



Co-Emergence

Catalyzing new markets for
health and education

Increasing Access to Clean Water in Kenya: The Case for a Social Impact Bond

Synopsis

The Problem

Today, 1.1 billion people around the world have no access to any source of improved drinking water; billions more have access only to an interrupted supply or to water of uneven quality (WHO, 2014). A major barrier to increasing access to clean water is the high level of water loss in distribution networks. This loss, also called non-revenue water, or NRW, is the difference between the amount of treated water in the distribution system and the amount of water billed to consumers. NRW averages 40 percent in developing countries (Kingdon, 2006), significantly limiting water utilities' ability to provide residents with 24/7 water services and extend water connections to new areas, including to poor communities (Kingdon, 2006; Frauenforfer, 2010). NRW is also associated with increased risk of water contamination through broken pipes, posing "a significant public health risk" (Frauenforfer, 2010).

Non-Revenue Water in Kenya

- 16 million Kenyans (39%) still lack access to clean water (WHO, 2014)
- Illnesses and conditions related to water, sanitation, and hygiene are the No. 1 cause of hospitalization in children under 5 (WHO, 2014)
- Non-revenue water averages 45% (WSRB, 2012)

Evidence in developed and developing countries shows that NRW can be reduced to less than 20 percent through a mix of technical and capacity building interventions, without massive capital investment (Kingdon, 2006; Frauenforfer, 2010). Those interventions include controlling physical losses through pipe maintenance and optimization of water pressure, ensuring customer metering accuracy, and improving the governance and performance of local water utilities through information and pay-for-performance management tools. Past projects around the world, including those in emerging markets, have documented returns on investment in fewer than five years (Kingdon, 2006; Ndirangu, 2013). To date, however, few NRW interventions have been implemented at scale. Reasons include the misperception that such interventions require massive infrastructure-type investment (to replace all pipes), lack of financial capacity among local water utilities or governments to pay for NRW interventions up front, and the challenge of improving governance of water utilities to ensure that gains are sustained.

Our Vision

Co-Emergence aims to leverage private sector capital to fund evidence-based NRW interventions in emerging markets. Based on existing evidence of the social impact and financial return, we believe NRW interventions are excellent candidates for financing through a social impact bond (an outcome-based contract with payment and return on investment contingent upon the achievement of desired social outcomes). We plan to launch our first social impact bond in Kenya for the following reasons:

- Kenya's NRW averages 45 percent (WSRB, 2012). Central and local governments have expressed strong political will to reduce NRW. The ongoing decentralization reform creates an urgent need for counties to improve their financial situations while increasing citizens' access to clean water.
- Leading organizations from the nonprofit and commercial water sectors have already done preparatory work in Kenya, establishing reliable NRW baseline data, developing effective approaches to improve local water utilities' performance, and conducting successful pilot programs, in

collaboration with local county governments and service providers. Those organizations have agreed to partner with Co-Emergence to scale up NRW interventions significantly by leveraging private sector capital.

- There is an increased and stated interest from impact investors in funding water and environmental initiatives. Kenya is a high-priority country for investment in Africa and is a focus country for institutions that provide guarantees for debt instruments (such as OPIC and USAID's Development Credit Authority).

About Co-Emergence

Co-Emergence was founded in early 2013 to nurture and scale up market-driven solutions to increase access to high-quality, affordable health and education services in emerging markets. Co-Emergence incubates high-potential innovations and provides hands-on strategic and management support from seed to scale. To leverage all relevant resources and skills, we facilitate cross-sector alliances, involving private companies, governments, donors, and civil society. For selected projects, we also provide early seed investment through our sister organization, Co-Emergence Capital. Ongoing projects include partnerships with the Bill & Melinda Gates Foundation, FHI 360, and Save the Children to facilitate private sector engagement to reduce malnutrition in Africa and Asia; and the incubation of a low-cost, standardized "track and trace" solution to reduce risks of exposure to fake drugs in emerging markets and increase visibility and efficiency along the supply chain. Co-Emergence has offices in New York City and Washington, D.C.

The Co-Emergence Social Impact Bond Team

Claire Champion, Founder and President of Co-Emergence, has worked for more than 15 years at the nexus of the public and private sectors, designing and implementing technical and organizational strategies to strengthen health systems and facilitating cross-sector partnerships. Her experience includes running a 20,000-refugee camp in the Democratic Republic of Congo; leading social marketing initiatives for family planning, water, and malaria products and services in Afghanistan; building the capacity of the Ministry of Health in Mozambique to develop improved systems for malaria prevention and treatment; and developing and implementing strategies to increase access to affordable complementary foods for children 6 to 24 months in Bangladesh, Ethiopia, and Vietnam. She has consulted for the United Nations, the U.S. Agency for International Development, the Rockefeller Foundation, Accenture, Vestergaard Frandsen, Abt Associates, Chemonics International, and others around the world. She has an MBA from Harvard Business School and a Doctorate of Public Health from Johns Hopkins University. She is bilingual in French and English and conversant in Portuguese.

Clemence von der Schulenburg, Finance Director, is a structured finance professional with more than seven years' experience with leading international private firms (KPMG, BNP Paribas, DVB Bank) in Asia and Europe. Accountable for more than \$1.5 billion in debt and equity transactions as a VP Relationship Manager, she has led and conducted whole deal cycle processes, from research, sourcing, deal negotiation, due diligence, structuring, legal documentation, to execution. She was selected as the only VP to assist the Board of DVB Bank in reviewing, implementing, and reporting on key strategic initiatives. During that period, she contributed successfully to project management, feasibility studies, business development, and strategic acquisitions. Prior to joining Co-Emergence, she worked as interim Chief Investment Officer at Encite Capital, a start-up social investment fund promoting small and medium-sized enterprises in Haiti. She has a Master's in Sustainability Management from Columbia University and an MBA-equivalent from the Rouen Business School. She is bilingual in French and English and proficient in Spanish.

Frauendorfer R., Liemberger R. (2010). The issues and challenges of reducing non-revenue water. Asian Development Bank. Accessed at http://www.miya-water.com/user_files/Data_and_Research/miyas_experts_articles/2_NRW/92.pdf on March 17, 2014.
Kingdom B., Liemberger R., Marin P. (2006). The challenge of reducing non-revenue Water in developing countries. The World Bank. Accessed at <http://siteresources.worldbank.org/INTWSS/Resources/WSS8fin4.pdf> on March 17, 2014.
Ndirangu N., Ng'ang'a J., Chege A., Blois R.J., Mels A. (2013). Local solutions in non-revenue water management through north-south water operator partnerships: the case of Nakuru. *Water Policy* 15: 137-164.
Water Services Regulatory Board (WSRB) (2012). IMPACT Issue N.5. Performance Review of Kenya's Water Services Sector – 2010/11. WSRB. Nairobi.
World Health Organization (WHO) (2014). Health through safe drinking water and basic sanitation. Accessed at http://www.who.int/water_sanitation_health/mdg1/en/ on March 17, 2014.