities and households.

The Water Communications and Knowledge Management Project *is conducting a series of ex-post evaluations of closed USAID–funded water activities to further USAID's understanding of why the outcomes of its completed water, sanitation, and hygiene activities have or have not been sustained. This Evaluation Brief summarizes results from the first full evaluation in the series. For more information and for the complete report visit Globalwaters.org or contact Annette Faye, M&E Lead: AFay@waterckm.com.*

Cover Image RANO-HP-constructed monoblocks, like this one in Ilaka Est, combine water points, latrines, showers, and laundry stations. (Photo credit: Annette Fay)*