Household participation, satisfaction, usage and investment in an OBA sanitation program to increase uptake of hygienic facilities among the rural poor in Central Vietnam

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OUTPUT-BASED AID (OBA)

OBA is a new tool for structuring development project investments in which funds are paid for defined and measurable project outputs, after the fact, rather than for project input costs, before and without evidence that outputs have in fact been achieved. OBA is particularly attractive for improving the effectiveness of subsidies targeted for the poor to make sure they reach intended poor-qualifying population segments. While many OBA projects for water supply for the poor are underway, and modalities for project structuring and independent verification relatively well developed, there is much less experience designing OBA projects in sanitation.

OBA HOUSEHOLD SANITATION PROGRAM IN CENTRAL VIETNAM

Background:

- East Meets West Foundation (EMWF, an I-NGO) already successfully implementing GPOBA for rural piped water in Central Vietnam
- Sanitation coverage of 67% (2008) in rural Vietnam and 60-70% in EMWF piped system communities
- Sanitation marketing (2003-5) created supply chains & helped raise demand from below 50% to 2008 levels
- Remaining rural population has mostly unhygienic latrine (see Fig 4) or open defecates (8%) in Vietnam
- GoV hygienic latrine standards increase cost of toilet (minimum $93 investment, 2008) and thus may justify an OBA type rebate for the poor.

Fig 1. Project location

Purpose:

- Improve health & living standards in rural piped communities by expanding access to hygienic latrines, promoting usage and educating on HHWS

Approach:

- Use existing market supply system created through prior investments in sanitation marketing in Quang Nam Province
- Work in EMWF communities with piped water access to operate pour flush toilets and practice good hygiene
- Offer small financial incentive of $20 to low income households who build a hygienic latrine (median investment $234) within a time delay of 6-9 months
- Structure the incentive as a rebate, using OBA approach/verification, coupled with consumer education, technical support, and hygiene education.

Procedures:

- Inform communities
- Solicit qualified households
- Screen, enroll and train qualified OBA participants
- Provide technical guidance
- Local gov't links to providers
- Beneficiary choses type, provider

Fig 2. Community meeting and follow-up technical training of qualified beneficiaries.

- Household visits to verify & document location, usability, & completion by deadline
- EMWF rebate disbursement ceremony for completed latrines.

Fig 3. Household visits to verify rebate criteria and check latrine location

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Fig 4. Documenting beneficiary's sanitation before and after OBA program participation.

Fig 4. Model of semi-septic pour-flush toilet facility supported by OBA rebate.

EVALUATION STUDY

WaterSHED in collaboration with EMWF undertook an evaluation in 2009-2010 of EMWF's OBA sanitation program as part of a larger study of the health impacts of piped water and improved sanitation on health (diarrhea diseases) and well-being. Aims of the sanitation OBA evaluation were to assess:

- Success targeting the OBA rebate to poorer households, by comparing OBA beneficiaries (Group 2) to those with a self-financed hygienic toilet (Group 1) and with no hygienic toilet (Group 3) (see Table 1 below).
- Drivers of participation, investment in and satisfaction with improved sanitation
- Satisfaction with program offer and quality of facilities
- Reasons for non-participation
- Uptake of promoted hygiene and usage behaviors

Table 1. SED characteristics (means, proportions) of self-financed latrine owners, OBA participants, and no-latrine households

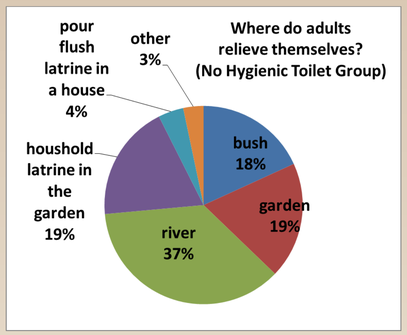
HOUSEHOLD CHARACTERISTIC	GROUP 1 Self-fin. Hygienic Toilet N=175	GROUP 2 EMW OBA Hygienic Toilet N=90	GROUP 3 No Hygienic Toilet N=121	Sign. of Group Diff. p-value
Female head education (years)	11.32	9.69	9.98	**0.000**
Male head education (years)	12.24	11.16	10.43	**0.000**
Land owned (m2)	1,536	1,106	1,352	**0.048**
Own house	66%	60%	68%	0.448
Occupy family house (don't own)	33%	40%	28%	0.168
Electricity connection	100%	100%	99%	0.335
Electric bill (VND/mo)	82,345	45,416	44,408	**0.000**
Number of bedrooms	2.27	2.42	1.69	**0.000**
Number of bedrooms per capita	0.48	0.59	0.38	**0.000**
Own shop	21%	2%	7%	**0.000**
Wall material - palm, mud, or wood	2%	0%	8%	**0.003**
- brick	9%	34%	7%	**0.000**
- cement	89%	67%	87%	**0.000**
Roof material - iron/other metal	41%	24%	31%	**0.012**
- cement sheet	13%	26%	20%	**0.035**
- tile	45%	52%	50%	0.491
Floor material - earth	3%	17%	12%	**0.001**
- cement	49%	43%	72%	**0.000**
- tile	49%	40%	17%	**0.000**
Food expenses rank (9 high, 1 low)	8.0	6.4	8.0	**0.003**
Prod assets expenses rank (9=high, 1 low)	4	5	4	**0.034**
Agric inputs largest expense cat	23%	17%	34%	**0.007**
Ceremonies/gifts largest expense cat	9%	21%	5%	**0.000**
Unimproved drinking water source	28%	21%	36%	0.070
Mins collecting water, dry season	1.5	4.3	8.5	0.102
Paid for latrine (VND, unadjusted)	5,091,824	5,194,444	690,000	**0.005**
Single parent hhld	9%	16%	12%	0.202
Female headed hhld	25%	16%	24%	0.214
Size of hhld (persons)	4.93	4.50	4.66	0.150
Mean hhld age (years)	27.37	32.43	25.55	**0.000**
Minimum hhld age (years)	2.49	12.74	2.86	**0.000**
Number children < 5.1 years	1.17	0.47	1.17	**0.000**
% of hhld > age 44	0.19	0.30	0.14	**0.000**

Characteristics of OBA Participants

- Significant SE & demo. differences btwn OBA & Groups 1 (G1) and 3 (G3) (see Table 1)
- OBA beneficiaries more likely to be older, smaller, single parent hholds, with few/any small children compared to G1 and G3, less educated than G1 but same as G3, and appear to possess somewhat less wealth/assets than G1, but somewhat more than G3.
- OBA hholds more likely to spend greater share on ceremonies/gifts than food or agricultural inputs compared to G1 & G3.

SANITATION OBA PROGRAM ACHIEVEMENTS

Beneficiaries: Since mid-2007, 5,250 poor-qualified rural households have gained access to an improved hygienic toilet via EMWF's OBA pilot program.
Improved access: Estimated 5% in study area in 2 years (65% to 70%).
Program cost and leverage: $150,000 cost with $8.60 leverage on each $1 spent.
Participant feedback: OBA participants significantly more satisfied with their latrine facility, more likely to appreciate dignity/privacy, but more likely to worry about maintenance cost/effort to maintain, than G1. Only 4% unsatisfied with construction quality/experience (lack of material transport, unavailable technician).
Drivers of participation: Financial incentive (100%) and training on how to build the facility (20%) most valued aspects of the program in which 94% already had idea to build & OBA rebate (55%), technical assistance (15%) served as triggers.
Usage & hygiene practices: These were statistically similar for G1 and OBA participants. Variations can be explained largely by group differences in education or wealth. OBA participants are more likely to treat their drinking water often or always, and more have received diarrhea prevention/treatment information than G1.



Reasons for non-participation

- Not aware of program (59%)
- Aware but not given opportunity (33%) due to not enough money, house/land ownership issues, not placed on selected list.
- Given opportunity, but did not participate (7%): i) lacked money (67%), ii) not enough time to raise money (33%), iii) did not understand latrine technology (costs/ benefits) (55%), iv) did not understand terms and conditions (11%).

UNAWARE AND NO OPPORTUNITY HOUSEHOLD CHARACTERISTICS

Significant differences in SE and demo. characteristics were found when comparing OBA participants (N=90) with 'not-aware' hholds (N=67) and with 'no-opportunity' hholds (N=37). Compared to OBA hholds, the *not-aware* were more likely to be house-poor, spend the greatest share of their income on food or agricultural inputs, rather than assets, gifts, and ceremonies, be least educated, and use unimproved drinking water sources the farthest away, indicators suggesting poorer farm households. They also had the youngest demographics, including the youngest maximum and minimum average age, and most under 5 children. *No-opportunity* were least likely to own their home than any other group, more likely than OBA participants to be house-poor, be significantly younger with young children, not to be headed by a single parent, be more likely to spend greatest share on food but not ag inputs, not have soap, use an unimproved water source, but be equally educated and have a similar small households size.

PRELIMINARY FINDINGS

EMWF's OBA sanitation pilot has demonstrated ability to successfully reach and trigger households less likely to adopt hygienic facilities on their own without technical support and financial incentives. It has also achieved high satisfaction by participants in their facilities and quality of construction. It has reached what appear to be somewhat poorer and older households compared to the 65% of self-financed existing latrine households in these communities, however, the selection and participation procedures and terms may be restricting ability to reach many of the remaining 30% of poorer and possibly marginalized households without sanitation, who were either not aware of the opportunity or unable to participate.