



Piped water flows but sachet consumption grows: The paradoxical drinking water landscape of an urban slum in Ashaiman, Ghana



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ABSTRACT

Packaged “sachet” water has become the primary drinking water source for millions of West Africans despite ongoing controversy over inadequate management of the new waste streams created by all the plastic wrappers. While recent literature from Ghana has shown that municipal water rationing and lower socioeconomic status tend to drive sachet consumption at the metropolitan scale, some low-income communities with a reliable piped water supply still exhibit diverse drinking water-seeking behaviours. This paper explores the drinking water landscape of one poor, informal community in Ashaiman, Ghana, as a case study of the individual- and community-level factors that shape household drinking water decisions. Using the results of a water questionnaire completed by 95 households and the transcripts of four focus groups, our findings suggest that, after controlling for demographics, sachet water consumption is associated with proxies for higher disposable income and lack of knowledge about household water treatment methods, while social processes and attitudes toward water quality do not seem to drive drinking water decisions. This community presents a paradoxical drinking water landscape, as poverty abounds despite excellent piped water access, and low-income households with slightly greater means tend to opt for packaged water as opposed to being driven to it by piped water shortages. These nuances in drinking water purchasing behaviour can inform policy and planning for drinking water provision in urban slums across the region.

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Introduction

The proportion of global disability-adjusted life years (DALYs) attributable to unimproved water and sanitation has fallen steadily over the last two decades, though with substantial regional heterogeneity as diarrhoea remains a leading killer in sub-Saharan Africa (Lim et al., 2012; Pullan, Freeman, Gething, & Brooker, 2014). Despite the UN announcement in March 2012 that Target 7C of the

Millennium Development Goals (MDG) was met ahead of schedule globally (WHO/UNICEF, 2012), sub-Saharan Africa continues to have the lowest percentage of population with access to an improved water source among all world regions, particularly in urban areas (WHO/UNICEF, 2013), and a number of critiques have noted the inadequacy of the metric “access to an improved water source.” Drinking water access in sub-Saharan Africa may be qualified by water quality (Bain et al., 2012; Onda, LoBuglio, & Bartram, 2012), fragmented distribution (Bakker, 2010), unsustainability (Stoler, 2012), usage patterns (Kayaga, Fisher, & Franceys, 2009) and government corruption (Nganyanyuka, Martinez, Wesselink, Lungo, & Georgiadou, 2014). Along similar lines, Obeng-Odoom (2012) frames “deep” access as the interaction between four dimensions: quality, reliability, cost, and equity. Other recent studies continue to refine the methods for estimating the burden of inadequate water, sanitation, and hygiene (Clasen et al., 2014), as well as underscore the persistent role in the global diarrhoeal disease burden among low- and middle-income nations (Prüss-Ustün et al., 2014; Wolf et al., 2014).

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It has been estimated that just a quarter of Accra's population has 24-h access to a piped water supply (WaterAid, 2005), and this estimate has not changed despite much growth and development of Greater Accra over the last decade. Like many developing nations, Ghana has struggled to keep pace with infrastructure improvements amid rapid population growth and urbanization (Ainuson, 2010). In the 1990s, nearly half of urban residents in Accra were living below the World Bank's absolute poverty threshold, and the poor tended to concentrate in fringe settlements or in defined areas within the urban core with limited access to basic services (McGranahan, Jacobi, Songsore, Surjadi, & Kjellen, 2001: 71). Over a quarter of Accra's residents are still estimated to live below the poverty line (Ainuson, 2010).

The political economy of water service in Ghana is rife with poor governance and missed opportunities that have historically plagued Ghana's water resource management and induced subsequent drinking water shortages (Nsiah-Gyabaah, 2001). While the post-colonial political elite lacked the vision of universal public water provision strategies (Yeboah, 2006), the ruling class used it as a tool to recompense the electorates that favour government and penalize opposition-leaning constituencies resulting in a phenomenon McCaskie (2009) referred to as "water wars." McCaskie (2009) offers a historical portrait of drinking water access in Kumasi, Ghana's second-largest city, which mirrors that of Accra: a colonial legacy of patchy water systems, low investment in asset maintenance, breakneck-speed urbanization, and subsequent chronic acute water shortages politicized by each successive decade's ruling elite and ethnic majorities. McCaskie's analysis

illuminates the institutional and structural antecedents to the present disequilibrium in supply and demand of water, which is further exacerbated by inefficiencies in public water provision, governmental budgetary difficulties in the context of rising population, and the search for financial capital investments. This confluence of factors opened the door for the private sector to fill gaps in demand (Yeboah, 2006), a process also described by McCaskie (2009: 148): "soaring demand, acute shortages, new technologies and increasing desire to inhabit the world of globalised capitalist modernity produced a revolution in the business of selling water." Similar reasons were advanced in support of water privatization during the adoption of the structural adjustment programme implemented as Ghana's Economic Recovery Programme (Obeng-Odoom, 2014). The neoliberalist approach to water policy which resulted in Aqua Vitens Rand Limited's management contract from 2006 to 2011, although heavily contested by civil society, is well-documented (Dreschel & Van-Rooijen, 2008; Yeboah, 2006), and has invoked rights-based discourses (Eguavoen & Spalthoff, 2008; Obeng-Odoom, 2012). Since Ghana's cancellation of that contract in 2011, areas connected to the municipal water grid through the current operator, Ghana Water Company Limited (GWCL), continue to experience water rationing and generally unreliable water service (Stoler, Fink, et al., 2012; Stoler, Weeks, et al., 2012) due to Accra's daily water shortfall of over 130,000 m³, or 25% of daily water demand (UN-Habitat, 2011), despite substantial surface water resources. According to the 2008 Ghana Demographic and Health Survey, only an estimated 57% of urban residents had access to piped water in their dwelling or

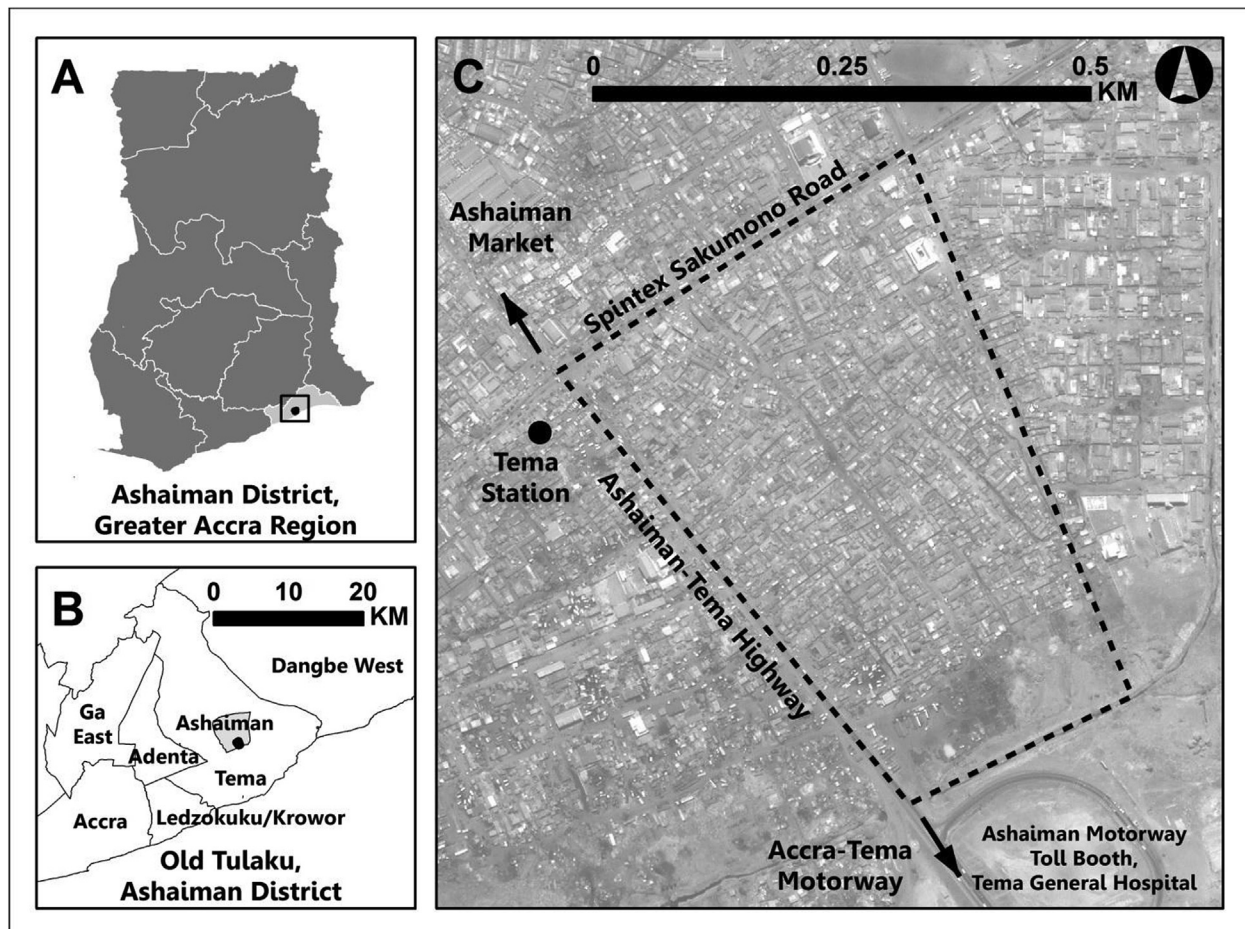


Fig. 1. The study site, showing (a) Greater Accra Region within Ghana, with Ashaiman District highlighted, (b) Ashaiman District with Old Tulaku highlighted, and (c) Old Tulaku draped over a May 2010 IKONOS panchromatic image.

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