























## II. Identifying Misaligned Incentives in the Sanitation Sector

### KEY POINTS

- Market failures can occur at all levels of the sanitation value chain (demand creation, collection, transport, treatment, disposal, and reuse) on both the supply and the demand side.
- Realignment of incentives can take place along all steps of the sanitation value chain.
- RBF instruments can help remedy insufficient resource allocation for sanitation due to lack of prioritization.

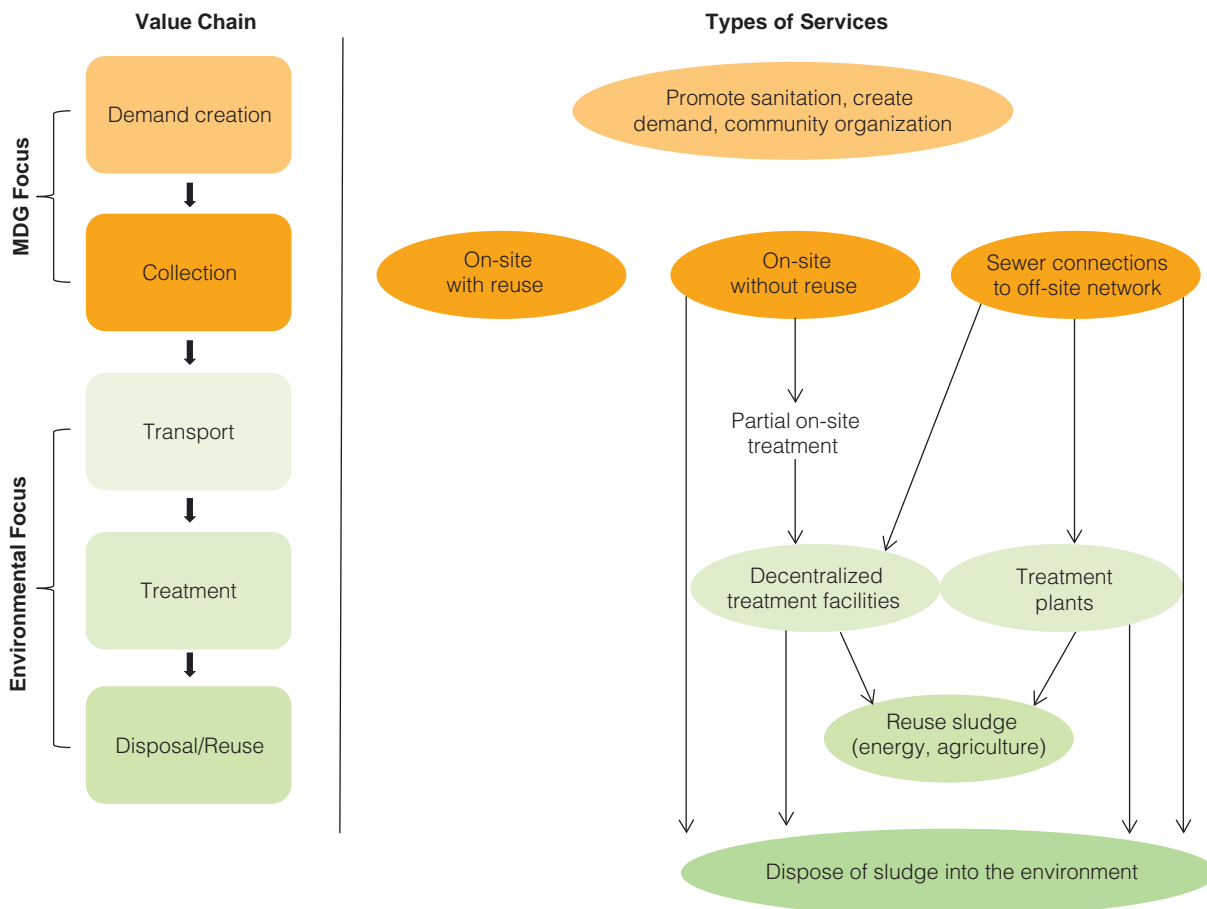
At present, the sanitation sector is riddled with “misaligned” incentives (or market failures) that have limited investment flows to the sector. This section briefly reviews where incentives are misaligned across the sanitation value chain (see Figure 1).

First, incentives are misaligned at the level of the overall sanitation sector. This is the root cause for insufficient

resource allocation at that level. The main issue affecting the sanitation sector as a whole is the **lack of prioritization**, especially when compared with other basic services, such as health, education, and even water. This may be due to a number of factors, including:

- Fragmented responsibilities due to the “ownership” of sanitation having been transferred to the

**FIGURE 1: TYPES OF SANITATION SERVICES ALONGSIDE THE VALUE CHAIN**



municipal government, which seldom has the drive, the competence, and the financial resources to tackle such issues;

- Competition with other sectors, such as the health sector, which have become more sophisticated at “making the case” for attracting investments;
- Lack of awareness of the impacts that poor sanitation can have on public health, the environment, and the rest of the economy via related sectors (such as tourism, agriculture, or fisheries); and
- The taboo element, which can result in difficulties in generating political gains from tackling sanitation.

Such a lack of prioritization may be felt at either the national or local government level, depending on how responsibilities for sanitation have been allocated to various levels of government. The two may be linked, as local governments often get a substantial share of their funding through transfers from the national government.

A potential way to address such lack of prioritization at the level of policy-makers using RBF instruments would involve using COD (Cash on Delivery) Aid contracts at the national level or community or local government rewards at the local level (see the subsection “Macro Level: Modifying Policymakers’ Incentives” in Chapter III).

Incentives can also be misaligned at each step of the sanitation value chain, as discussed below.

**Collection.** This step of the value chain, also referred to as *capture and storage*, is generally considered to be the main

entry point for sanitation provision.<sup>2</sup> It consists of building and operating infrastructure to collect sanitation products, including human excreta, black water (septage), or grey water (sullage). Collecting the waste can be done via onsite sanitation solutions (for example, dry pit latrines or septic tanks) or off-site systems, where excreta are removed from the plot, most commonly via waterborne sewerage.

A number of market failures may appear both on the demand and on the supply side of that segment, which means that provision of collection services (infrastructure building as well as operation and maintenance) may be insufficient compared to what would be socially optimal. Table 2 lists examples of such market failures.

**Transport.** Transport can be carried out in two ways. For on-site sanitation systems, when such systems fill up, the sludge needs to be emptied and transported to a sanitary landfill. For off-site sanitation, transport is done via the sewers. However, most latrines belonging to the world’s poor are not connected to a sewer system. When latrines fill up, they need to be moved or emptied. In most rapidly growing cities, emptying is poorly organized and regulated. Householders either empty pits and tanks themselves or pay private operators to do so. Waste is often dumped in the nearby environment, especially (as is often the case) if there is no official disposal and treatment point, or if it is far away. Pit and tank waste is heavy and costly to transport, and operators often incur additional costs because they have to pay to dump the waste at an official site. The result is that little on-site waste reaches the treatment plant and most ends up in nearby watercourses, waste ground, or unofficial landfill sites.

**TABLE 2: EXAMPLES OF MARKET FAILURES LEADING TO INSUFFICIENT COLLECTION SERVICES**

Demand-Side Failures	Supply-Side Failures
No or insufficient demand for sanitation	No or insufficient providers (such as masons)
Lack of awareness about the benefits of sanitation	Existing providers do not have adequate / sufficient equipment
Entrenched behavior or resistance to change	Existing providers have insufficient training
Not affordable	Existing providers have no legal status and operate illegally
No financing available for up-front investment	Utilities have monopoly rights and do not allow additional providers

<sup>2</sup> In Figure 1, an intermediary step, “demand creation,” was inserted because several activities may need to be carried out by other actors to generate demand independently of investments into collection.

**Treatment.** Treatment can take place either on-site (some on-site systems allow on-site treatment, such as septic tanks, but only if they are adequately maintained) or off-site (when the waste has been collected via sewer networks or pit latrine emptiers and transported to a sewage treatment plant). Treatment of these waste flows is often critical to protect downstream water resources, public health, and the environment.

Table 3 lists some examples of potential failures on the demand and supply sides of waste transport and treatment.

**Safe disposal.** Safe disposal requires isolating the residual waste from human beings and from the environment (for example, to protect water resources). This can be achieved by building safe disposal sites, which are lined (thereby protecting groundwater resources) and set aside from human settlements. Such safe disposal sites might not exist in sufficient numbers, however, or might be inappropriately built or out of reach for enterprises transporting the waste. For example, if the sites are on the outskirts of town and charge a fee for disposal, it may not be economic for pit latrine emptiers to dispose of the waste at those sites.

**Reuse.** Suitable treatment can result in waste streams being converted into a valuable resource for reuse. Reuse of treated excreta offers significant benefits both in terms of reducing the need to find safe disposal sites for waste and because the waste itself contains nutrients that are an important resource for agriculture or energy generation, either at a large scale (wastewater treatment plants with co-generation) or at the domestic/community level through biogas plants.

Table 4 lists some failures that can occur at the reuse step of the sanitation value chain.

“Addressing” these market failures can be done through a range of policy instruments, including developing and enforcing regulations, applying penalties and standards, or making incentive payments.

**TABLE 3: EXAMPLES OF POTENTIAL FAILURES IN WASTE TRANSPORT AND TREATMENT**

Demand-Side Failures	Supply-Side Failures
Unwillingness to pay for the service (especially when “no-cost” alternatives, such as dumping the waste on the street, are available)	Limited entry into the segment
Existing services are not affordable	Under-investment by both small-scale entrepreneurs and utilities
	Appropriate technical solutions are not available (lack of innovation, partly due to lack of market entry)
	Limited returns create difficulties for firms to grow

**TABLE 4: EXAMPLES OF POTENTIAL FAILURES IN WASTE REUSE**

Demand-Side Failures	Supply-Side Failures
Local culture may be “opposed” or resistant to reuse of grey waters	Sludge has limited financial value when its economic value could be large (if markets for reuse were better organized)
By-products from reuse cannot compete with alternative products (for example, subsidized energy or chemical fertilizers)	Higher costs of reuse facilities

Results-based financing consists of using public funds to make incentive payments to address market failures.

RBF consists of using public funds to make incentive payments to address such market failures. RBF can be used at various levels: at the macro level to influence policymakers to prioritize sanitation sector investments, or at the micro level, either on the supply side or the demand side of the various steps of the sanitation value chain.

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# III. Using RBF to Realign Incentives in the Sanitation Sector

## KEY POINTS

- At the macro level, RBF instruments such as cash on delivery (COD) aid or community rewards can generate incentives for policy-makers to act differently.
  - RBF instruments targeted to suppliers to incentivize them to provide services to the poor include output-based aid (OBA) and advanced market commitments (AMC).
  - On the demand side, RBF can generate incentives for households to change their behavior through conditional cash transfers (CCTs) and vouchers.
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Public funds can be used at several levels to realign incentives to provide sustainable sanitation, at the macro level or at the micro level (on the supply or on the demand side). This chapter examines the main RBF instruments that have been promoted over the years in several sectors (including, for example, health, education, and energy) and assesses whether they are applicable to sanitation. Each instrument is introduced and then discussed in terms of its application to the sanitation sector.

### Macro Level: Modifying Policymakers' Incentives

As mentioned in Chapter I, policy-makers at the national and local levels might be under-prioritizing the sanitation sector. RBF can be used to generate incentives for policy-makers to act differently, either at the national level (for example, through COD Aid) or at the local level (for example, through rewards for local governments or communities).

RBF can be used to generate incentives for national- and local-level policy-makers to act differently.

### Using Cash on Delivery (COD) Aid: A Contract Between an External Donor and National Governments

**What is COD Aid?** COD transfers funds, typically to the Ministry of Finance (MoF), in proportion to progress toward a mutually agreed outcome such as universal primary education completion or reductions in illness. It is presented as a way to create incentives for “the government to address a problem of its own making.”

COD Aid is results-based in the sense that transfers only take place if the goals have been met and progress has been independently verified. The approach lets the recipient choose how such mutually agreed objectives will be achieved. For example, if universal primary education completion is best achieved by building roads (so children can get to schools) rather than building schools or training teachers, the MoF can allocate funds for that purpose. The recipient can make a specific request for additional technical assistance but this is by no means an integral (and mandatory) part of the aid package. COD Aid, as a concept, was first introduced by US-based Center for Global Development (CGD).

Cash on delivery (COD) transfers only take place if specified goals have been met and independent verification of progress has taken place.

Several donor agencies have expressed interest in incorporating this type of aid into the design of their programs. For example, DFID is in the process of negotiating a COD Aid arrangement with the Government of Ethiopia to support

secondary education for girls. In this example, pre-agreed unit payments would be made for each girl who passes secondary school tests.

A note by Robert Kaplan<sup>3</sup> for CGD explored three alternative arrangements to apply COD Aid to the water sector, although it did not address the sanitation sector (see Table 5).

This note indicated that to achieve sustainable improvements, a COD Aid contract for water should last at least five years, preferably with automatic extensions after five to 10 years. It was envisaged that depending on the baseline coverage, the COD Aid payment be made on the whole extent to which the indicator has been achieved (especially when the baseline is very low, with a view to pay for past achievements) or only for a given increment above a specified baseline.

**How could it be applied to the sanitation sector?** COD Aid could be appropriate for the sanitation sector in order to modify governments' current attitudes toward the sector. A critical issue would be to define an indicator that provides incentives for governments to invest in a sustainable and measurable manner, without creating particularly burdensome performance monitoring requirements or generating perverse incentives.

At an international level, COD Aid for sanitation could take the form of a contract between a donor and the Ministry of Finance in a given country, with a fixed remuneration (to be agreed) per unit of achievement. In line with the Millennium Development Goals (MDGs),<sup>4</sup> achievement could be defined based on coverage, with a unit payment per person with access to improved sanitation according to the Joint Monitoring Programme (JMP) definition.<sup>5,6</sup>

To encourage sustained coverage, it would be preferable to pay a lower unitary amount for the entire achievement rather than focus exclusively on new coverage. This would also be more in line with current performance verification systems (that is, JMP) that track overall coverage rather than new coverage. Indeed, particularly with respect to on-site sanitation, some households that had access to improved sanitation may lose it in the following year (for example, if a latrine collapses due to flooding or because it becomes full); focusing on new coverage may therefore be inadequate.

Although an emphasis on coverage is in line with existing performance verification mechanisms, the debate on post-MDG indicators has shown that focusing on coverage alone is often not sufficient and may in fact generate perverse incentives. For example, on-site latrines may exist but they have filled up and are therefore unusable. The latrines may

**TABLE 5: POSSIBLE APPLICATIONS OF COD AID TO THE WATER SECTOR**

Alternatives for Annual Payments	Output Definition	Verification	Issues Identified
Per satisfied household (HH) served	HH with access meeting WHO standards	Household surveys	How to determine household satisfaction Water quality standards
Per volume of water billed and paid	Water billed and paid	Operators' audits	Bias toward formal operators Possible perverse incentive to use more water
Per satisfied household served, adjusted by percent billed and paid of total volume of water produced	As above, combined	Household surveys + operators' audits	Higher verification burden

Source: Kaplan 2010

<sup>3</sup> Kaplan 2010

<sup>4</sup> See <http://mdgs.un.org/unsd/mdg>

<sup>5</sup> See [www.wssinfo.org/definitions-methods/introduction](http://www.wssinfo.org/definitions-methods/introduction)

<sup>6</sup> This may be open to discussion, however, as many countries track sanitation coverage differently from what the JMP does: it would therefore be necessary to specify the monitoring strategy in advance in the contract.



be emptied periodically, but in an unhygienic way that generates environmental and public health hazards.

Complementing a coverage indicator with a volumetric indicator (as Kaplan suggests in his note for the water sector) may be possible. This could be done in several ways, such as by measuring the volume of sludge either disposed of at safe disposal points or treated to adequate standards. Measuring performance in this way would be more difficult in terms of performance verification for sanitation than for the water sector, however, for the following reasons:

- In less-developed countries, the bulk of the volume that needs to be safely disposed of (and treated, where applicable) tends to originate from on-site latrines. These volumes are not currently tracked in most performance verification systems.
- Residual volumes are highly dependent on the method used for collecting excreta. For example, if water-borne sewerage is used, the volumes of sewage are much higher than if using dry-pit latrines. Tracking such volumes in a consistent and comparable manner could therefore prove methodologically challenging.

### Rewards for Local Governments and Communities

Because the sanitation sector is often highly decentralized, providing incentives to local governments to focus on sanitation may also be necessary, in complement or as an alternative to COD Aid. Such local-government or community-level rewards were introduced in India in the context of the Total Sanitation Campaign (TSC) through the *Nirmal Gram Puraskar* (NGP) (see Box 1).<sup>7</sup>

If combined with external funding, a system of “cascading” incentives and rewards could be instituted, whereby the national government reallocates rewards from a COD Aid contract to well-performing villages and communities.

This kind of village- or community-level incentive program could be established by national governments, with inter-governmental transfers based on clearly defined targets to promote sanitation. The type of indicators discussed for COD Aid contracts could be used in the context of such programs.

### Supply Side: Incentivizing Service Providers

On the supply side of sanitation markets, RBF can be used to generate incentives for service providers to provide

#### BOX 1: THE NIRMAL GRAM PURASKAR IN INDIA

The *Nirmal Gram Puraskar* (NGP) is a national program in which the central government provides one-off monetary rewards to qualifying *Gram Panchayats* (local governments). Payments are based on a set of criteria (which include, among others, 100 percent sanitation coverage of individual households and being totally free from open defecation) and are made following a verification process. These rewards range between US\$1,250-12,500 per *Gram Panchayat*, depending on the population. *Gram Panchayats* can use the cash incentive to improve and maintain sanitation facilities in their respective areas with a focus on solid and liquid waste disposal and maintenance of sanitation standards. In addition, the State of Maharashtra has introduced several state-based campaigns, such as the Clean Village campaign (*Sant Gadge Baba*), which takes place annually and allows for maintaining overall cleanliness in the villages and strengthening the performance verification mechanisms. A key limitation of the program in India is related to the weakness of the performance verification systems, however, which appeared to be prone to some manipulation, particularly in certain states.

Source: Trémolet et al. 2010

<sup>7</sup> Trémolet et al. 2010

services to the poor, either because the latter cannot afford the full cost of the services or because service providers are not currently serving this market segment. This section reviews two main types of RBF instruments that can be used on the supply side, including *output-based aid* (OBA) and *advanced market commitments* (AMC).

### Output-Based Aid (OBA): Incentivizing Service Providers to Serve the Poor<sup>8</sup>

Output-based aid ties the disbursement of public funding to the achievement of clearly specified results that directly support improved access to basic services.

**What is output-based aid?** OBA ties the disbursement of public funding (in the form of subsidies) to the achievement of clearly specified results that directly support improved access to basic services. OBA has gradually emerged as an important way to finance access to basic services as well as infrastructure provision in a range of sectors, including roads, energy, telecommunications, health, and education.<sup>9</sup>

The full amount of subsidy is paid to the service provider (private, public, or community operators) only when results have been met and verified by a third party. Subsidies are provided ex-post, once the outputs have been delivered over a certain period of time, which means that the service provider bears some financing and performance risk. This encourages the use of private sector funds (leverage), which are usually needed to pre-finance a large portion of the costs.

The need for subsidy is assessed on the basis of the level of demand for the service, costs, and social benefits generated. Subsidies are provided to encourage the provision of basic services to poor households in a targeted manner: a fundamental purpose is to encourage service providers to deliver services in areas that are not necessarily commercially attractive or where they would not naturally get involved without the subsidy.

**How could OBA be applied to the sanitation sector?** The use of OBA has so far been relatively limited in the sanitation sector, especially when compared to other sectors such as water or energy. The Global Partnership for Output Based Aid<sup>10</sup> has initiated a number of sanitation projects. Only two of them have been implemented so far (see Boxes 2 and 3 for existing sanitation projects that have received GPOBA's support), while others have been considered but are yet to be implemented or approved.

In addition, a few national governments have also adopted output-based approaches to delivering subsidies for sanitation, such as the Government of Mozambique in the late 1980s, Brazil, and India.

<sup>8</sup> This section draws heavily from Trémolet and Evans 2010. Please refer to the full publication for details.

<sup>9</sup> For more information on output-based aid and how it has been applied in several sectors, please refer to Mumssen et al. 2010.

<sup>10</sup> See [www.gpoba.org](http://www.gpoba.org)

**BOX 2: OUTPUT-BASED AID FOR CONNECTIONS TO WATER AND SEWERAGE IN UNPLANNED URBAN SETTLEMENTS IN MOROCCO**

In Morocco, GPOBA provided a US\$7 million grant to three service providers (two private operators and one public) to extend water and sewerage services into unplanned urban settlements that were formerly excluded from regular service provision. Launched in 2007, the project aimed to connect 11,300 households to piped water and sewerage. The output was a simultaneous connection to piped water and sewerage for poor households. The subsidy was paid in two installments: 60 percent on completion of the connection and 40 percent upon verification of at least 6 months of sustained service. An independent third party carried out verification. Details of the schemes and the costs of the subsidy varied by operator. Unit subsidies for sewerage connections varied from US\$421 in Casablanca to US\$913 in Meknès, due to differing unit costs and differing ability to pay on the part of households in different cities. Initial progress under the scheme was slow, largely due to a lack of familiarity with this type of scheme, investment delays upstream, and lack of clarity over land tenure. The pace of investment substantially picked up in subsequent years, with Amendis in Tangiers having delivered the expected number of connections ahead of schedule. The Government of Morocco is now exploring options for scaling up the scheme at the national level.

*Source:* Based on Chauvot de Beauchêne 2009 and personal communication with X. Chauvot de Beauchêne

Most OBA projects so far have focused on providing subsidies per new access point (either for connection to the sewerage system in Morocco or for on-site sanitation as in Senegal). In a paper commissioned by GPOBA and WSP, Trémolet and Evans (2010) argued that OBA mechanisms could be used to finance a much broader range of activities, going from demand promotion (or more generally “software” activities) all the way to sludge reuse and safe disposal. The types of OBA mechanisms recommended in this paper are summarized in Table 6 and Figure 2.

The design of individual OBA schemes will depend on the most appropriate way to package the provision of sustainable sanitation services, which means that each OBA scheme will likely include a combination of several types of results-based subsidies. In addition, the management of human excreta may need to be packaged with that of other waste streams, such as solid waste, for example, if latrines or drainage pipes keep filling up with rubbish. OBA subsidies could be provided in an integrated manner to encourage the formation of integrated solid waste and liquid waste entrepreneurs.

The main focus of any intervention will be determined by identifying which funding gaps need to be filled—that is, where market failures or affordability constraints mean that a sanitation service is being under-provided. For example, if networked sewerage exists but people are not connected, the principle focus for OBA subsidies should be on collection/access (building sewerage connections). If households have onsite facilities (such as basic latrines), but the pit waste is being indiscriminately dumped in the environment, the focus may be on fostering transport and safe disposal of this waste.

**BOX 3: SENEGAL: OUTPUT-BASED AID FOR ON-SITE SANITATION AT THE HOUSEHOLD LEVEL**

In Senegal, GPOBA is providing subsidies for on-site sanitation facilities in poor urban and peri-urban areas of Dakar, the capital city. The OBA component was developed in the context of a broader water and sanitation project funded by a group of donors and led by the World Bank, the Senegal Long Term Water Project. The OBA component built on an earlier IDA-funded project, PAQPUD (*Programme d'Assainissement Autonome des Quartiers Périurbains de Dakar*), which already involved an OBA approach, and led to the construction of 63,500 new on-site sanitation facilities in a demand-driven manner, benefiting more than 400,000 people between 2002 and 2008. The GPOBA project was initially expected to build on PAQPUD and provide access to an additional 15,100 facilities to households living in the Dakar region (approximately 135,900 expected beneficiaries with about nine people per household). Although the project was expected to end in February 2010, it has been extended to the end of 2011, due to slow implementation.

After 1.5 years of implementation, the level of completion was relatively low (around 7 percent of the initial objective) due to a range of reasons, including:

- The economic crisis had significantly affected Senegalese households who faced difficulties paying for improved sanitation among other priorities such as food, schooling, and other essential household expenses.
- The fact that beneficiary households had to pay the full amount of their upfront contribution (about 25 percent of the total cost) before the construction starts appeared to be a major obstacle for most beneficiaries.

Some of the adjustments that were proposed to address these issues include:

- A stronger involvement of the main micro-finance institution in Senegal to address the difficulties faced by beneficiaries to finance their upfront contributions (although this was tried, it did not help to increase the effectiveness of the program); and
- A revised Information Education Communication (IEC), methodology with an upfront effort in terms of mass communication, an increased IEC budget, and increased involvement of local governments.

Source: Communication with Pierre Boulenger, WSP 2010

The further down the chain the subsidy is provided, the more likely it will be possible to implicitly subsidize previous steps of the chain. However, the further down the subsidy is provided on the value chain, the more necessary it might become to add performance indicators that strengthen the poverty targeting.

The further down the chain the subsidy is provided, the more likely it will be possible to implicitly subsidize previous steps of the chain. However, the further down the subsidy is provided on the value chain, the more necessary it may become to add performance indicators that strengthen the poverty targeting. Otherwise, companies may have a stronger incentive to connect rich or large customers rather than those who are poor and more difficult to reach, and likely to consume and therefore discharge less. For example, in Sri Lanka, GPOBA proposed to create incentives for better operation of onsite sanitation by combining a payment for operation of onsite systems with a subsidy for rehabilitation and construction of new facilities. The objective was to create incentives for contractors to enter the market as “sanitation operators” in charge not only of building latrines but also of ensuring that they are adequately maintained and remain operational over time.

As a result, the packaging of sanitation services eligible for a payment could help foster the development of new sanitation service providers. For example, the

**TABLE 6: RANGE OF OBA FINANCING MECHANISMS POTENTIALLY APPLICABLE TO SANITATION**

Value Chain	Service Types	Indicative Outputs (for Monitoring and Payments)	Cost Elements That Could Be Partially Covered Ex-post		Type of Service Provider
			Capital Costs	Operating Costs	
Demand creation “software activities”	Sanitation marketing	Number of people who build/use a latrine following demand promotion activities		Staff salaries, transport costs, materials development	NGOs, CBOs, local governments, ministries, sanitation entrepreneurs
	Social mobilization, triggering	Village/community becoming ODF			
	Hygiene promotion	Number of people adopting hygienic practices			
	Product development	Volume of sales of new products	Development costs	Staff salaries	Sanitation entrepreneurs, universities, engineering firms
Collection/access	Build on-site sanitation (pit latrines or septic tanks)	Village/community becoming ODF Number of latrines built for eligible households Number of slabs sold to eligible households	Construction costs		Households (self-provision), masons, utilities, local government
	Empty latrines or septic tanks	Number of latrines emptied for eligible households Volume of waste removed	Start-up costs (equipment) and initial rehab of latrines	Running costs of equipment, fuel, salaries, costs of disposal	Households (self-provision), private operators (manual or mechanized), utilities, local government
	Build sewer connections	Number of new connections to eligible households	Construction costs		Utilities Private contractors
	Build and operate community toilets	Number of eligible users	Construction costs, land	Running costs	Local government, utilities, NGOs, CBOs
	Build and operate public toilet facilities	Number of toilet blocks installed in disadvantaged areas and meeting accessibility criteria	Construction costs, land	Running costs	Utilities, NGOs, private contractors, local governments

*(continued)*

TABLE 6: CONTINUED

Value Chain	Service Types	Indicative Outputs (for Monitoring and Payments)	Cost Elements That Could Be Partially Covered Ex-post		Type of Service Provider
			Capital Costs	Operating Costs	
Transport	Transport pit waste and septage to designated discharge point	Number of latrines emptied for eligible households Volume of waste transported to approved location	Start-up investment costs	Salaries, fuel, costs of discharge	Utilities, local government, private contractors
	Build and operate transfer stations	Number of transfer stations built and still operating after a given period Volume of septage collected at transfer stations	Construction costs, land	Salaries, fuel, costs of discharge	Utilities, local governments, private operators
	Build and operate sewerage systems	Number of eligible households connected to new sewers with satisfactory service (can be measured by surveys, payment of tariffs, etc.)	Construction costs	Salaries, fuel, costs of discharge	Utilities, local government, community contractors, private contractors
Treatment	Build, maintain, and operate decentralized wastewater treatment facilities	Volume of waste collected at plant and treated to required standard	Construction costs, land	Salaries, fuel, costs of discharge	Utilities, local government, community contractors, private contractors
	Build, maintain, and operate principal wastewater treatment plants	Volume of waste collected at the plant and treated to required standard	Construction costs, land	Salaries, fuel, costs of discharge	Utilities, local government, community contractors, private contractors
Safe disposal/reuse	Build and maintain ecological toilets or biogas facilities	Number of ecological/biogas toilets installed/used Volume of productive agricultural inputs generated Energy generated	Construction costs, land		Local government, private contractors, communities
	Treat waste to standards required for reuse and deliver it to locations as required	Volume (or percent) of waste reused	Construction costs, land	Salaries, fuel, transport costs (if required)	Utilities, local government, private contractors (large schemes) Local government, households, communities (for individual ecological toilet installations)

























**BOX 6: THE HEALTH RESULTS INNOVATION TRUST FUND**

The Health Results Innovation Trust Fund (HRITF) is funded by the Government of Norway and the United Kingdom, with commitments totaling more than US\$500 million through 2022. The HRITF finances activities to enhance access to and improve the quality of basic health services using a variety of RBF mechanisms. The HRITF has four specific aims:

- Support design, implementation, monitoring, and evaluation of RBF mechanisms;
- Develop and disseminate the evidence base for implementing successful RBF mechanisms;
- Build country institutional capacity to scale up and sustain RBF mechanisms, within the national health strategy and system; and
- Attract additional financing to the health sector.

The HRITF works with development partners and client countries to build and use country systems, wherever possible.

The HRITF supports:

- Country Pilot Grants to design, implement, monitor, and evaluate RBF mechanisms, with the following countries currently supported: Afghanistan, Benin, Democratic Republic of the Congo, Ghana, India, Kyrgyz Republic, Rwanda, Zambia, and Zimbabwe;
- Seed grants to assess the value and feasibility of RBF mechanisms in countries;
- Dissemination and knowledge sharing;
- A global website for knowledge and learning (see [www.rbfhealth.org](http://www.rbfhealth.org)); and
- An Interagency Working Group (IWG) on RBF, co-chaired by the World Bank, to share knowledge, best practices, and lessons learned

The HRITF was initiated in December 2007 and is expected to operate through 2022.

Source: [www.rbfhealth.org](http://www.rbfhealth.org)

for Tuberculosis, Aids, and Malaria.<sup>23</sup> It was initially set up with contributions of approximately US\$60 million, from the Dutch government and several other donors. At present, it does not operate on an RBF basis although a focus on performance-based management and monitoring and evaluation lies at the core of its design. In each country of operation, the GSF selects an executing agency, which acts as the main channel to disburse funds to sub-grantees. The GSF could potentially be used as a vehicle for RBF to the sector, under a “specific window” with dedicated RBF procedures. It would be necessary to verify the feasibility of such *modus operandi* with

the GSF’s management, however, because the GSF is hosted within UNOPS, a United Nations agency that may have disbursement procedures that do not allow RBF.

**Strengthen performance verification mechanisms and consider supporting a “partnership” for independent performance verification**

Independent performance verification is critical to the success of RBF schemes and can suffer from weaknesses. Technical innovation may be needed to facilitate sanitation performance verification (in the same way as the invention

<sup>23</sup> See [www.theglobalfund.org](http://www.theglobalfund.org)

of a lumen measurer made it possible to monitor the performance of street lighting, for example). Given the development of RBF mechanisms for a number of sectors (including health and education but also water and sanitation), it may be possible to establish an international partnership (or several at the national level) to strengthen performance verification activities, which would provide training for performance verification, publish manuals on developing performance verification procedures, and include an accreditation system for performance verification organizations at the country level.

**Promote the use of sanitation RBF as part of a broader package of interventions (for example, health and education CCTs to include a sanitation component)**

Sanitation is often considered in isolation when there are strong linkages with other activities, such as providing shelter or carrying out health prevention measures. Given that most CCT programs routinely include health and education indicators, the inclusion of sanitation indicators as part of these broader programs could be encouraged. This would require fostering linkages with other sectors and communities of practitioners.

**Fund solid empirical research through randomized controlled trials to verify the impact of RBF instruments vs. more traditional financing methods**

The advocates of RBF methods have so far hypothesized that a stronger focus on results when using public funds can generate better results for the program as a whole, however. There have been a limited number of independent evaluations of RBF schemes compared to more traditional financing methods, and all of these evaluations have been done for health and education related interventions.<sup>24</sup> As a result, the relative efficiency of RBF schemes has yet to be demonstrated in the sanitation sector and would need to be ascertained through rigorous evaluation. This would need to include a comprehensive evaluation of the costs of alternative approaches, particularly given that the costs of software interventions tend to be under-estimated in the sanitation sector.

**Disseminate information and findings about RBF instruments**

RBF is now a well-established financing method in the health sector. Information on RBF for health is conveniently located in a website managed by the World Bank entitled Results-Based Financing for Health.<sup>25</sup> Creating an equivalent website on RBF for sanitation (or dedicated webpages on an existing site) could be

Verification of the impact of RBF methods for sanitation would need to include a comprehensive evaluation of the costs of alternative approaches, particularly given that the costs of software interventions tend to be underestimated in the sanitation sector.

<sup>24</sup> See, for example Basinga et al. (2010) evaluating P4P schemes for health in Rwanda, or Olken, Onishi, and Wong (forthcoming) evaluating the Indonesia's PNM Generasi program, a CCT program based on health and education indicators in rural Indonesia. In Indonesia, the program's effectiveness appeared to be considerably higher in health than in education, partly because the health interventions take place at regular intervals one month apart rather than every day school attendance for example, which requires a more sustained change in behaviour.

<sup>25</sup> See [www.rbfhealth.org/rbfhealth](http://www.rbfhealth.org/rbfhealth)

a good way to raise the profile of RBF for sanitation and share experiences once these become more numerous. For example, as GPOBA evolves to become a “center of excellence” on output-based aid (rather than a direct provider of OBA subsidies), a section of its website could support resources dedicated to using RBF for sanitation more specifically. In the first instance, and short of creating a dedicated website, this could take the form of a “virtual group” or community of practice that could disseminate results, share lessons, and learn from each other as well as from people who have applied RBF in other sectors or could be incorporated as a key topic for the recently launched international Community of Practice on sanitation.

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