Beyond the Pipe: Pathway to Local Sustainability

Introduction & Session Descriptions

March 19, 2014, 9:00am-4:00pm
Holiday Inn, Airport City – Accra

Special Thanks To:
Conrad N. Hilton Foundation

Other Lead Funders: BGI, Kosmos Energy, Newman’s Own Foundation, PepsiCo Foundation
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A MESSAGE FROM CHARLES NIMAKO,
SAFE WATER NETWORK COUNTRY DIRECTOR-GHANA

Dear Participants:

The ‘Beyond the Pipe’ Forum series has been organized to stimulate discussion, exchange ideas, and promote collective action among leaders from government, Development Partners, NGOs, and the private sector. This Forum is the sixth in this series, and our second in Ghana, focused on advancing locally sustainable water systems that can be scaled across the country.

This year, we will focus on strategies to achieve local ownership and sustainability across four thematic areas—a cluster approach, public-private partnerships, financing, and appropriate technologies. Each of us works to develop approaches to providing safe drinking water to those most in need, and we welcome your perspectives on strategies to advance our shared goals. There is tremendous value in a more coordinated effort at addressing sector challenges. Through serious, purposeful, and united engagement, we can identify the most cost-effective ways to deliver reliable, safe and affordable water in a manner that realizes measurable health and human development benefits.

Together, we can accomplish considerably more than would be possible for any of us working on our own. I believe we have assembled the best expertise amongst us, with the best experience and knowhow to deliberate on the challenges at hand and provide practical, effective solutions. I also hope that our discussions will spark fresh thinking, introductions to new potential partners, and renewed engagement between old acquaintances.

Finally, I’d like to extend my appreciation and gratitude to the Conrad N. Hilton Foundation for their support for this Forum. I also wish to thank our other lead funders BGI, Kosmos Energy, Newman’s Own Foundation, and PepsiCo Foundation, as well as our additional supporters Duraplast, Guinness Ghana, and World Vision.

Sincerely,

Charles Nimako
About Safe Water Network

Safe Water Network develops market-based solutions that provide safe, affordable water to those in need. Our field implementation initiatives form the basis for research and innovation to systematically address the challenges of local sustainability. We document and share our insights through forums, workshops, and reports, and we engage the diverse capabilities of our public- and private-sector partners to advance our model for broad replication.

Ghana Management Team

Charles Nimako, Country Director
Mark Owusu, Finance and Administration
Charles Yeboah, Monitoring & Evaluation Coordinator, Health & Hygiene
Joseph Ampadu-Boakye, Program
Session 1: Creating Viable Water System Clusters – Prospects and Options

Chair: Mrs. Vida Duti, Country Director, IRC Ghana
Moderator: Patrick Apoya, Chief Executive, SKYFORCE

The sector continues to register significantly high levels of non-functionality of water systems. Improving local servicing capability and financial viability of systems are major milestones critical to ensuring sustainable access to safe water supply. Given the lack of skill capability and efficiencies of scale at the community level to manage water systems, a potential solution is adopting a cluster approach involving centralized management of small community water systems at a decentralised level, potentially at the district or sub district level, depending on the location and distribution of water systems. This solution has the potential to achieve efficiencies through clustering activities such as training, deployment of spare parts, financial management and technical servicing, enabling local sustainability of water services. Panelists in this session will discuss the prospects and challenges for using the cluster approach for sustainable water service delivery in Ghana.

Key Questions
- What can we learn from experience with small towns/multi village water systems that have been deployed across multiple communities e.g. Pantang water scheme, Oyibi water scheme, Three Districts water scheme?
- What are the economics of adopting a cluster model for community water systems?
- How can technical services support most effectively be provided within a cluster?
- What are the barriers to scaling up the cluster approach?
- What are the potential roles of stakeholders in scaling up?
Session 2: Public Private Partnerships – Applying Experience to Community Water Supply

Chair: Mr. Emmanuel Nkrumah, Water and Sanitation Specialist, World Bank
Moderator: Harold Esseku, Consultant, Rapha Consult

Over the past decade, the Ghana Government has launched PPPs, and there are several examples of partnerships currently in place for the management of large water systems. Further reinforcing the government’s resolve to advance PPP initiatives, community water systems serving over 10,000 population are expected to be placed under community-private sector management. Our case study analysis suggests that PPPs to support smaller community solutions (2,000-10,000 people) could play a key role in the drive towards achieving local sustainability and scaling up successful solutions. Panelists will share their experiences in implementing PPP projects, advise how these lessons can be applied to smaller scale PPPs and define the pathway for scaling up small community solutions.

Key Questions
- How is asset ownership defined in existing regulations and how does this enable private sector participation?
- What are the enablers and the barriers to a successful PPP for community water systems?
- How can PPP models be adapted for community water systems?
- What are the opportunities for catalyzing PPP solutions?
- What is the size of the opportunity – market size, investment portfolio, geography?
- How do we shape partnerships to achieve scale?
Session 3: Unlocking Financing Opportunities

Chair: Kwasi Osei, PRISM Capital Partners & Former Director of SSNIT
Moderator: Amanda Gimble, SVP, Safe Water Network

The 2013 Beyond the Pipe Forum identified specific potential opportunities to structure and deploy financial products to improve access to safe water. A working group was constituted to develop a financing structure for community water systems\(^1\) in Ghana. In October 2013, Safe Water Network launched a safe water station at Tongor-Tsanakpe in the Volta Region that has the potential to be developed into a micro utility, impacting ~50,000 people in ~10 communities. In partnership with Water and Sanitation for the Urban Poor, Safe Water Network is also expanding an existing safe water station at Pokuase to serve an additional 10,000 customers. This session will review the potential for components of these two micro-utilities to be financed as well as the output from the Working Group.

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**Key Questions**

- How could patient capital be applied to finance micro-utilities or their component businesses, e.g., remote kiosks, institutional connections, distribution/delivery?
- How could financial products be developed to support community water systems?
- What is the role of the public and private sectors in supporting such initiatives?
- What can we learn from other infrastructure financing solutions – water, energy, education etc.?
- What are the roles of stakeholders in the development and upscaling of similar financing initiatives – Ghana Government, Development Partners, Financial Institutions, District Assemblies, sector institutions including CWSA and GWCL etc.?

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\(^1\)A water system that allows for extending water services to multiple communities from treatment point.
Session 4: The Economics of Sustainability – Taking Appropriate Technologies to Scale

Chair: Dr. Kwabena Nyarko, Senior Lecturer, Kwame Nkrumah University of Science and Technology & Team Leader, WASHCost Project
Co-Chair: Akosua Afreh Adjei, Project Engineer, Safe Water Network
Moderator: Samuel Amoako Mensah, UNICEF-Ghana

Appropriate technology is a prerequisite for achieving sustainable water services, ensuring availability and quality of water. The water sector in Ghana continuously relies on ground water technologies which have played key roles in improving access to safe water. However, available data suggests that 30% of water systems that use ground water (point sources) contain unacceptable levels of elements or mineral substances\(^2\). The major challenges are with iron, manganese, fluoride, arsenic, common salt, hardness, high/low pH, colour, turbidity, lead, mercury, bacteria etc.

Other surface water supply options are yet to be successfully harnessed, limiting access to safe water in geographies without adequate aquifer to support ground water technologies. The three regions in Northern Ghana and parts of the Western and Brong Ahafo regions have significant water source challenges.

Our market review in 2013 concluded that water treatment and supply via Limited Mechanization Systems (with chlorine dosing), Modular Slow-Sand Filtration, or Membrane Filtration, supported by solar power, all show significant potential in their appropriate settings to provide safe water to underserved communities. On the basis of this conclusion, together with endorsement at our 2013 forum, we have implemented all three technologies identified at that time. For the purposes of this forum we will focus on one technology where we have the most data to date -- modular slow sand filtration, one of several surface water treatment technologies that can be harnessed. We will review experiences from our pilot projects and explore other technologies and opportunities for further reducing the cost of water service.

Key Questions

- What are the economics of the SSF technology, and what is the size of the market/opportunity?
- What are the opportunities for further reducing cost – Capex, Opex, CapManex?
- What are the prospects for capital recovery\(^1\) with this technology?
- How can the skills capability at the district and community level most effectively be developed to manage and operate SSF systems?
- What are the potential partnership opportunities for scaling up – players and their roles?
- What are the other appropriate technologies that could be explored?
