

Safe Water Network

Mastering the Model at Dzemeni

With mixed emotions, Charles Nimako put down the 2011 summary report on Safe Water Network's projects in Ghana. His team, along with Safe Water Network leaders in New York, had worked for almost two years to make the Dzemeni (pronounced **JEM**-uh-nee) site profitable and provide safe drinking water to local Ghanaians. They had brought innovative ideas and actions to address enormous problems that had plagued water providers for decades; however, difficult challenges and choices remained just ahead. He considered the two questions he and Hew Crooks, the organization's SVP of Operations, discussed during their last phone call. How can we optimally expand the system to increase profitability at the Dzemeni site? And, should we move ahead with plans to expand the Dzemeni site into a regional 'micro-utility' to provide safe water to the people living in nearby Tongor?

A native Ghanaian, Nimako had earned his MBA from Stanford University, worked as a consultant with McKinsey & Company in South Africa, and had most recently served as the CEO of the PepsiCo Bottler in Ghana and franchise director for East Africa. His work in the corporate world had proved invaluable in solving the many project problems encountered at the Dzemeni site, but the remaining challenges looked daunting.

Founded by American actor and philanthropist Paul Newman and a group of business and civic leaders, Safe Water Network sought to "develop innovative solutions that provide safe, affordable water to those in need."³ Safe Water Network's core values, as determined by the founders, are outlined in **Exhibit 1**. The organization brought together a group of dedicated professionals who had made their mark in private industry and civic work. For example, the founding CEO of Safe Water Network, Kurt Soderlund, also cofounded North Star Partners, a marketing and strategy consulting firm, and he had served as a special assistant to the president at New York City's New School, assisting the president in his role as chairman of Human Rights Watch.³

Safe Water Network's partner list features titans of industry from a variety of industries. The organization counts the Conrad N. Hilton Foundation, Kosmos Energy, the Merck Company Foundation, Newman's Own Foundation, PepsiCo Foundation, Navajbai Ratan Tata Trust, and Starr International Foundation among its funders, and it has partnered with the International Finance Corporation (IFC), IBM, and the Johns Hopkins Bloomberg School of Public Health (JHBSPH). The Safe Water Network team on the ground in Ghana has contributed unique and valuable experience as well. In addition to Charles Nimako, the organization also hired Charles Yeboah to be its monitoring and evaluation, health, and hygiene coordinator, as Yeboah brought a public sector perspective from his work with the Ghana Health Service's National Buruli Ulcer Control Program.⁴

Safe Water Network saw its role as a "Johnny Appleseed" of clean water, helping communities to jump start the journey toward clean water, relinquishing ownership and control, and then moving on to other communities to provide benefits. Safe Water Network currently operates in two countries: India and Ghana. The organization began in 2008 with the launch of a rainwater harvesting program in Rajasthan, India. The Indian operations expanded in 2010 with a 20-village safe water station initiative and the opening of an office in New Delhi. In 2011,

EXHIBIT 1 Safe Water Network Core Values²⁰

Access
Making water available and affordable for all
Empowerment
Providing communities the confidence and competency for self-sufficiency
Impact
Realizing lasting health, social, and economic benefits
Measurement
Documenting success and failure
Lessons Learned
Adopting best practice
Environment
Safeguarding water resources
Risk Taking
Investing in new approaches
Open Source
Sharing our findings with the water sector at large

Safe Water Network provided technical assistance to the NGO Shining Hope for Communities in Nairobi, Kenya, in establishing a water tower in the Kibera slum to serve a girls' school and the surrounding community. In 2012, they completed a market and feasibility assessment in collaboration with IFC to identify opportunities for commercial approaches to provide safe water to the poor in Kenya.⁵

The Ghana project started in 2009 when Safe Water Network funded the installation of five safe water stations in the country. WaterHealth Ghana (WHG), a local affiliate of WaterHealth International, approached Safe Water Network about an alliance: Safe Water would fund the sites and WaterHealth Ghana would manage and operate them. The physical and chemical process of water purification occurs at these safe water stations, as does the purchase of clean water by local consumers. Safe Water Network's role in the project expanded after the initiative's performance fell short of the business objectives of delivering safe water to thousands of rural and suburban Ghanaians, creating a sustainable and replicable model for commercial clean affordable water, and facilitating local ownership of the safe water stations. Safe Water Network partnered that same year with Johns Hopkins University, which conducted an independent study to evaluate the impact of the safe water stations on health outcomes.

The Dzemeni Project

Located on the Gulf of Guinea just north of the equator, Ghana gained its independence from Britain in 1957. Almost half of the country's 24.3 million residents live in the coastal urban centers of Accra, Takoradi, the Gold Coast, and inland Kumasi; the other half reside in the country's rural areas. After years of military dictatorships and coups, Ghanaians now enjoy a stable democratic government and a solidly growing economy. GDP growth has averaged a little more than 8 percent for the five-year period of 2007–2011.⁶ In spite of these impressive gains, Ghana remains a fairly poor country. Although the per capita income averages \$1,230 annually for the country as a whole, 39 percent of rural Ghanaians earn less than \$456 per year, or \$1.25 per day, the global standard for extreme poverty.⁷

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World Bank data indicate that 80 percent of rural Ghanaians have access to “improved” water; however, water systems fail at an alarming rate. For example, the Ghanaian Ministry of Water Resources, Works, and Housing found that 30 percent of hand pumps did not function at all and another 50 percent operated incompletely. Between 40 and 45 percent of rural Ghanaians, roughly 4.6 million people, lack consistent access to clean water. Money allocated by the government toward clean water projects often gets diverted to other uses; in 2010, more than 90 percent of funds budgeted failed to be spent. Water-borne diseases such as diarrhea, Buruli ulcer, and intestinal worms run rampant among the population, with 70 percent of diseases in the country traceable to the lack of safe water.⁸

Four of the five safe water stations served residents of the greater Accra peri-urban region (i.e., the area between the suburbs and the countryside), which include Amasaman, Pokuase, Obeyeyie, and Oduman. **Exhibit 2** provides country-level data for Ghana, the two regions with safe water stations, and the five site locations. Dzemeni, located on the southeast shores of Lake Volta, represented the first attempt to reach rural and semirural Ghanaians. Lake Volta, formed in 1964 when the government dammed the Volta River at Akosombo Gorge, is one of the largest manmade lakes in the world.⁹ Dzemeni residents can draw water directly from the lake; however, decades of human and animal use have resulted in levels of microbial pollution that leave the water unsuitable for human use.

With about 7,000 residents, Dzemeni exists primarily as a market town and urban center, and it serves as a trading center for about 15,000 Ghanaians in the outlying hamlets. The Dzemeni safe water site made sense to Safe Water Network for several reasons. First, Dzemeni had no municipal water source and no other commercial water vendors existed; the convenience of Lake Volta effectively eliminated competition. Since it first appeared, residents have drawn water out of the lake, in spite of its contaminated state. Second, Safe Water Network

EXHIBIT 2 Country-level Data for Ghana

District	Ga West	South Dayi
Region	Greater Accra	Volta
Population	262,742	46,661
Population density (per sq. km)	370	46
Water coverage	19%	69%
% of communities paying tariffs	90%	60%
Water tariffs	10p/20L	10p/20L
Average size of population in LMS-ready communities	1,269	Nil
Average size of population in MSSF-ready communities	1,759	487
% of selected communities with electricity (LMS)	95%	Nil
Potential population to be served	60,000	1,000

District	Community	Population
Ga West	Amasaman	6,000
	Pokuase	16,000
	Obeyeyie	2,500
	Oduman	2,500
South Dayi	Dzemeni	7,700
Total		34,700

Source: SWN Internal Planning Documents.