

Evaluating the Community-Based Model of Haiti Outreach

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The goal of Haiti Outreach's work is to train communities to manage development projects for themselves. HO has developed a community development model in response to this goal that provides a way to address the development needs of each individual community. The development of this model has been guided by HO's vision of Haiti becoming a developed country (<http://www.haitioutreach.org/about/vision-and-mission/>), and it centers around the creation of community-level institutions. HO works with water committees in each community to develop the rules and regulations necessary to manage the project, and it is through these committees that the community is able to enter into and be held accountable to a contract with Haiti Outreach.

After all the investment, contribution, and experiences that have gone into developing this model for engaging communities, we might be interested in knowing if HO's model is as effective as other models for maintaining wells. One way of answering this question would be to compare the functionality of HO wells with wells maintained under other models. If we compare wells maintained under different management models, there are four main reasons the functionality of the wells might be different:

- 1) Differences in the age of the wells
- 2) Differences in the construction of the wells
- 3) Differences in the usage of the wells
- 4) Differences in management approaches

We would like to find a group of wells that are similar to the HO wells in terms of age, construction, and usage so we can attribute differences in the condition of wells to differences in management approaches. The response to the January 12th, 2010 earthquake made one group of wells suitable for

comparison with HO's wells. DINEPA asked HO to ensure a group of wells in Leogane were working after the January 12, 2010 earthquake. These wells were either rehabilitated by HO or else were judged to be functional according to HO's technical standards. We can also be sure that these wells were of a similar age to wells drilled and maintained by HO. Thus we can rule out differences in the condition of these wells being caused by reasons (1) or (2). We make the assumption that all differences in usage were due to management approaches, allowing us to attribute the differences in the performance of these wells in Leogane and HO's wells to HO's management training model.

The data show that after one year's time, all of HO's wells were functional (n=21), whereas only 91.3 percent of the Leogane wells were functional (n=127). This difference of 8.7 percentage points is statistically significant and might be expected to grow over periods longer than one year.

Although it is a useful starting point, this 8.7 percentage point difference does not tell the whole story regarding the tradeoffs between the different approaches. One reason is that this difference would likely be much larger if it were not for the many repairs made during this time; the standard approach will typically incur larger costs than the HO approach through the more frequent repair of wells by outsiders. On the other hand, HO's model requires larger up-front costs to provide communities with management training and to shelter the well. HO's approach also charges fees, and there is evidence from public health programs that charging poor people for needed services can dramatically decrease access to those services, even if the fees are very small.

Recognizing these tradeoffs between various approaches to provide safe water in rural areas of Haiti, we might be interested in making a more comprehensive comparison of the HO intervention with the standard intervention that takes into account the amount of money spent to upkeep wells, how much water is provided, and to whom it is provided. An important tool for such a comparison is the concept

of a water-person-year. This unit helps us to understand not only if water was ever provided to an individual, but for how long water was provided.

Based on the data on the wells in Leogane and those managed by HO, we are able to run simulations to estimate how many water-person-years can be provided for a given budget. The simulations indicate that more water-person-years can be provided for the same amount of money using HO's model compared to a standard intervention. And even assuming the fees charged under HO's model have the strongest possible negative effect on the provision of water, the difference in water-person-years provided is so large that nearly everyone would choose a community-based intervention over a conventional intervention.

Haiti Outreach continues to revise and develop the community management model. HO has begun to adjust the community management model to apply to different projects, such as water distribution systems in Pignon and St. Raphael and irrigation co-ops.

Suggestions for Further Reading:

Aliprantis, D. (2011). Community-Based Well Maintenance in Rural Haiti. *IDB-OVE Working Paper*

06-11. <http://idbdocs.iadb.org/WSDocs/getdocument.aspx?docnum=36450832>

Koestler, L., A. G. Koestler, M. A. Koestler, and V. Koestler (2010). Improving sustainability using incentives for operation and maintenance: The concept of water-person-years. *Waterlines* 29 (2),

147-162. <http://www.fontes.no/a/uploaded/file/Waterlines%20April2010%20-%20Waterpersonyears-Koestler.pdf>

Koestler, A. G., M. A. Koestler, and L. Koestler (2009). Coverage as a misleading development goal:

The concept of water-person-years. In *Water, Sanitation And Hygiene: Sustainable*

Development And Multisectoral Approaches, Addis Ababa. 34th Water, Engineering and Development Centre (WEDC) International Conference.

http://www.wedc-knowledge.org/wedcopac/opacreq.dll/fullInf?Search_link=AAAA:1707:59230695

Ocwieja, S., H. Bigelow, R. Michel, and K. N. Van Dine (2011). *Community Management and Revenue Transformation Model Working in Rural Haiti*. Pignon, Haiti: Haiti Outreach.

Prepared for the *35th Water, Engineering and Development Centre (WEDC) International Conference*. (COULD there maybe be a link on haitioutreach.org?)