

1. **Title of grant:** Demonstration of pro-poor market-based solutions for faecal sludge management in urban centers of Southern Bangladesh
2. **Subtitle (more descriptive title):** To demonstrate financially viable and sustainable Fecal sludge management solutions for cities and towns in Bangladesh, which will improve the health and well-being of the urban population, in particular low-income groups working in sludge management as well as slum residents who will benefit from the new services.
3. **Name of lead organization:** [SNV Netherlands Development Organisation USA](#)
4. **Primary contact at lead organization:** [Rajeev Munankami](#)
5. **Grantee location:** 7500 Old Georgetown Rd, Suite 901, Bethesda, MD 201814, USA
6. **Developing country where the research is being or will be tested:** Khulna Division, Bangladesh
7. **Start and end date:** November 2013- December,2017
8. **Grant type:** Global Growth and Opportunity
9. **Grant size:** USD 4,998,989 (as per BMGF grant database here: <https://www.gatesfoundation.org/How-We-Work/Quick-Links/Grants-Database/Grants/2013/11/OPP1088405>)
10. **Short description of the project:**

The project has developed and tested city-wide sanitation service delivery models for the two main types of urban centers in Bangladesh (city corporations and municipality) and thereby directly improving environmental health and well-being of the population, as well as demonstrating to sector stakeholders:

- How to integrate FSM business models that contributes to achieving city wide service delivery faster
- which roles the private sector can play in FSM and how they can be supported,
- How to ensure that these sanitation solutions are inclusive, benefitting poor households and workers, and not only wealthier neighborhoods

11. Goal(s):

The proposed project will be implemented. These partners are considered “the core group” of this project and have worked together during the four month project formulation phase. Core group members bring together different experiences in the sanitation sector and expertise in formal and informal private sector development.

12. Objectives:

The key objectives of the project were

- Increase demand and willingness to pay among the population for safe sanitation facilities and safe desludging services
- Viable business models for sanitation targeting different consumers segments developed, tested and established.
- Citywide service delivery framework and enabling conditions developed and adopted by local authorities

- Financially viable acceptable and environmentally safe treatment and re-use technologies introduced, tested and integrated plans
- Progress and lessons learned from the program are systematically documented, shared and promoted with key stakeholders at local and national level

13. Research or implementation partners:

The project has been implemented under the leadership of local government institutions (Khulna City Corporation, Jhenaidah and Kushtia Municipalities) in collaboration with a group of institutions consisting of Khulna University (KU), Khulna University of Engineering and & Technologies (KUET), Khulna Water and Sewerage Authority (KWSA), WaterAid Bangladesh and SNV Bangladesh. These partners are considered “the core group” of this project who brought together different experiences in the sanitation sector and expertise in formal and informal private sector development. Based on the need different assignments were formulated and experts both individual and institutions were also involved.

14. Links, further readings – results to date:

<http://www.snv.org/update/urban-sanitation-bangladesh-results-pro-poor-market-based-solutions-faecal-sludge-management>

15. Current state of affairs:

This project is terminated on December 2017 but a follow up phase has been approved from January 2018 for 3 years under City Wide Inclusive Sanitation Engagement (CWISE) initiatives for Khulna and 2 years for Jhenaidah and Kushtia. The new program will support the local government and institutions for city wide safe sanitation services, and provide tailored support to the implementation of safe inclusive slum sanitation services. The program will also provide follow-up and minor support to Kushtia and Jhenaidah’s emerging FSM services, and will continue to work together with members of Bangladesh FSM Network to contribute to national discussions, policy and guidance.

16. Biggest successes so far:

- An important part of the work of the program team and partners has been the raising of awareness and gaining of official support from national and local authorities. Providing field-based evidence has been integral. The program has been highly successful in this endeavor. The evidence generated by the program was instrumental in developing the institutional and regulatory framework (IRF) for FSM at national level. The Government of Bangladesh has now decided to pilot the IRF for FSM across the country, including in the cities of the program.
- The program also worked on setting up an integrated GIS based sanitation information management system to provide a solid base for Local Government Institutions (LGIs) for better planning and decision making on urban services, including FSM. The database brought together information from the three different authorities in the Khulna area: the city cooperation, the utility, and the development authority. These are entities not usually inclined to work together, but whose smooth collaboration is essential for sustainable service delivery in the city.
- While working with the emptier community in Bangladesh, we worked with both manual and mechanical emptiers. The former is a large group, with little social mobility. The program built an emptier data base, which was endorsed by the LGIs, recognizing the importance of formalizing this area of work, developing their skills and gradually moving towards a decent and safe job. The program also developed and trained emptiers on occupational safety and

health, with technical support from the local universities. In this way, the program successfully brought key stakeholders together to discuss a profession previously considered semi-illegal.

- A behavioral change and communication (BCC) strategy was developed for each of the cities, based on formative research. The BCC work was linked to existing communication and outreach, influencing their practice. Eleven different business models were developed and numerous tests were conducted for different parts of the city. The hypotheses tested were around efficiency of the service provision, as well as willingness of households to pay (WTP) for scheduled emptying services (or “not-emergency emptying”). Demand for emptying is steadily increasing, but is still yet to reach the minimum quantity required for efficient treatment plant operation and/or for ensuring a clean living environment. Of the eleven models developed, two have been identified as most relevant and are being piloted in more depth: these involve Federation of Community Development Committees (CDC) rather than individual CDCs and services directly provided by Municipalities.
- The existing treatment facility in Jhenaidah was non-functional, and the one in Kushtia was underperforming. Limited load was presumed to be the root cause, but as the program discovered after some time, there were also serious flaws in design. Knowledge regarding sludge treatment plants in Bangladesh is very superficial, often based on just a few trainings, with no on-the-job coaching or feedback provision. The program worked with local and international service providers to revive both treatment plants. In Khulna, an innovative structure using earth and HDPE sheets was designed and constructed on an old dumping site. The intervention has transformed the sites in both Jhenaidah and Kushtia from nuisances to attractive, functional landscapes. This is contributing to changing the perception of Bangladeshi about waste management. This is important because in the Bangladeshi context, due to population density, treatment will always be close to settlement areas.
- The program has also been working on new management models. In Kushtia, operation and management of FSTP was recently outsourced to a private sector and the program is currently discussing support needed for their business planning. This is seen as a key activity in demonstrating the benefits of outsourcing of treatment plant operations to other cities in Bangladesh.
- Re-use (mainly co-composting) at scale in Bangladesh is only legally possible with the approval of the Bangladesh Agricultural Research Council (BARC), and must be based on trials conducted by an in-country research institution over a stipulated time. For this reason, the program engaged with Bangladesh Agricultural Research institution (BARI), and trials have been ongoing for the past 3 years. To date, positive results have been found and in principle BARI is favorable to follow-up research which would eventually formally allow safe re-use of FSM in agriculture to be mainstreamed in the sector’s outreach/extension units. Similar research was conducted on re-use in fisheries but for one season.
- The potential capacity of the sludge treatment plants currently installed, e.g. in Kushtia, does require someone to purchase co-compost in bulk. Ideally there would be strong links to the private sector which could provide both additional income to the plant and alleviate operators from the inefficiency of small-scale sales. This is a highly specialized field, but currently city authorities of Jhenaidah and Khulna are reluctant to lease the activity to a third party, and are still hoping to do this in-house. The program continues to engage with them in raising awareness regarding both the scope of the work, and the available network of the private sector in the country. Ways to link production to the commercialization of the product are continuing.
- Detailed sanitation planning along with action plans for piloting of different sanitation facilities in vulnerable areas such as slums and public toilets have been conducted. Whilst many of the identified issues are being addressed, the quality of containment remains a sizeable challenge. A study has been conducted for upgradation of containment and at the moment the program is developing an inspection modality for compliance with national building standards regarding septic tanks. Inspection of sanitation has been virtually absent in the practice of authorities so far.
- The program has comprehensive Performance Management Indicators that are shared and discussed with city authorities on an annual basis to measure change. Officials are happy to see that the program is addressing FSM issues in a multi-dimensional way and regularly reconfirm their support and appreciation. The program co-organized two international learning

events (in Khulna and in Manila), and has shared experiences with a number of other BMGF grantees.

17. Main challenges / frustration:

During the project implementation, many underlying issues without the solutions of which other follow up activities could not be initiated, were not envisaged during the planning. When those underlying issues emerged, it took some extra time and effort to resolve them. This, nevertheless, created a positive learning experience with more insights across the value chain among the program stakeholders.

The result were highly dependent on getting everybody, all the stakeholders and political interests on board, to make a shared, evidence-based decisions about sanitation in their city which took us considerable time and effort but we have been successful in managing this, but the political context will always remain a latent risk.

For local government institutions project still means infrastructure construction. It was very difficult to convince that software activities are equally important and data with evidences would be useful for them for their decision making. There were very less or no data but through this project we have considerable data which is helping the city council to develop their interventions and plan.

Sanitation has mostly been supported by development partners and the allocation of resources by local government institutions (LGIs) is very less. The trend has been established to have a separate account for FSM initiatives but it would still require some time for them to mainstream such investments.

Globally there is limited expertise available for FSM and it was hard to identify competent consultants to support the identified interventions. FSM is still considered a new learning area and we had to identify experts, create interest in the sector and co-create the assignments for developing their confidence and ownership on the topic which created some of the project delivery delays.