OVERVIEW
In Ghana, output-based aid (OBA) was used to improve affordability for households in crowded low-income areas of the Greater Accra Metropolitan Area (GAMA) to invest in improved household toilets. OBA was provided as a subsidy to reduce the up-front cost for toilets and stimulate demand, which in turn made it more attractive for financial institutions to enter this market.

DEVELOPMENT CHALLENGE
Recent economic growth in Ghana\(^1\),\(^2\) has been accompanied by rapid urbanization, putting a strain on infrastructure and the provision of household basic services. Among competing demands for public investment (including education, health, transportation, electricity, and water), sanitation has not been prioritized. Nationwide, only 23 percent of households have a toilet or improved latrine; in GAMA, only one-third have access to a flush toilet.\(^3\) Sanitation has become a growing problem, with periodic outbreaks of cholera and the second-highest open defecation rate among African countries.\(^4\) Private investment in sanitation at the household level is limited, with issues of affordability and access to finance to cover the upfront cost.

BUILDING A MARKET FOR TOILETS
In 2013, the World Bank and the government of Ghana approved the GAMA Water and Sanitation Project, linked to Ghana’s 5-year Strategic Environmental Sanitation Investment Plan adopted in 2011. The project was designed to support improvements of the water distribution network as well as waste collection, treatment and disposal services, with emphasis on low income communities (LICs).\(^5\) Besides infrastructure investments, the project sought to facilitate private investment in improved sanitation. Technical assistance was

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1. GNI per capita has increased from US$ 340 in 2000 to US$ 1,380 (2016) and national poverty levels have declined to roughly 24 percent (2010).
provided to (i) build the capacity of small and medium enterprises to supply toilets; (ii) help develop the market for financing household sanitation investments; and (iii) support financial institutions interested in partnering with the project to develop suitable savings and loan products.

The high cost of improved household toilets suitable for densely populated areas raised issues of affordability. Hence, a US$4.85 million GPOBA grant was provided to pilot the use of OBA subsidies to improve affordability of household sanitation in these communities. The OBA grant was initially designed to subsidize half the cost of 6,600 toilets in compounds in LICs of GAMA. It was also assumed that about US$7.8 million in microloans would be provided by non-governmental organizations (NGOs) and other microfinance institutions (MFIs) operating in Ghana, and a revolving fund would make funds available at low interest rates.

The OBA grant was channeled in the form of a partial subsidy to private toilet suppliers to cover 50 percent of the total cost for a standalone toilet with a digester. Consistent with the principles of OBA, the grant was paid only after toilet installations had been inspected by engineers engaged by the project and verified (on a sampling basis) by an independent verification agent. The household’s contribution was generally made through the local Metropolitan or Municipal Assembly (MMA), and paid to the supplier as an advance.

During implementation, however, realities on the ground and market failures presented challenges to the underlying assumptions made at project inception. While interest in household toilets in the GAMA was high, ability and willingness to pay remained below expectations, despite the 50 percent subsidy on the cost of toilets. A rapid results initiative by the MMAs in 2015 registered over 5,500 applications for toilets in the targeted LICs; however, by the end of 2017, only 3,000 of the registrants had fully paid their contributions, with another 1,000 making periodic payments through their MMAs. Most of those who paid had mobilized the funds from their tenants as advances on rent, from family members, or their business activities.

Further investigation challenged the assumptions that people would borrow if needed to supplement their own funds and that affordable microloans would be available. In reality, both demand and supply for financing toilets were lacking. Focus group discussions found that homeowners were reluctant to borrow for an investment that does not generate income. Likewise, MFIs were accustomed to lending for income-generating businesses and lacked experience with home improvement loans.

Two measures were taken to stimulate demand for toilets and for borrowing, if necessary: (i) the subsidy was raised to 70 percent in LICs, accompanied by publicity that the cost of toilets had been reduced; and (ii) the MMAs undertook stricter enforcement of by-laws requiring each house to have a toilet, reminding registrants to keep paying and periodically imposing fines to pressure landlords to comply.

Steps to make the supply of financing more accessible included: (i) workshops with MFIs to ascertain their concerns and inform them about successful experiences in other countries with lending for sanitation investments; (ii) providing data on toilet registrants showing that the majority had micro and small businesses that would make them suitable clients of MFIs; (iii) signing a memorandum of understanding with interested financial institutions; (iv) providing technical assistance in developing savings and loan products suitable for sanitation investments; and (v) getting MMAs to sign up registrants for a savings or loan program to complete their payments. Further, proposals are under consideration for potential additional credit enhancements, including (a) a guarantee fund to share a percentage of losses on toilet loan portfolios, and/or (b) an incentive scheme to provide a bonus per installation resulting from a loan that financial institutions could use to offset losses and costs.

RESULTS
The partial OBA grant for toilet installations in LICs was the primary instrument to leverage savings from households—by making the cost more affordable—and commercial finance from the MFIs—by keeping the loan size low enough for beneficiaries to qualify for credit. The initial 50 percent subsidy by itself was insufficient to generate adequate demand to reach project targets. Demand accelerated in response to a combination of (i) raising the subsidy; (ii) marketing; and (iii) increasing enforcement of regulations.

Lowering the cost of the toilets by increasing the subsidy rate immediately affected the willingness to pay of the target population: average monthly beneficiary contributions went up by 43 percent in the first quarter of 2018 over the previous 6

6 World Bank, 2013.
months. Installations likewise picked up, increasing by 270 percent from 191 installations per month during the second half of 2017 (with a declining trend) to 705 per month in January–February 2018. This increase was facilitated by engaging larger contractors who were better able to clear the backlog of orders and service the increase in demand—and who also were better than the smaller suppliers at marketing to mobilize additional beneficiaries in the areas where they were operating. Monthly installations had risen to over 1,000 from under 200 in the second half of 2017, and as of June 2018, 7,685 toilets had been installed in LICs as a result of this project.

In addition to attracting larger contractors, the demand stimulus was also an important step toward attracting financial institutions to enter this market. Previously, the only loans available for toilets were through NGOs and MFIs with a social orientation. These depended on grants and low-cost funds to make toilet loans available at below-market interest rates. The project sought to mobilize financial institutions able to commercialize lending for toilets on a larger scale. Market information showing that most registered project beneficiaries had micro and small businesses made them attractive to MFIs as an entry point to gain more potential clients for their normal business of savings and loans for income-generating activities. Technical assistance for product development and partial guarantees were important incentives to address concerns regarding the costs and risks. In addition, the subsidy on the cost of the toilet helped make
borrowing more affordable by reducing the amount that had to be borrowed, thus offsetting the cost of Ghana’s high interest rates.

**SUCCESS FACTORS**

OBA subsidies played an important role in developing the market for financing investment in sanitation by making the cost more affordable to LICs, thereby increasing demand and willingness to pay and borrow, and by keeping loan sizes small enough for them to access loans from MFIs.

Market information, technical assistance, and credit enhancements are also important to offset the costs and risks that tend to deter MFIs from developing new products for non-income generating investments.

Financial institutions were further incentivized by the inspection and verification service provided under the project as a condition for OBA grant payments, as well as to ensure technical quality of installations and customer satisfaction. They were concerned that customers would stop repaying loans if toilets stopped working, but lacked the technical capability to inspect and solve problems.

Although the project provided technical assistance to the small suppliers that initially came forward to implement the project, engaging larger contractors was critical to be able to install larger numbers of toilets in a timely manner and to achieve economies of scale through bulk installations in a given area in order for costs to fall over time. Reducing costs is important both to phase out subsidies in targeted LICs and to make toilets more affordable to households that do not qualify for subsidies.

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**References**


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**ABOUT GPOBA**

Part of the World Bank Group, the Global Partnership on Output-based Aid (GPOBA) provides innovative financing solutions that link funding to actual results achieved. Our results-based financing (RBF) approaches provide access to basic services like water and sanitation, energy, health and education for low-income families and communities that might otherwise go unserved.

By bringing together public and private sector funders to maximize resources, and designing effective incentives for service providers to reach underserved low-income communities, we give people the chance for a better life. Visit www.gpoba.org to learn more.