



# **Review of Results-Based Financing Schemes in WASH**

## **Summary Report**

**Report to Bill & Melinda Gates Foundation**

**January**

**2015**

## Glossary

A list of terms that are important for discussing results-based financing (RBF) in water, sanitation, and hygiene (WASH), and their definitions, follows.

<b>Advance payment</b>	Advance payments are payments given before delivery of outputs. Thus, advance payments are a non-results-based component of a RBF payment.
<b>Average cost</b>	Average cost is the total cost of a project divided by the number of outputs provided, people served, or households served. This refers to the combined cost paid by the donor and other contributors to fund the project—it is not the price paid by consumers to consume services.
<b>Bridge financing</b>	Bridge financing is a loan intended to support a borrower until the borrower receives more funding. In the case of RBF, bridge financing provides money that enables the borrower to make necessary investments to deliver the outputs that trigger RBF payments. The RBF payments can then help repay the loan.
<b>Conditional Cash Transfers (CCT)</b>	CCT is a type of RBF where donors provide cash payments to poor households or communities that meet certain behavioral requirements, such as using improved latrines rather than defecating in the open.
<b>Direct Cost</b>	Direct cost is the short-term cost of delivering an output under an RBF scheme. This reflects the amount of money a service provider must spend in order provide an output which triggers an RBF payment. For networked services, this may include more than a connection (for example, some water distribution pipes).
<b>On-Site Sanitation</b>	On-site sanitation uses facilities that are not connected to a network, such as septic tanks or pit latrines.
<b>Open defecation</b>	Open defecation means defecating without any sanitation facility, improved or unimproved. This could include defecating into bushes

or by the side of a road, among other activities. Use of poorly designed facilities, like latrines that leak into a river, are not included.

<b>Output-Based Aid (OBA):</b>	OBA is a type of RBF, where service delivery is contracted out to a third party that receives a subsidy to complement or replace the required user contribution. The subsidy is paid after the delivery of outputs has been verified.
<b>RBF payment</b>	RBF payments are made to service providers for specified outputs. These payments are contingent on certain outcomes. Some schemes have an advance payment, which is paid to a participating service provider before outputs are delivered.
<b>Service provider</b>	Service providers are the entities that provide the outputs, and receive RBF payments for those outputs. Service providers may be large or small, and may be public or private.
<b>Theory of Change (ToC)</b>	A Theory of Change is used to describe the assumptions on how a development intervention plans to achieve its intended outcomes
<b>Total Cost</b>	This includes all costs of a RBF scheme: the RBF payments, and all administrative and overhead costs. For example, this would include technical assistance for running a RBF scheme (when provided), not just the cost of delivering outputs.
<b>Results-Based Financing (RBF)</b>	RBF is an aid mechanism where payments are made upon verification of the delivery of desired outputs, or the performance of desired behaviors.
<b>Viability Gap</b>	A viability gap is the difference between the revenues needed to make a project commercially viable, and the actual fees likely to be paid by poor consumers. Viability gaps can be filled by RBF subsidies, or other methods.
<b>Viability Gap Funding</b>	Viability Gap Funding (VGF) provides money to a service provider upfront to cover a viability gap (see previous). VGF is not RBF, as it is provided before any results are delivered. VGF is not the only way to fill a viability gap.

## **Vouchers**

Voucher projects are a type of RBF where consumers receive a redeemable voucher from a Government or donor agency that can be exchanged for a specified good or service. The provider of the good or service then exchanges the voucher for a subsidy payment.

## Executive Summary

Results-Based Financing (RBF) is an alternative to conventional funding mechanisms for Water, Sanitation, and Hygiene (WASH) projects. As the name suggests, Results Based Financing (RBF) provides funding for an initiative *after* results have been delivered. This is in contrast to the conventional approach of providing the finance upfront. RBF was developed in an attempt to improve aid effectiveness by increasing accountability, efficiency, and private participation. (For more information on what RBF is, see Box 0.1).

Given the massive need to improve WASH services globally, donors have been trying RBF in WASH since at least the mid-1990s. However, until now, there have been no comprehensive evaluations of RBF in WASH. This report summarizes findings from an investigation into whether RBF works in WASH, in what circumstances, how, and why.

First the overall performance against Development Assistance Committee (DAC)<sup>1</sup> and other evaluation criteria is summarized. This is followed by what the investigation has revealed about where RBF works well, where it may not be appropriate, and what we still need to learn. The methodology for the investigation is briefly described in Box 0.2

### How Well Does RBF Work in WASH?

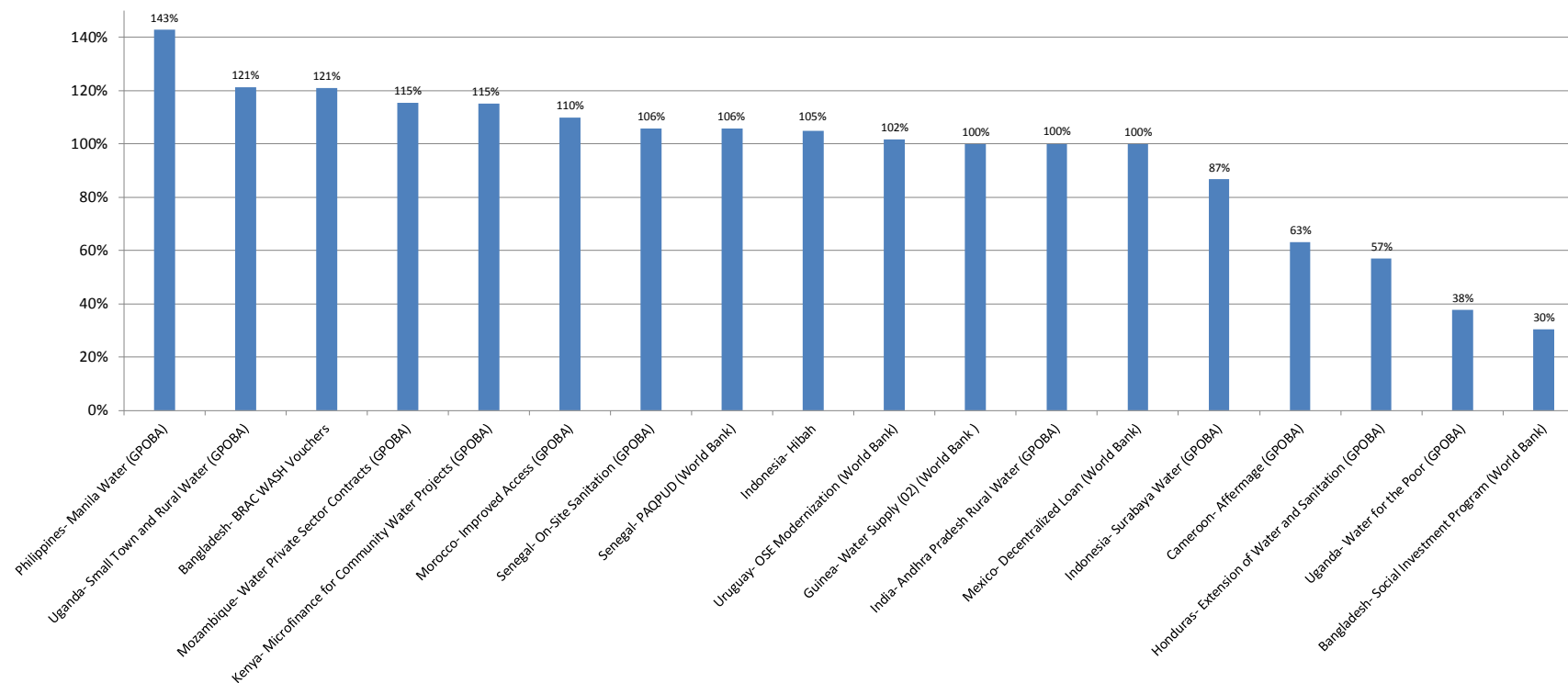
***RBF projects in WASH are effective.*** Effectiveness<sup>2</sup> is defined as achieving what an intervention sets out to do. RBF projects on average deliver 94 percent of targeted outputs. Seventy-one percent of projects delivered outputs at or above target level. Projects' effectiveness in reaching targets is shown in Figure 0.1.

---

<sup>1</sup> The Organization for Economic Cooperation and Development's (OECD) Development Assistance Committee (DAC) created a set of criteria for evaluating the performance of development activities. See <http://www.oecd.org/development/evaluation/daccriteriaforevaluatingdevelopmentassistance.htm>

<sup>2</sup> According to DAC, effectiveness is "a measure of the extent to which an aid activity attains its objectives." See <http://www.oecd.org/development/evaluation/daccriteriaforevaluatingdevelopmentassistance.htm>

**Figure 0.1: Effectiveness of RBF in WASH**



Note: This figure only shows projects for which numerical effectiveness data were available. These percentages reflect the number of outputs verified by each project for delivery of a results-based payment. They are not the service providers' self-reported numbers, except for Bangladesh: BRAC Wash Vouchers.

***There is not enough evidence to be sure RBF WASH projects are efficient.*** RBF was designed to promote efficiency<sup>3</sup> by: allowing innovation in delivery methods, involving private firms in providing subsidized WASH services, providing financial incentives to deliver results, and reducing waste by ensuring money is only spent when results are achieved.

The evidence shows that RBF projects hit the cost targets they set for themselves. Moreover, projects' costs are in line with typical engineering estimates of costs. However, there is a dearth of comparisons of RBF costs with conventional approaches. As a result, it is not possible to empirically verify whether RBF is more efficient than conventional financing.

***There is not enough evidence to be sure RBF WASH projects are sustainable.*** RBF is intended to promote sustainability,<sup>4</sup> in particular by engaging private providers who— it is hoped— will be motivated to provide on-going service because they make money by doing so.

No RBF project collected data on whether service continues to be provided after the money has been paid out. Thus, there is no empirical evidence on whether RBF really is more sustainable than conventional aid, or in what circumstances.

---

<sup>3</sup> According to DAC, “Efficiency measures the outputs -- qualitative and quantitative -- in relation to the inputs.” See <http://www.oecd.org/development/evaluation/daccriteriaforevaluatingdevelopmentassistance.htm>

<sup>4</sup> According to DAC, “Sustainability is concerned with measuring whether the benefits of an activity are likely to continue after donor funding has been withdrawn.” See <http://www.oecd.org/development/evaluation/daccriteriaforevaluatingdevelopmentassistance.htm>

### Box 0.1: RBF Delineated and Defined

Results-Based Financing (RBF) is an aid mechanism where payments are made to service providers upon verification of the delivery of desired outputs, or the performance of desired behaviors. RBF needed to be distinguished from three closely related mechanisms:

- *Payment for Results (PfR)*: PfR provides loan disbursements to governments upon verification of desired outputs. These disbursements are loans to governments, rather than grants to service providers.
- *Public-Private Partnership (PPP)*: Governments contract with private firms to provide services, such as through concession or performance-based contracts for operations and maintenance, and may pay for services provided under the contract.
- *Viability Gap Funding (VGF)*: Donors provide upfront grant contributions to cover gaps between what customers will pay and what providers need to be paid, instead of providing output-based subsidies.

There are various types of Results-Based Financing. The three main types of RBF used in WASH are shown below.

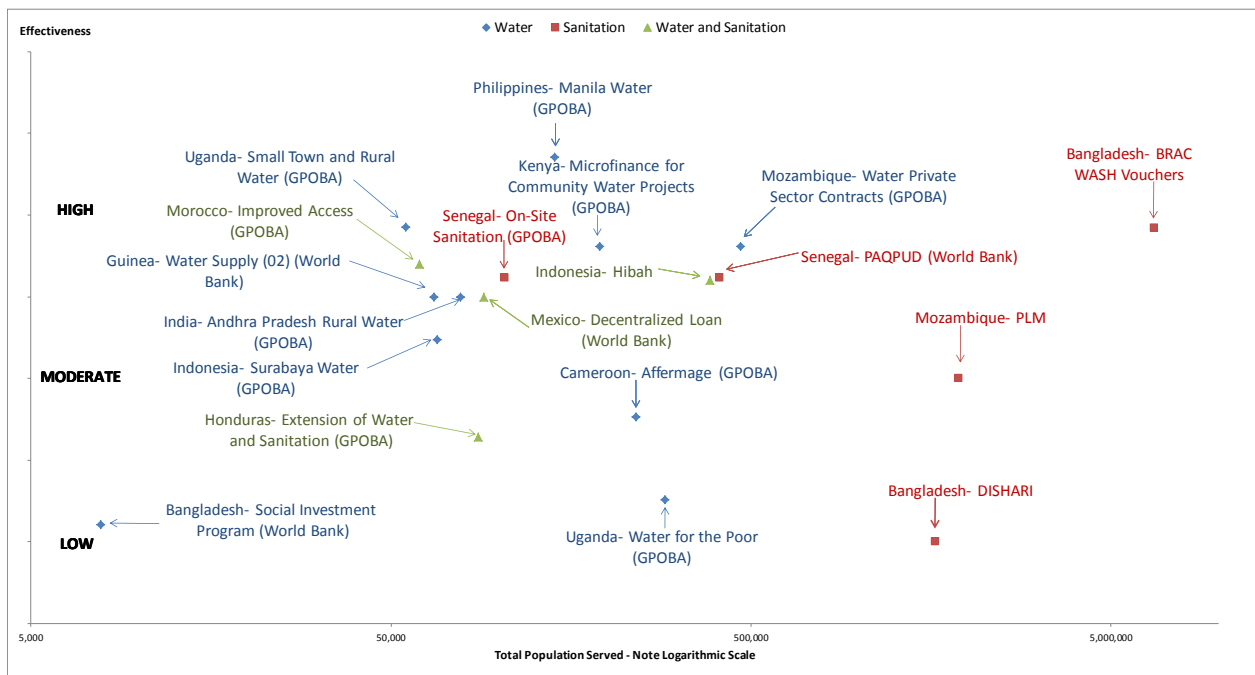
Type of RBF	Description
<b>Output-Based Aid (OBA)</b>	In OBA projects, service delivery is contracted out to a third party—public or private—which receives a subsidy to complement or replace the required user contribution.
<b>Conditional Cash Transfers (CCTs)</b>	CCT projects provide cash payments to poor households that meet certain behavioral requirements.
<b>Voucher Programs</b>	In voucher projects, a consumer receives a redeemable voucher from a Government or donor agency which can be exchanged for a specified good or service.

**Advance Market Commitments (AMCs)**, which stimulate the development of new technologies by guaranteeing markets, were not found in WASH (although they are used in health to develop vaccines).

***RBF projects can operate at the scale, but most have not.*** A few RBF projects have operated at a large scale. The BRAC WASH Vouchers project in Bangladesh has provided 6,600,000 people with latrines. PRODES in Brazil supported the development of wastewater treatment facilities serving 6,800,000 people. PLM in Mozambique provided 1,900,000 people with latrines. The Water Private Sector Contracts project in Mozambique was the largest water project we identified, serving 468,000 people. In Indonesia, the Water Hibah has provided working water connections to 385,000 people, and is being scaled up with the intent of serving an additional 230,000. The scale and effectiveness of RBF projects in WASH are show inFigure 0.2.



**Figure 0.2: Scale and Effectiveness of RBF in WASH**



Note: The horizontal axis is on a logarithmic scale. Targets were not available for two projects shown here. Mozambique: PLM was assigned moderate effectiveness because it was large, and no evidence of effectiveness problems was found. Bangladesh: DISHARI was assigned low effectiveness as it had problems with payments being made for outputs that were not actually delivered.

However, most RBF WASH projects are small. The median number of people served by projects in our sample was 142,810. As most RBF projects are effective, these low numbers served show that the projects are aiming low. Many RBF projects are intended as pilots to demonstrate viability of the approach. This is understandable, but if RBF is to be relevant to achieving global WASH targets, it has to operate at much larger scales than it has tended to so far.

The limited evidence available suggests that achieving scale is more likely when projects are developed with strong local ownership, and when RBF is mainstreamed into sector funding arrangements.

### Box 0.2: Methodology

This report aimed to capture the whole population of RBF projects in WASH, and then analyze a representative sample of the population. This ensured that the report's conclusions were based on reasonable evidence, and allowed the current state of RBF in WASH to be understood.

First, a census of all RBF projects in WASH was created by reviewing reports on RBF, and searching websites of donors and other organizations focused on WASH. Then, a sample of 30 projects was selected from the census. The sample only included projects that were expected to have progressed far enough to yield results, and included all types of RBF and sectors in WASH.

Documents were reviewed and stakeholders were interviewed, to collect data on the projects in the sample. Last, the data was analyzed to learn how RBF is used in WASH, how well it performs, and how it could be improved. The amount of documents that were available, and the quality of the documents, varied across projects.

This report made the strongest conclusions possible with the information that could be found. It was often not possible to make concrete recommendations on certain aspects of the practice of RBF in WASH. Inconsistencies across sources were resolved, and the report presents data on scant reporting of key indicators. The methodology is presented in more detail in Section **Error! Reference source not found.**

## Where Is RBF Likely To Work Well, and Where Is It Not?

Evidence and logic indicate that RBF works well in some situations, and not in others. For RBF to work, these minimum conditions must be met:

- There is a need for **subsidizing the desired result**—RBF is inherently a payment by government for something, that is, a subsidy
- The **result must be measurable**, as payments need to be based on verified results
- The result must be closely **linked to the desired impact**, or the RBF scheme must be complemented by other measures needed to convert outputs into impacts—otherwise, the desired benefits will not be realized
- **Providers** need to be **motivated** by payments, and **capable** of delivering the desired outputs—otherwise they will not deliver what is needed.

These conditions alone are not sufficient to guarantee successful use of RBF. This report's key findings on other factors of success are below.

***RBF works when private providers supply goods beneficiaries want.*** Private providers respond well to RBF incentives. An analysis of RBF outcomes showed that 70 percent of projects with private providers met or exceeded their targets. RBF works well when it subsidizes outputs that families themselves want. A typical case is the Small Town and Rural Water project in Uganda, in which a number of local private providers in total delivered 121 percent of the target number of outputs.

***RBF can work with public providers, but the rationale for RBF is less clear.*** In the limited dataset used, public providers were slightly less effective than private providers. More importantly, the rationale for using RBF with public providers is less clear. Governments should be able to fund providers they own, and to direct them to achieve results with the funding. If this is not happening,

the best response will often be to improve the governance and accountability of the provider, rather than trying to incentivize it with RBF.

***RBF is a promising mechanism for higher levels of government to influence policy at lower levels of government.*** One place where there is a clear rationale for RBF with public providers is in decentralized water sectors, where higher tiers of government seek to influence policy and service provision at lower levels, but do not control it directly. The Government of Indonesia used RBF payments (known as ‘Hibah’) to encourage municipal utilities to expand service. A stakeholder reported that the Hibah

*“seemed to be the key they had been looking for in terms of unlocking capacity to better target and control fiscal transfers to sub-national government and ...to areas where developments are most needed.”*

*(Averill, Scally-Irvine, Nordiawan, Howard, & Gouy, 2011)*

***Bridge-financing extends the range of situations where RBF can be used, but introduces complexity and risk.*** RBF typically requires a provider to first create the output, and then get paid for it. This works well where providers are well capitalized or have ready access to finance. In some cases though, providers lack access to finance. In these cases, RBF schemes have been designed to include ‘bridge finance’. Bridge finance is typically in the form of loans to the provider from third party financiers, enabling the provider to cover the cost of delivering outputs. Payments received for results are then used to repay the financier. Risk transfer still works (provided the financier is private), because financiers will conduct due diligence to be sure that their loans are likely to be repaid. This acts as quality control on the service providers.

A good example is Microfinance for Community Water Projects in Kenya, which arranged for a local bank to provide loans to community-based organizations (CBOs) to build water systems. These loans provided the initial capital that the CBOs needed to build outputs. The CBOs then used the payments they received for delivering outputs to help repay the loans. That project worked well, and is in a scale-up phase.

Bridge financing provided in the Extension of Water and Sanitation project in Honduras enabled more providers to deliver outputs under the project. Local non-government organizations (NGOs) offered to provide additional bridge financing—this allowed more public providers to participate, and enabled private providers to participate (private providers had not yet participated in the project, as they could not obtain financing).

However, bridge-finance adds complexity—and hence increases costs and risks, and can make projects harder to scale up. Projects that provide help with bridge financing often have to provide technical assistance to financiers (as happened in the Second Generation Project in Indonesia), which increases costs and reduces economies of scale. Furthermore, providing bridge financing increases the range and number of organizations that must be coordinated, as lenders are brought in to the project. Thus, RBF with bridge finance should only be used where the benefits from RBF (compared to another funding mechanism) outweigh the costs of complexity introduced by the bridge finance.

***It is not yet clear if RBF can achieve behavior change in community sanitation projects.*** The full health benefits of improved sanitation are not realized unless most people in the community adopt good sanitation and hygiene practices. Conditional Cash Transfers (a kind of RBF) have been used to try to motivate changed behavior, but with limited success so far.

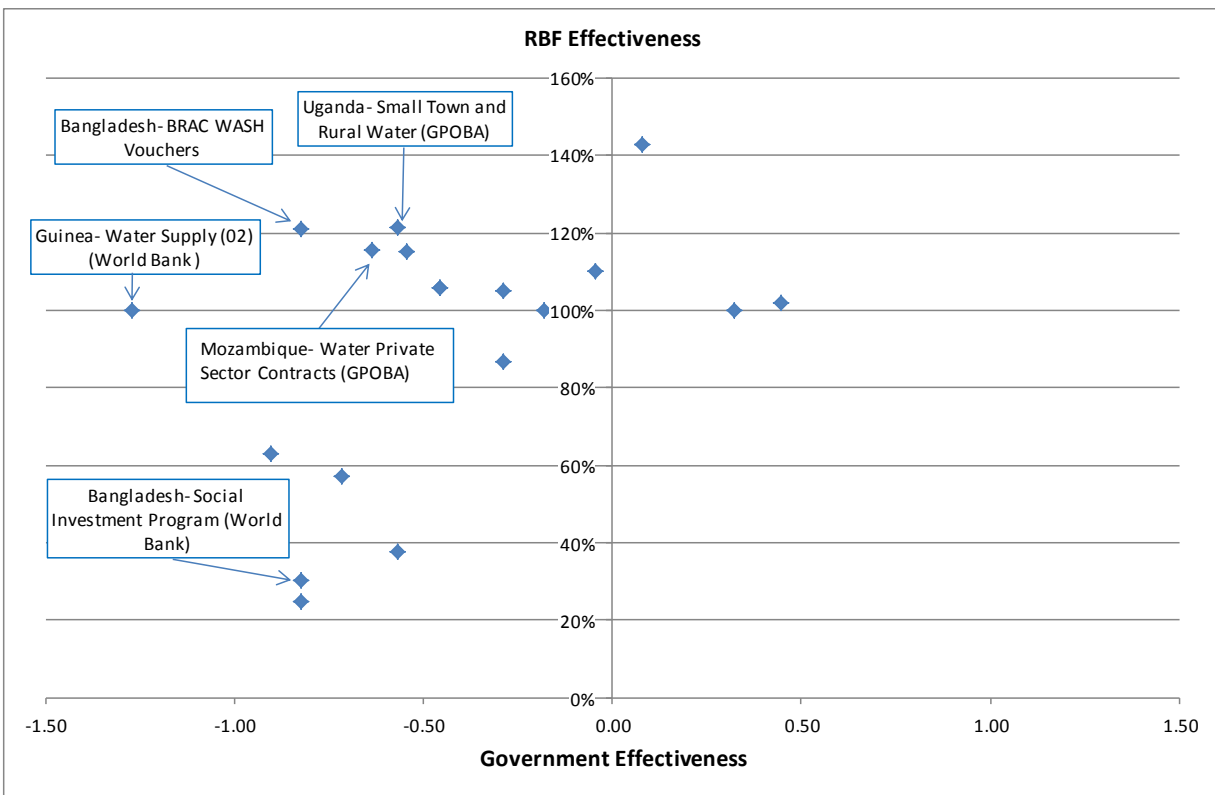
The Nirmal Gram Puraskar (India) and DISHARI (Bangladesh) projects provided incentives to village governments if open defecation was eliminated in the village. These projects both aimed to provide prizes to village governments for eliminating open defecation in their communities. However, villages received prizes under the Nirmal Gram Puraskar without having necessarily eliminated open defecation. In some cases, people resumed defecating in the open after the prizes were awarded. The DISHARI project in Bangladesh relied on villages to self-report results. Some villages falsely reported success, and received prizes they did not deserve.

The East Meets West Foundation is working on a more rigorous approach to monitoring behavior change in its projects in Vietnam and Cambodia. Online reporting, rigorous checking procedures, and digital photos are being used as part of a program that incentivizes the construction and use of latrines. However, it is too early to know yet if this is sufficient to overcome the inherent problems of monitoring private sanitation and hygiene behavior. For now, it is worth continuing to support innovation in monitoring of sanitation behavior to see if effective methods can be developed. However, large scale initiatives should be postponed until success is demonstrated at a pilot level.

***RBF works well in poor countries with low government capacity.*** RBF projects have met or exceeded their output targets in some very poor countries with low government effectiveness, such as the BRAC WASH Vouchers project in Bangladesh, and the Water Supply (02) project in Guinea. Two of the three largest RBF projects managed to scale in similar countries. BRAC WASH Vouchers served 6,600,000 people in Bangladesh, and PLM served 1,900,000 people in Mozambique (both projects provided latrines).

Figure 0.3 shows that many RBF projects were highly effective in countries with low government capacity.

**Figure 0.3: Government Effectiveness and Effectiveness (of RBF)**



Note: While these points may seem to indicate a trend, the R-squared statistic of the linear regression was 0.17. The vast majority of the variation in RBF effectiveness was explained by something other than government effectiveness. Otherwise, ‘High effectiveness’ was defined as delivering 100 percent of targets. ‘Moderate’ was at least 50 percent and less than 100 percent, and ‘Low’ was below 50 percent.

***RBF works for providing consumable goods in humanitarian emergencies.***

Voucher projects have successfully used private goods provided WASH goods in areas affected by violent conflict and natural disasters. In Somalia, the WASH Cluster has been providing vouchers for households to buy containers of water from small vendors in conflict-affected areas—in 2014, the Cluster served 205,704 people. After the 2010 earthquake in Haiti, Oxfam used vouchers to help 440 families obtain hygiene goods, such as soap, from small shops.

**Further Research Is Needed—It Should Be Built Into New Projects.**

Much remains unknown: is RBF more effective, efficient, and sustainable than conventional public sector and donor projects; what factors allow RBF to reach scale; how can RBF work well to promote changes in sanitation and hygiene behavior? Answers are unlikely to be found from further study of existing projects. This is because existing RBF projects have not collected enough data—only 62 percent of key indicators were publicly available for projects in the sample. Moreover, the real question is not ‘whether RBF works’ but ‘in what circumstances, and with what designs, will RBF deliver better results than conventional projects?’ This cannot be answered at present. Even where there is data on the performance of RBF projects, there is not comparable data on conventional projects.

The way forward is for all RBF projects in WASH in the future to collect and publish a common minimum set of data, including targets, outputs achieved, costs, and whether delivery is sustained. This should be complemented by projects with built-in randomized controlled trials<sup>5</sup>, in which RBF and conventional projects with the same aims are implemented side-by-side, and compared on metrics such as effectiveness, efficiency, sustainability and impact. Finally, a serious effort is needed to develop RBF projects at scale. As this is done, ‘participant-observation’ records should be kept, to allow lessons to be learned.

---

<sup>5</sup> Resources for conducting randomized trials to evaluate development projects are available at <http://www.povertyactionlab.org/methodology>.



T: +1 (202) 466-6790  
F: +1 (202) 466-6797  
1747 Pennsylvania Avenue NW  
Suite 1200  
WASHINGTON DC 20006  
United States of America

T: +1 (646) 632-3770  
F: +1 (212) 682-0278  
200 Park Ave  
Suite 1744  
NEW YORK, NY 10166  
United States of America

T: +61 (2) 9231 6862  
Level 1, 27-31 Macquarie Place  
SYDNEY NSW 2000  
Australia

T: +64 (4) 913 2800  
F: +64 (4) 913 2808  
Level 2, 88 The Terrace  
PO Box 10-225  
WELLINGTON 6143  
New Zealand

T: +57 (1) 646 6626  
F: +57 (1) 646 6850  
Calle 100 No. 7-33  
Torre 1, Piso 14  
BOGOTÁ  
Colombia

T: +33 (1) 45 27 24 55  
F: +33 (1) 45 20 17 69  
7 Rue Claude Chahu  
PARIS 75116  
France

----- [www.castalia-advisors.com](http://www.castalia-advisors.com)