

## **BUSINESS MODEL INNOVATIONS FOR SCALING-UP FSM BUSINESSES IN LOW- AND MIDDLE-INCOME COUNTRIES**

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The majority of urban populations in low- and middle-income countries rely on onsite sanitation systems, which produce large amounts of faecal sludge. Collecting and treating faecal sludge could provide a viable business opportunity for private firms or public organizations. Despite the increasing efforts to create sustainable and economically viable businesses in the context of faecal sludge management (FSM), most businesses are still in the mode of securing their existence and maintaining their survival. Success is limited, and businesses have not been able to scale-up. Scaling-up entails reaching a critical mass and being able to cover a certain geographical service area. Scaling-up implies that the business provides reliable emptying services, which are affordable for poor people. An example of scaling-up is that businesses not only provide emptying services, but also faecal sludge treatment and resource recovery. IWMI and Sandec/Eawag are exploring the role of business model innovations in the scaling-up process of faecal sludge management. Our preliminary results suggest two distinct paths on how business model innovations can drive the scaling-up processes: (i) organic business growth; and (ii) replication of micro-enterprises. The first path represents a typical 'organic' business growth path. An 'organic' business growth means that the FSM enterprise attempts to make a stepwise extension of the business. Critical innovations in the business model refer to the tariff system, business planning and execution, and the market development for value added end-products. As an example, we will present Manila Water in the Philippines, and their success in scaling up FSM. The second path refers to a replication of micro-enterprises. Micro-enterprises are small firms, that specialize in FSM. They are operated with few employees (e.g. entrepreneur, helper, driver). Micro-enterprises compete with each other, which, in turn, helps lead to affordable prices. To remain profitable, the micro-enterprises have to drive business model innovations. Compared to path one, the business model innovations are not driven by a single organization, but rather through collective actions among the micro-enterprises. Path two illustrates "coopetition". Coopetition means micro-enterprises compete to find customers, but cooperate in technology innovation to drive down costs, and innovate treatment technologies and resource recovery. As an example, we will present honeysucker businesses in Bangalore, India. The paper contributes to a better understanding of business challenges in the scaling-up process of FSM. It provides guidance for increasing geographical coverage, enhancing usage of emptying services, and increasing affordability of sanitation services at the household level.

SEMIYAGA: Market demand for end-products of faecal sludge treatment in Kampala, Accra, and Dakar