EXAMINING SUSTAINABILITY OF THE PEPAM/USAID ACTIVITY IN SENEGAL

WEBINAR
November 7, 2019 | 9:00 am EST

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Hosted by the USAID’s Water Communications and Knowledge Management (CKM) Project and the Water Office

Photo Credit: Alioune Watt
EX-POST EVALUATION SERIES

- Rural WASH
- Rural Water & Sanitation
- Urban Finance & Governance
- Urban Utility Strengthening
- Rural Sanitation & Hygiene
2. PROGRAM BACKGROUND

**Activity Name:** Millennium Water and Sanitation Program (PEPAM/USAID)

**Period of Performance:**
2009 to 2014

**Implementer:** Research Triangle Institute

**Locations:** four regions in southern Senegal
2. OVERVIEW OF PEPAM/USAID’S ACTIVITIES AND OBJECTIVES

1) Improve local management of water & sanitation supply (WSS)
2) Increase local demand for improved WSS and hygiene
3) Strengthen local private sector enterprise capacity to provide WSS services
4) Increase local construction & rehabilitation of WSS infrastructure
5) Use community-led total sanitation (CLTS) to reduce/eliminate subsidies and to promote behavior change in HH and WASH-in-schools

Photo Credit: WADA I & II Closeout Report
Subsidy for water and sanitation services

- Infrastructure based on demand creation
- Subsidies:
  - Water Points (WP) ~10% cost share
  - Household (HH) latrines: varied

CLTS with a water incentive (CLTS-WI)

- CLTS triggering
- ODF Certification lead to option of subsidized:
  - WP ~10% cost share
  - Public latrine block

Hybrid of CLTS and Subsidy

- CLTS triggering or demand creation for water
- ~3 months later subsidy introduced:
  - WP ~10% cost share
  - HH latrines: varied
3. EVALUATION DESIGN: Research Questions

**Water**
1. What is the level of service of PEPAM/USAID WP?
2. Which factors influenced sustainably of water services?
3. Are women actively engaged in management and governance structures?

**Sanitation**
1. Are households using and replacing their latrines?
2. What factors, including choice of approach, contributed to sustainability?

**Handwashing**
1. What is the status of handwashing stations and practices today?
2. Which factors influenced sustainability of handwashing behavior?
3. EVALUATION DESIGN: Data Collection Overview

Surveys
- 514 Water user
- 617 Sanitation HH

Structured Observation
- 551 Latrines
- 291 Handwashing stations
- 169 Water points

Water Quality Testing
- 105 E. coli
- 105 Iron
- 64 Fluoride

Qualitative Interviews
- 56 interviews with stakeholders
4. **FINDINGS: Water – Current Status and Use**

**Functionality**
- 82% reported year-round WP function
- 63% of WP functional

**Reliability**
- WP largely reliable
- 18% reported reliability concerns
- Reasons for unreliability
  - WP was broken (40%)
  - Seasonal fluctuations (34%)
  - Supply rationing (21%)
- Reliability varied by pump type and region

*Photo credit: THE COCA-COLA FOUNDATION*

1 note that this was in relation to their primary water source, not necessarily the PEPAM water point
4. FINDINGS: Water - Current Status and Use

Quantity

Water User Survey
- 84% are satisfied/highly satisfied with water quantity\(^1\)

Observation
- Avg stroke rate: 0.27 liters/stroke
- Avg flow rate: 0.22 liters/second

\(^1\) note that this was in relation to their primary water source, not necessarily the PEPAM water point
4. FINDINGS: Water - Current Status and Use

Quality

Water User Survey

- 87% are satisfied/highly satisfied with water quality
- E. coli – present in 7 of 105
- Iron – 1 of 105 above Ntl. Std.
- Fluoride – 5 of 64 above Ntl. Std, 3 above WHO Std.

“In this village, no one doubts the good quality of the water….since they have had access to water from the borehole, many of the diseases found in children and in the population in general disappeared.” Water Committee Member

Photo credit: Holly Dentz

\[\text{note that this was in relation to their primary water source, not necessarily the PEPAM water point}\]
4. FINDINGS: Water - Current Status and Use

**Accessibility**

*Water User Survey*
- 17% need >30 min single water collection trip
- Most needed more than one trip
- Avg. 53 mins per day to meet water needs

**Use**

*Water User Survey*
- 62% reported using multiple sources

**Uses of PEPAM/USAID Water Points (n=259)**

- Livestock: 36%
- Agriculture: 11%
- Chores: 73%
- Handwashing: 70%
- Bathing: 76%
- Laundry: 76%
- Cooking: 96%
- Drinking: 98%
4. FINDINGS: Water - Current Status and Use

**Accessibility**

**Water User Survey**
- 17% need >30 min single water collection trip
- Most needed more than one trip
- Avg. 53 mins per day to meet water needs

**Use**

“Community members use the water from this water point for drinking and cooking because they are convinced of the drinkability of the water and this is not the case with the other water points used for chores.”

– Water Management Committee Member
4. FINDINGS: Water – Factors Affecting Sustainability

Water Committee Management & Women’s Engagement

Water User Survey

- 87% of community members say their WC is active
- 88% say they hold regular meetings
- 63% say they ever attended a meeting

Water Committee Interview

- 4/11 meet monthly*
- 4/11 collect meeting minutes*
- 2/11 publish their minutes*

- 10 of 11 WC have at least one female member
- 17 out of 40 possible WC positions were held by women

* indicators are aligned with PEPAM/USAID
4. FINDINGS: Water – Factors Affecting Sustainability


- 33% of users report paying for water
- Avg 13,034cfa/HH/year (~$22.50/year)
- Users of submersible pumps more frequently paid for water and paid higher fees
- Fee collection positively correlated with functionality

Amount of Water Fees Paid by Pump Type Compared with Expected O&M Cost Range, in CFA
4. **FINDINGS: Sanitation Current Status and Use**

**HH Survey & Latrine Observation**
- High rates of sanitation access
- PEPAM/USAID promoted latrines are not widely found
- 56% of Hybrid village HH had access to basic sanitation

*Latrine Access in PEPAM/USAID Sanitation Communities*

- Any Latrine (n=602)
  - CLTS: 94%
  - Hybrid: 87%
  - Subsidy: 96%
  - Total: 92%
- Any Latrine w/Slab (Improved) (n=539)
  - CLTS: 54%
  - Hybrid: 70%
  - Subsidy: 77%
  - Total: 69%
- Private Latrine (n=603)
  - CLTS: 68%
  - Hybrid: 73%
  - Subsidy: 66%
  - Total: 69%
- Private, Improved Latrine w/Slab (Basic) (n=540)
  - CLTS: 36%
  - Hybrid: 56%
  - Subsidy: 49%
  - Total: 47%

Photo credit: Holly Dentz
4. **FINDINGS: Sanitation Current Status and Use**

**HH Survey & Latrine Observation**

- Latrine characteristics
  - CLTS-WI poor quality latrines
  - Hybrid and Subsidy showed mixed results

- Overall high levels of latrine use
  - 86% observed appeared in use
  - 93% of HH had no visible feces
  - 68% reported no OD
  - Limited visible feces in compounds across approaches

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**Self-reported Latrine Use**

- CLTS-WI: 80%
- Subsidy: 77%
- Hybrid: 89%
- Overall: 94%

Photo credit: Holly Dentz
4. FINDINGS: Sanitation Factors Affecting Sustainability

Latrine Repair
- 49% of respondents repaired their latrines
  - Highest rates in hybrid villages
  - Trained masons valued – infrequently consulted

Barriers to access and repair/replacement
- Full pits
- Insufficient financial and material resources → poor latrine quality and failure
  - Particularly for the poor

Limited to no sustained movement up the sanitation ladder

Photo credit: Holly Dentz
4. FINDINGS: Sanitation Factors Affecting Sustainability

Latrine Quality

“There is no challenge except that the latrine models they [PEPAM/USAID] proposed do not last. Every two years we build them. It is at this level that I appeal to them, we really need financial or material support to be able to build modern, sustainable latrines.” Natural Leader - CLTS-WI

Photo credit: Holly Dentz
4. FINDINGS: Comparing Implementation Approaches

Trade-off Between Approaches

Key Outcomes by Approach Type

- **Appears in Use (n=539)**: CLTS 94%, Hybrid 77%, Subsidy 89%, Total 86%
- **Any Latrine w/Slab (Improved) (n=539)**: CLTS 54%, Hybrid 70%, Subsidy 77%, Total 69%
- **Private Improved Latrine w/slab (basic) (n=540)**: CLTS 36%, Hybrid 56%, Subsidy 49%, Total 47%
- **Repaired Latrine Issues (n=174)**: CLTS 48%, Hybrid 58%, Subsidy 42%, Total 49%
4. FINDINGS: Handwashing Current Status and Use

**HH Survey and Observation**

- 6% had fixed Handwashing stations (HWS)
- No observed activity tippy taps in use
- Reversion to pitcher and basin
- 85% respondents report handwashing with soap & water
- Overall 38% of observed HWS showed signs of use

**HH with Observed Soap and Water for Handwashing by Approach**

<table>
<thead>
<tr>
<th></th>
<th>CLTS</th>
<th>Hybrid</th>
<th>Subsidy</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has Soap and Water (n=601)</td>
<td>25%</td>
<td>29%</td>
<td>31%</td>
<td>39%</td>
</tr>
</tbody>
</table>
4. FINDINGS: Handwashing Current Status and Use

"...but as soon as the tippy tap breaks down, I notice that tippy tap are not recommended......but we have replaced them with other ways of washing hands. By replacing the tippy tap with basins, pots, kettles."

Natural Leader CLTS-WI
4. FINDINGS: Handwashing Factors Affecting Sustainability

- PHAST/SARAR weaknesses
- Critical times well understood but…
  *Critical Times for Handwashing*

*Before Eating:* 81%
*After Toilting:* 73%
*Before Cooking:* 53%
*Other Times:* <50%

- Reported need for sustained behavior interventions
- Additional WASH programming appeared to influence handwashing

Photo credit: https://www.worldvision.com.au
“…what has not worked is the fact that the people from the project who came to teach us these practices did not come back later to at least refresh our thoughts. If you show or learn things to people and you stay for years without coming back to refresh their ideas about what has been done, people will eventually forget what they have learned. It would be interesting to follow up with people until they assimilate what they have learned…” Natural Leader CLTS-WI

Photo credit https://www.worldvision.com.au
5. **KEY IMPLICATIONS AND RECOMMENDATIONS**

- Consider building on the hybrid (combined CLTS and subsidy) approach for future rural sanitation service programming.

- Consider alternative models for small-scale WP management and governance.

- Incorporate human-centered design of handwashing stations into future projects.

- Continue to engage in private-sector partnerships that foster local capacity building and entrepreneurship training.
5. KEY IMPLICATIONS AND RECOMMENDATIONS

• Support system strengthening for sustained championing of WASH behavioral norms.

• Conduct a cost-benefit analysis of WP pumps, well and borehole options, and the three sanitation implementation approaches.

• Support adaptive management recommendations in midterm evaluation reports and follow up to ensure that implementers have the flexibility to make course corrections.
6.  ACKNOWLEDGEMENT

Thank you on behalf of the evaluation team!
• Holly Dentz
• Alioune Watt
• Grace Tang
• Kari Nelson
• Leslie Hodel

Photo Credit: Alioune Watt
6. QUESTIONS AND CONTACT

Any Questions? Comments?

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Ex-Post Evaluation Series Links

- Globalwaters.org
- PEPAM/USAID Evaluation Report
- PEPAM/USAID Evaluation Brief
- PEPAM/USAID Evaluation Blog
- PEPAM/USAID Executive Summary in French