

# Sanitation: the neglected Siamese twin of water in achieving the millennium development goals (MDGs) in Ghana

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**Abstract** While inadequate water and sanitation services have both been implicated in a number of mortality and morbidity situations all over the world, the improvement in sanitation provision lags far behind that of water. This paper therefore seeks to examine the spatial variation in sanitation provision in Ghana and assess the factors that have contributed to the low investment in sanitation infrastructure as well as how sanitation can be improved. It revealed that the low sanitation has its roots in somewhat complicated political, institutional, economic and socio-cultural factors, including inadequate political commitment, poor monitoring, higher negative externalities associated with sanitation compared with water, and low sanitation demand resulting from poor social marketing for sanitation. Sanitation should therefore be marketed as a concept that has public health benefits and not merely as a toilet facility. Proper social marketing for sanitation and scaling up the community-led total sanitation approach should be pursued to stimulate individual demand for private sanitation.

**Keywords** Sanitation · Water · MDGs · Health · Ghana

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## Introduction

Inadequate access to safe water and sanitation services has been implicated in a number of mortality and morbidity situations all over the world. It is a major cause of deaths and sickness among many children, and leads to poverty and reduced socio-economic opportunities for several thousands of children (WHO 2016; Boschi-Pinto et al. 2008; Pruss et al. 2002). For example, an estimated 842,000 people in low- and middle-income countries die each year from diarrhoea and other causes associated with inadequate water, sanitation and hygiene, with children under five bearing the greatest burden (WHO 2016). Similarly, Pruss et al. (2002) attribute about 5.7% of total disability-adjusted life years (DALYS) and 4.0% of all years-of-life lost (YLL) (deaths) to problems related to water, sanitation, and hygiene. Specifically, diarrhoea and diarrhoea-related diseases are the most frequent causes of death among children under 5 years of age worldwide, second only to pneumonia (Boschi-Pinto et al. 2008). To this date, diarrhoea kills 1.5 million children annually, more than combined toll of AIDS, malaria and measles (Black et al. 2010), and “alongside poor water quality, lack of sanitation and poor hygiene are the main culprits” (Overseas Development Institute (ODI) 2006, p. 1).

In Ghana, McGarvey et al. (2008) conclude that low infrastructure development for safe water and sanitation coupled with the resultant poor water quality

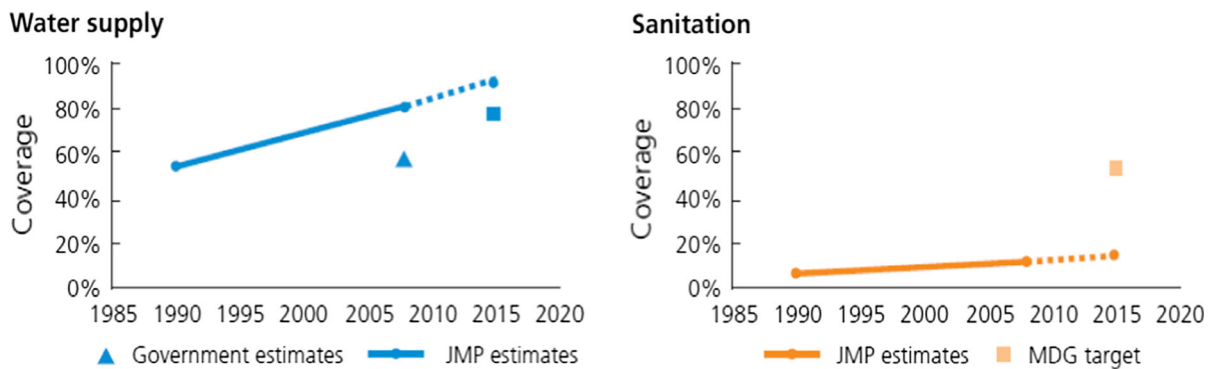
suggests high risk for water-borne infectious diseases. About one in five children (19.8%) had diarrhoea 2 weeks preceding the 2008 Demographic and Health Survey while 3.1% had diarrhoea with blood, which is a symptom of dysentery (Ghana Statistical Service (GSS) 2008). As expected, the GSS (2008, 2014) report indicate that the prevalence of diarrhoea was lower among children who lived in households with improved drinking water sources and improved sanitation facilities as against unimproved facilities. Surprisingly, however, there are, at least, variations in how water and sanitation interventions separately impact diarrhoea prevalence, with sanitation having seemingly better health outcomes on diarrhoea prevalence than source of drinking water. This observation has been confirmed by several studies, which examined the effects of water and sanitation interventions on diarrhoea and other sanitation and water-related diseases (see Esrey et al. 1991; Pruss et al. 2002; Pruss-Ustun et al. 2008; Black and Fawcett 2008; Cairncross et al. 2010; Cheng et al. 2012). For example, Cheng et al. (2012), using data from 193 countries, found that increased access to sanitation was significantly more associated with decreased under-five child mortality due to diarrhoea compared with that of water (Cheng et al. 2012).

Pruss-Ustun et al. (2008) also found that on average, sanitation and hygiene interventions decreased diarrhoeal diseases by 32 and 37% respectively, whereas water supply interventions decreased diarrhoeal diseases by only 25%. About two decades earlier, Esrey et al. (1991) reported that while water quality improvements could be expected to be associated with a reduction of some 17% in diarrhoea risk, good sanitation reduced diarrhoea risk by about 36%. If cholera outbreaks are excluded from the analysis, the impact of water supply interventions will be much lower, because cholera virus would not reach water sources, if there were improvement in sanitation (Black and Fawcett 2008). One of the mostly advanced explanations to the lower impact of water in diarrhoea risk reduction is the contamination of water on its way to or during storage in the household (Cairncross et al. 2010), and inadequate sanitation is one of the major sources of contamination of drinking water (Cairncross et al. 2010; Cheng et al. 2012).

Meanwhile, globally the millennium development goal (MDG) target to halve the proportion of people without sustainable access to safe drinking water was

met in 2010, but the corresponding target for improved sanitation was missed (WHO/UNICEF 2015). For example, Ghana exceeded its MDG water supply targets of 77% coverage, but failed to achieve the sanitation target of 54% by 2015 (see Fig. 1). The national coverage for improved sanitation was only 15% in 2015, compared with 30% in Sub-Saharan Africa, 62% in developing regions as a whole and 68% globally (WHO 2016). As a result of this gap, Cumming (2009) concludes that adequate sanitation remains the most neglected of all the MDG targets while Biswas (2010) observes that “sanitation has not received the same level of attention from national and international institutions and policy makers as water has”. Drangert et al. (2010) therefore suggest that “sanitation deserves attention in its own right”.

The foregoing observations raise the main research question for this paper: why has sanitation received less attention from successive governments, the private sector, Non-Governmental Organisations (NGOs), Civil Society Organisations (CSOs) and individuals? Thus, the paper seeks to examine the extent of the spatio-temporal variations in sanitation provision in Ghana; and assess the factors that have impeded sanitation provision in Ghana. While several studies have been conducted on the sanitation situation and its impact of health in Ghana, there is dearth of knowledge on the socio-cultural and politico-economic reasons why sanitation has received very little attention in the development agenda in Ghana. This is particularly important for Ghana that attained a lower-middle income country status in 2010, a status that reflects a steady improvement in the economic performance of the country over the past three decades (Todd and Majerowicz 2012). Thus, as a lower-middle income country doing so well in so many arenas (including water), Ghana should have been doing better on sanitation since increase in economic growth of a country is highly related to access to improved sanitation (WHO/UNICEF 2012; Mara and Evans 2011). In addition, sequel to the MDGs, the sustainable development goals (SDGs) seeks to achieve access to adequate and equitable sanitation and end open defecation by 2030. At the current rate of improved sanitation penetration in Ghana, there is the need to explore the factors behind the low sanitation coverage if the ambitious targets of the current SDGs on sanitation are to be achieved in the next 15.



**Fig. 1** Progress in water supply and sanitation coverage in Ghana. *Source:* Water and Sanitation Programme (2011)

### Conceptual context

Though different sanitation facilities are in use throughout the world, the Joint Monitoring Programme of the WHO/UNICEF have categorised them into improved and unimproved. An improved sanitation facility is defined as one that hygienically separates human excreta from human contact. Thus, only users of improved sanitation facilities are considered as having ‘access’ to sanitation on condition that the facility is not shared by multiple households and the public (WHO/UNICEF 2013). In this regard, improved sanitation is considered as an important household asset that is procured individually or collectively.

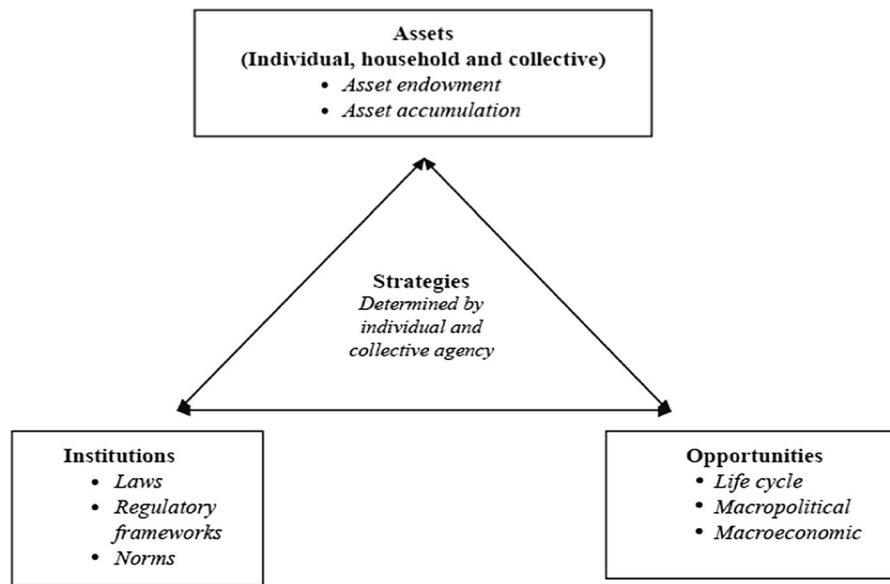
Subsequently, this paper is premised on Moser’s (2006) Asset Accumulation Policy framework, which focuses on creating opportunities for long-term asset accumulation through strategies determined by individual and collective agency (Fig. 2). Such strategies are seen as evolving over time, with the view to improving well-being through a combination of investment in assets, creating agency and provision of protection where necessary to deal with vulnerabilities. Moser (2006) further explains that the process by which the assets held by individuals and households are transformed into something meaningful (such as improved sanitation provision) is controlled by some external factors such as government policy, political institutions, and NGOs. Within the context of household sanitation provision, such institutions as laws, norms and regulatory and legal frameworks can either block or provide access in different ways, and that, the formal and informal context within which individuals and households operate can provide an

enabling environment for the provision of improved sanitation facilities at the household level.

In sum, sanitation practices and decision-making do not take place in a socio-political vacuum; they are profoundly embedded in, and shaped by, complex sets of social, political and economic structures and processes that are both ‘historically deep and geographically broad’ (Farmer 2004, p. 309). And in today’s inter-connected world, global and local processes may intersect in complex ways to enable or constrain people’s agency as they seek to balance multiple household needs in often less-than-ideal circumstances (Farmer 2004; Hampshire et al. 2009). Hence, the demand for improved sanitation for most households may not be high until other needs such as housing (shelter), water, farming, and schooling are met (Card and Sparkman 2010). Thus, understanding successful sanitation adoption requires an understanding of a multi-scalar political, economic, socio-cultural and environmental factors such as “political will on the part of both government and nongovernmental organizations (NGOs) over the long term; proximate social pressure, i.e., person-to-person contact between inhabitants and toilets; political ecology, i.e., assured access to water, compatible soil type, and changing land use” (O’Reilly and Louis 2014).

### Methodology

Two main sources of secondary data were used for the analysis in this paper: user-based data and provider-based data. User-based data on water and sanitation are mostly “generated from statistical information obtained through representative household surveys or



**Fig. 2** Asset Accumulation Policy. Moser (2006)

censuses on the types of water and sanitation facilities that householders were using at the time of the survey” (WSMP 2009). The user-based data used for this paper were the Ghana Demographic and Health Surveys (GDHS), Ghana Population and Housing Census, and Ghana Living Standards Survey (GLSS). All these surveys are conducted by the Ghana Statistical Service (GSS) at regular intervals.

Provider-based also known as administrative data for water and sanitation are generated by service providers. Service providers usually collect data on the type of facility supplied and the estimated number of people that these facilities can adequately serve, and that such data set is said to measure “people’s access to facilities and estimated coverage for certain geographical locations as against actual use of such facilities” (WSMP 2009). For this paper, data from the service providers are from the Community Water and Sanitation Agency (CWSA), which is responsible for providing drinking water and sanitation to rural communities and small towns. Finally, we draw on existing literature and government documents to examine the factors that have impeded sanitation provision in Ghana. Primarily, content analysis was used as the analytical tool for the study. All relevant documents and reports were thoroughly read, and appropriate themes were developed for the study. The analysis focused on two main issues: water and

sanitation situation in Ghana (both urban and rural), and the factors (political, economic and socio-cultural) affecting sanitation provision in Ghana.

### Water and sanitation situation in Ghana

Before assessing the factors responsible for the neglect of sanitation in Ghana, it is instructive to present the sanitation situation and show the spatio-temporal variation in access to improved sanitation in the country. This section presents the sanitation situation in Ghana, and it must be stressed here that though the analysis is on both improved water and sanitation, particular emphasis is placed on sanitation provision with the aim of examining the low sanitation coverage and putting into context what needs to be done to improve the historically low sanitation coverage. Due to rural–urban variations in the development of water and sanitation infrastructure, this section presents the urban and rural water supply and sanitation situations under separate subsections.

#### Urban water supply and sanitation

The water sector of Ghana has seen dramatic and impressive improvement in terms of meeting the MDG water target (See WHO/UNICEF 2010, 2011, 2012, 2013, 2015; GSS

1993, 1998, 2003, 2008, 2014). Even in 1990 urban water supply (84%) was above the MDG water target of 80% set for Ghana and has further improved gradually since then (Table 1). However, since 1990, 59% of the population gained access to improved drinking water in 2015 as compared with only 11% for sanitation within the same period. Table 1 further reveals an interesting trend in a reduction of proportion of urban residents with piped water in their premises, from 41% in 1990 to 32% in 2015. This could be explained by the erratic nature of water supply by the official urban water supplier, Ghana Water Company Limited, implying that having access to pipe-borne water in the premise does not guarantee a 24-h supply. Hence most new housing units do not connect to pipe-borne water but rather tend to fill the provisional gap by small-scale informal service providers (water tankers), with its attendant insecurity in water quality and higher tariffs. For example, in Accra it is reported that “unconnected” consumers of water spend 4–18 times the normal tariffs charged by the public water company (van Rooijen et al. 2008).

In terms of sanitation, Table 2 indicates that the proportion of 2015 population that gained access to sanitation from 1990 was 11% which was among the lowest on the African continent compared to countries with similar or even worse economic standings such as Angola (41%), Burundi (26%), Cameroon (25%), Ethiopia (27%) and a host of other developing countries (see WHO/UNICEF 2015). Similarly, Ghana lags behind other African countries such as Malawi, Angola, Ethiopia, Benin, and a host of others where open defecation declined by at least 24% from 1990 compared with only 3% point decline for Ghana (WHO/UNICEF 2015). In urban Ghana, Table 2 further reveals that access to improved sanitation increased from 13% in 1990 to 19% in 2015, with an additional 73% using shared facilities (up from 46% in 1990) whilst 7% of the urban population are estimated to practice open defecation, indicating a decrease from 10% in 1990. Across the country, the proportion using shared facilities increased from 29% in 1990 to 60% in

**Table 1** Use of drinking-water sources (proportion of population). Source WHO/UNICEF (2015)

Locality	Sanitation options	Year	
		1990	2015
Urban	Improved		
	Total improved	84	93
	Piped on premises	41	32
	Other improved	43	61
	Unimproved		
	Unimproved	8	7
	Surface water	8	0
Rural	Improved		
	Total improved	39	84
	Piped on premises	2	3
	Other improved	37	81
	Unimproved		
	Unimproved	11	8
	Surface water	50	8
Total	Improved		
	Total improved	56	89
	Piped on premises	16	19
	Other improved	40	70
	Unimproved		
	Unimproved	9	7
	Surface water	35	4
Proportion of 2015 population that gained access since 1990		59	

**Table 2** Use of sanitation facilities (proportion of population). *Source* WHO/UNICEF (2015)

Locality	Sanitation options	Year	
		1990	2015
Urban	Improved		
	Improved	13	19
	Unimproved		
	Shared	46	73
	Other unimproved	31	0
Rural	Open defecation	10	7
	Improved		
	Improved	4	9
	Unimproved		
	Shared	20	45
Total	Other unimproved	47	12
	Open defecation	29	34
	Improved		
	Improved	7	15
	Unimproved		
Proportion of 2015 population that gained access since 1990	Shared	29	60
	Other unimproved	42	6
	Open defecation	22	19
		11	

2015, which represents one of the highest in the world. To fully understand the high utilisation of shared toilet facilities in Ghana, we need to wear a cultural lens. “Sharing” of basic facilities and services between and among households or communities is seen as an expression of interdependence and a building block for social cohesion within a Ghanaian society. There are so many things that are shared (or used in common) due to the communal way of living in Ghana and perhaps most countries in Africa. These items or services range from food, water, shelter, clothing to toilet facilities and a host of others. Moreover, per the living arrangements in compound houses (where several households live in housing units with shared facilities), most Ghanaians have the tendency to share a number of facilities including water sources, bathrooms, drying lines, as well as toilet facilities.

However, the Joint Monitoring Programme (JMP) of the WHO and UNICEF classifies shared facilities as unimproved because it is argued that the accessibility, safety and cleanliness of the facility is compromised if shared among two or more households (WHO/UNICEF 2012). While this classification has been a subject of debate over the years (Tumwebaze 2014), it emphasises the importance of private toilets in terms

of safety, accessibility and cleanliness. Though cleanliness is an important factor, shared or public toilets (as opposed to individual household toilets) are the best option for densely populated low-income urban areas due to space constraints (Schouten and Mathenge 2010; Katukiza et al. 2012) and lack of decision-making power by individual tenants who just rent a room or two (Amo-Adjei et al. forthcoming).

#### Rural water supply and sanitation

Like urban areas, available data shows that rural water sector has also seen significant improvement in terms of provision. WHO/UNICEF’s JMP update of 2015 shows that 84% of rural dwellers have access to improved water supply, showing a significant improvement of the 1990 figure of 39%. These figures are consistent with that of household figures reported in the Ghana Demographic and Health Survey (GDHS) where access to improved water increased from 41.2% in 1990 to 79.6% in 2014 (GSS 2014). From Table 3, it can be seen that the total number of water facilities provided increased about fivefolds between 1999 and 2009, from 3329 to 15,056 respectively, whereas the number of small town piped

**Table 3** CWSA facility delivery status (1999–2009). *Source* CWSA Annual Report (2009)

Type of facility	1999	2009
<b>Water</b>		
Boreholes	2837	12,954
Hand-dug wells	379	1484
Small community piped schemes	88	279
Small town piped schemes	25	339
Total water facilities	3329	15,056
<b>Sanitation</b>		
Household latrines	7666	61,384
Institutional latrines	410	3470
Total sanitation facilities	8076	64,854

systems witnessed the most significant rise (about 14-folds), increasing from 25 in 1999 to 339 in 2009. Worth noting is the increase in the number of boreholes provided within the 10-year period, about fourfolds from 2837 in 1999 to 12,954 in 2009.

In terms of rural sanitation, while the WHO/UNICEF and Ghana Demographic and Health Surveys report gradual improvements in access to improved sanitation in Ghana over the past two decades, huge challenges remain with providing rural sanitation. As seen from Table 2, access to improved sanitation in rural areas increased marginally from 4% in 1990 to 9% in 2015; thus, 91% of the rural population in Ghana still used unimproved sanitation facilities in rural areas. Table 2 further reveals that open defecation, which has the greatest impact on health and environment, is still practised by a significant proportion of Ghanaians, especially among the rural populace where it witnessed an increase from 29% in 1990 to 34% in 2015. This figure is almost threefolds higher than the global average of 13% of people who defecate openly, in street gutters, behind bushes or into open water bodies, etc. (WHO 2016). The provider-based data from the CWSA in 2006 indicates regional variation in the provision of sanitation in Ghana (Table 4). The table shows Greater Accra Region had the highest rural sanitation coverage (33.56%), with Western Region recording the lowest rate of 1.12%. The average coverage for all the ten regions was about 11%.

Though the provision of sanitation has historically been slow in general, CWSA (2009) reports some increment in the number of sanitation facilities provided between 1999 and 2009 (Table 3). Table 3

shows that the total number of sanitation facilities rose from 8076 to 64,854 between 1999 and 2009. Most significant was the rise in the number of household latrines from 7666 to 61,384. The increase in the number of institutional latrines was also noteworthy, rising from 410 in 1999 to 3470 in 2009. It must however, be stressed here that although there has been significant increase in the provision of sanitation facilities, both private and institutional, most of these do not constitute improved sanitation because they are shared with other households.

Moreover, these investments over the years reflect the leading role of government, rather than individuals, in sanitation provision; a supply-driven approach which has been found to be ineffective and unsustainable (Jenkins and Scottb 2007). In Ghana, District Assemblies are directly responsible for sanitation in the towns and communities. The co-ordinating Ministry that supervises District Assemblies, the Ministry of Local Government, Rural Development and Environment (MLGRDE), is thus ultimately accountable for the state of national sanitation. CWSA's role is to promote and collaborate with District Assemblies with respect to water-related sanitation. CWSA's function is one of facilitation by providing technical support to the District Assemblies for the planning and execution of projects for disposing of faecal matter. CWSA's thus promotes and creates awareness in the rural population for maximum benefits to be derived. Though this approach can succeed in providing sanitation facilities in the short term, it tends to be unsustainable in the medium and long term because communities and users do not adequately maintain the facilities. There is anecdotal evidence in several communities across the country about abandoned toilet facilities after a year or two into their operation. Therefore, sanitation practitioners and advocates have called for proper marketing of sanitation and raising individual sanitation demands.

Subsequently, in 2010, the Ghana Government, with the ratification of the Environmental Sanitation Policy (Revised 2010), officially adopted the community-led total sanitation (CLTS) approach to scale up rural sanitation. The CLTS approach is based on the premise that traditional sanitation programmes that focus on building latrines have proven both too expensive and ineffective in changing behaviours. Pure CLTS programmes are low-cost because they provide no subsidies to build latrines, but focus on

**Table 4** Rural sanitation coverage by region-2006. *Source* Community Water and Sanitation Agency (2007)

Region	Sanitation coverage (%)	VIP	KVIP	Population served
Ashanti	8.45	5304	367	199,840
Brong-Ahafo	5.77	3052	176	100,920
Central	3.25	1088	95	48,880
Eastern	13.65	7294	431	245,340
Greater Accra	33.56	4484	385	198,840
Northern	7.72	10,099	106	143,390
Upper East	2.70	716	50	27,160
Upper West	3.55	229	52	23,090
Volta	30.20	9938	832	432,180
Western	1.12	971	16	16,110
Total	9.98	43,175	2510	1,435,750

VIP ventilated improved pit, KVIP Kumasi ventilated improved pit

achieving sustained sanitation demand and behaviour change. The approach relies on trained facilitators to help communities analyze their current sanitation practices through a participatory approach that helps community members confront the reality of negative impacts of practices and lead to rapid collective behaviour change. As a result, communities are motivated to spend their own money to build latrines themselves, not because they have been given the money to do so, but because they want to use them (Kar and Pasteur 2005). This approach is about both creating community demand for better sanitation and avoiding subsidies. In response to the adoption of CLTS, the Ministry of Local Government and Rural Development (MLGRD) and Environmental Health and Sanitation Directorate (EHSD) trained 200 Environmental Health Assistants (EHAs) in three regions (Eastern Region, Central Region, Brong-Ahafo Region) to support the scaling up process. Considering the task involved in effectively promoting CLTS coupled with high proportion of people without improved sanitation, much effort and investment need to be made in training more environmental health assistants in all the 10 regions of the country. Currently, the approach is operational in nine out of the ten regions.

### Factors affecting sanitation provision in Ghana

Successive governments, the private sector, NGOs, CSOs, communities and individuals recognise the importance of both water and sanitation to health and development of a society but sanitation still lags far

behind water, an observation which begs the question of why sanitation provision has been so low over the years. This is necessarily a historical question and in answering we attempt to address the question of whether sanitation issues have always been neglected relative to its counterpart, water. However, instead of repeating the well-known situation and evidence, we undertake a different and more speculative analysis, supported with some empirical studies and the analysis of government policies and actions. The focus is on broad national challenges that have affected or have the potential to affect individual, community and government decisions as far as sanitation provision is concerned. Political, institutional and socio-economic factors are examined below.

#### Political factors

First and foremost, it must be stated that the neglect of sanitation in the development discourse of Ghana is not a recent phenomenon, and has its root in the political framing of the issue (Moser 2006). For example, when examining parliamentary debates in the 1960s in relation to water and sanitation issues, Bohman (2010) found that sanitation was not discussed as a big issue in parliament at the time but the link between water supply and health was more pronounced. Even when sanitation and sewerage had been discussed as part of official policy, Bohman observed that the practical responsibility for carrying out the work had been under prioritised. She therefore concludes that investing in water infrastructure was recognized as a preventative measure with regard to public health and it was suggested that to prioritize the



construction of water pipes was better as a preventive method than the building of health centres. The basis was that about 80% of the cases reported to the hospitals in Ghana at that time were thought to be caused by the impurity of water and therefore “if we could provide good drinking water the number of cases would be considerably reduced” (Parliamentary debates, 1965). Assuming impure water sources were the cause of health problems, what they failed to take into consideration was the question of what caused the water to be impure in the first place. A broader and in-depth analysis could have implicated sanitation at the time and appropriately given the necessary attention.

Secondly, the low priority for sanitation issues was also reflected in the actual infrastructural development in the subsector. For example, the infrastructural development in water supply in Ghana dates as far back as 1914 when the Weija Water Works was inaugurated as the first water works in Ghana under the Accra Water Supply Scheme and managed by the Public Works Department (Patterson 1979). This was followed by a number of water supply infrastructural projects in major towns in Ghana such as Sekondi (1917), Winneba (1921), Cape Coast (1928), Kumasi (1930) and Kpong (1954). However, in terms of sanitation infrastructure, Tema was the only town in Ghana in 1961, which had water borne sewage disposal system, managed by Tema Development Corporation (Bohman 2010). This favoured infrastructural development for water continued through the structural adjustment period in the 1980s and can still be observed today.

Another important contributing factor to poor progress made in improving sanitation coverage in Ghana is inadequate political commitment to sanitation issues at all levels over the years. This is mostly reflected in low funding for sanitation at all levels. While there was US\$117 million annual investment gap (in terms of what existed and what was required to achieve the MDGs) in the water sector, that of sanitation was about threefolds (US\$ 352 million), and in spite of this wide investment gap between water and sanitation, the government’s planned investment in sanitation, which was about \$50 million for 2014, was only about 42% of that of water supply which was \$120 million (Smith-Asante 2014). The rest of the gap was expected to be funded by development partners (external donor support) who in general have been a major financier of sanitation provision in Ghana, with

very little public sector funds. According to WaterAid (2011), donor support accounted for about 78% of funds for the Ministry for Water Resources, Works and Housing (MWRWH) in 2010, and about 38% for the Ministry for Local Government and Rural Development (MLGRD), which is responsible for sanitation in Ghana. Comparing reported donor funding to the water and sanitation sector with the national allocations in countries such as Burkina Faso, Mozambique and Sierra Leone, WaterAid (2011) showed that donor funding for the sector was far above government spending. This is a reflection of the low commitment and prioritisation of sanitation issues in Ghana, which led WaterAid (2011) to conclude that there was a relative neglect of the overall water and sanitation sector (with sanitation being the worst hit) compared to health and education in terms of Ghana’s prioritisation; and therefore questioned whether the Ghana government could effectively exert leadership over the water and sanitation sector. Thus, there is little local political capital to focus on sanitation and those who are most in need have the least political power.

Even the budgeting structure in the sanitation sector has always been problematic as compared with that of water subsector. For example, Water and Sanitation Programme (2011) asserts that the budget structure of the water sector “allows disaggregation of urban and rural water supply, and clearly spells out what is provided by the Government of Ghana (GoG) and what is provided by donors”. However, in the case of sanitation, the budget covers several subsectors, including solid waste and drainage. Such budgeting structure makes it difficult to separate the provision and promotion of toilet facilities from the entire sanitation budget and also to separate urban from rural spending (Water and Sanitation Programme 2011). Once there is a composite budget, planning for the various subsectors become problematic and even presents the tendency to siphon funds from one subsector to the other. Subsequently, sanitation planning and delivery under the CWSA is confined primarily to household latrine promotion and hygiene education, with limited financial and technical support (Bandie 2003).

Finally, there had been insufficient attention paid to the issue of sanitation among international institutions and donor agencies until 2002 when it was added to the MDG targets as an afterthought. Sanitation has been avoided among international policy and decision

makers to the extent that Black and Fawcett (2008) have termed sanitation “the last taboo” and the “unmentionable”. At a Conference on Water, held in Argentina in 1977, United Nations (UN) declared 1981–1990 as the International Drinking Water and Sanitation Decade with a target of improving access to “water and sanitation for all”. However, water supply received most of the attention to the neglect of sanitation to the extent that at the end of the decade there were 300 million more people without access to sanitation than there was at the beginning of the decade (Black and Fawcett 2008). Even when United Nations (UN) came out with the MDGs in 2000, there was no target for sanitation. It was at the Bonn conference (held in December 2001) that a strong effort was made to push for sanitation issues. Additionally, Biswas (2010) observed that the United Nations “proclaimed a World Water Day that has been regularly observed on March 22 since 1993, but there was not a corresponding day for sanitation until 15 years later...when 2008 was proclaimed International Year of Sanitation”. The fact is that international development agenda in most cases shape the development programme and prioritisation in most developing countries, including Ghana. Thus, most national governments tend to be judged by their ability to achieve or make substantial progress towards the achievement of internationally set goals, which in turn increases the donor funding. Therefore, the neglect of sanitation on the international front has had a great impact on the commitment of successive national governments to improving access to improved sanitation in Ghana.

#### Institutional factors

With regard to institutional and policy issues, we also see much emphasis on water supply than sanitation provision. Recognising the fact that the prevalence of guinea worm disease, bilharzias, enteric fevers, dysenteries and malaria are strongly related to the poor sanitary conditions in the country, WHO (1961) recommended a vast programme for sanitary conditions in Ghana. Subsequently, the Ghana Water and Sewerage Corporation (GWSC) was established in 1965 by Act, 310 (1965), and started functioning in September 1966. The argument for a common water and sewerage authority was that the sectors were inherently interlinked and they therefore required joint

planning. However, operations and maintenance as well as further infrastructural development of the Corporation paid much more attention to water supply than to sanitation and sewerage, eventually leading to low progress in sanitation provision.

Again, when the Water Resources Commission was created in 1996 to be in charge of overall regulation and coordination of water resources utilization, responsibilities for rural water and sanitation in general were taken from the central organisation in 1998. The Environmental Sanitation Policy from 1999 therefore stressed that sewerage and other environmental sanitation functions, then resting with central agencies, had to be transferred to District Assemblies (GoG 1999). The official argument for transferring the sewerage aspect to the Assemblies was that other aspects of sanitation were already taken care of by the Waste Management Departments at the District Assemblies and therefore, it will “enable effective coordination with other environmental sanitation activities” (GoG 1999). However, some researchers have different views as to why sanitation issues were separated from the GWSC. For instance, Bohman (2010) opines that there is a suspicion that the separation was not only “to allow decentralised decision-making and community involvement, but also as a way to get rid of ‘the unwanted’ and to make the water sector attractive for private participation” since there has always been a higher willingness to pay for water supply than for sanitation.

Furthermore, the urban sanitation subsector (and sanitation in general) has, in recent times, seen very little systematic monitoring in terms of the number and quality of facilities built by households. The quality and adequacy of shared facilities in compound houses (the main housing type in low-income urban areas) used by 73% of households in urban areas (WHO/UNICEF 2015), are in question and that the National Environmental Sanitation Strategy and Action Plan (NESSAP) prepared by MLGRD (2010) suggests the need for concerted efforts to upgrade existing toilet facilities and further expand options to residents. The function of monitoring for sanitation quality and cleanliness used to be well performed by the Environmental Health Officers (EHOs). Known since colonial times by the local people as the ‘*Tankas*’ (a corrupted form of Town Council officials) or ‘*saman-saman*’ (meaning the one who summons), the traditional role of the Environmental Health Officer (EHO)

was that of ‘sanitary inspector’, who enforced by-laws and statutory health regulations on households. Hence, one of the main tasks of the EHOs was to prosecute householders and landlords who allowed unsanitary latrines to be constructed or who disposed off waste into gutters and drains (Crook and Ayee 2006). The absence of or weak monitoring and inspection has led to poor quality of, and low investment in, sanitation facilities by householders and landlords, with its concomitant health implications for the general population.

#### Socio-economic factors

There is also a broader economic explanation for the low take-up for sanitation in Ghana, and by extension most developing countries. The general set back in development of sanitation in broader terms can partly be related to the dilemmas associated with the public good characteristic of sanitation which makes it an essentially un-commercial task (Bohman 2010). It is often argued that sanitation is more of a public good than water because you benefit directly when you secure better water supplies, but it benefits the rest of the community when you use better sanitation facilities (McGranahan and Mulenga 2009). Thus, the immediate individual benefits of sanitation are less obvious than in the case of buying water. Therefore, in a short time perspective it is economically rational for an individual to avoid paying the cost of getting connected to pay for sanitation services, and hence willingness to pay for sanitation among consumers is far lower than in the case of water. This can help to explain why individualised markets drive water provision more easily than sanitation provision—and hence why sanitary improvements tend to lag far behind water improvements (McGranahan and Mulenga 2009). Moreover, as indicated earlier, in such instances the demand for improved sanitation for most households in peri-urban communities may not be high until other needs such as housing (shelter), water, farming, and schooling are met (Card and Sparkman 2010).

Another economic factor for the low uptake of sanitation is supply-driven approach to sanitation provision in Ghana: sanitation facilities are provided by external agents such as government and NGOs rather than by the individual users themselves. Historically, the consideration of sanitation services as typical

examples of services associated with high externalities (having high public health benefits) has often served as a rationale for subsidies and government provision in the country. Therefore, successive governments and donor agencies, through the Metropolitan, Municipal and District Assemblies, have been at the forefront in the provision of community toilet facilities in the country. As a result, by the mid-1980s, there were 784 public toilets in Accra and Kumasi alone, managed and maintained by their respective Metropolitan District Councils, not to mention those built by local governments and NGOs for use for free by small towns and rural communities (Ayee and Crook 2003). The widespread traditional use of public toilets for sanitation in Ghana has been found by Jenkins and Scottb (2007) to be rather more common among developing countries in Africa and that it is a reflection of governments’ policy of being actively involved in the constructing, operating, and managing public toilets for household use. This has created the impression that the government or an external agent should be responsible for sanitation provision, leading to low sanitation demand, and this also explains why there is low private investment in sanitation (Ayee and Crook 2003), with only 20% household coverage in urban areas and even far lower in rural areas (WHO/UNICEF 2015). Meanwhile, it has become evidently clear that public funding of sanitation provision is inadequate to bridge the gap in sanitation provision (Jenkins and Scottb 2007). Thus, free and highly subsidized policies have had negative consequences for operational sustainability (Kendie 1994).

Low sanitation demand in Ghana (estimated to be about 5.3% by Jenkins and Scottb 2007), and subsequent low supply has driven the prices to be relatively high. This is a result of inappropriate marking of sanitation as a concept that promotes public health benefits rather than as a toilet facility where human excreta should be dumped and forgotten. Thus, though one can blame low sanitation demand on poverty, some researchers believe that money is not the problem because most people have access to more expensive technologies (Hutchings et al. 2012) which they consider more important and more pressing and that since sanitation is not marketed as a necessary and useful service, people do not see the need to invest in it. The question is; if poor people have mobile phones and other electronic gadgets, why don’t they have a toilet? It is a matter of priority rather than cost. In other words, the use of social marketing, defined by Scott

(2005) as the “use of commercial marketing techniques to promote the adoption of behaviour that will improve the health or well-being of the target audience or of society as a whole” is quite low in Ghana.

There are also some cultural beliefs that encourage some people to resort to open defecation. For instance, WaterAid (2009, p. 7) found that some people in Northern Ghana still use open defecation because they believe that “public toilets are surrounded by evil spirits and therefore should be avoided”, while others believe that “latrine use will strip the user of their magical powers”. Others defecate in the open because they want to prevent their bodies from bad odour or smell from the toilet/pit latrine. These culturally-led sanitation practices can also be observed in some other west African countries particularly among the Idoma people in Nigeria, where WaterAid (2009, p. 7) found that “open defecation is culturally encouraged as it is a taboo to defecate in a building or super structure, and many older people still refuse to defecate in any sort of enclosed area”.

Thus, although personal cleanliness is very important in Ghana, a holistic understanding of health and environmental consequences of unsafe sanitation practices seems severely inadequate. This peculiar cultural paradox in people’s dealing with human faeces was observed by van der Geest (1998) in his studies among the Akan ethnic group that most people detest faeces so much that they do not even tolerate it near their houses. On the one hand, Ghanaians seem very concerned about cleanliness, while on the other hand, they prove remarkably inefficient in getting rid of the dirt they detest most: human faeces. Perhaps, from a psychological point of view, this paradox is the result of the fact that people tend to think of themselves as less susceptible to risk and assume that things only happen to other people. In the case of sanitation, Rosenquist (2005) asserts that “this mechanism of denial causes major trouble for the implementation of new sanitation solutions, where mental and physical handling of these issues is a prerequisite”.

## Conclusions and recommendations

This paper has revealed that although sanitation is as important as water in preventing diseases and deaths, it has not received the needed prioritisation in Ghana and most developing countries. As a country that has

risen to the lower-middle income level, the expectation was that it should have done better on improving access to improved sanitation. It is observed that this neglect has its roots in somewhat complicated political, institutional, economic and socio-cultural factors. Therefore, to bridge the sanitation gap the following measures are recommended.

The government of Ghana, in collaboration with NGOs and donor agencies should embark on enhanced social marketing due to the public health benefits gained through the promoted behaviour change. Several studies have indicated that it is more cost-effective to provide funding for creating sanitation and hygiene demand through promotion than to heavily subsidise sanitation hardware (Chambers and Myers 2016; Kolspy and Diop 2004; Samantha and van Wijk 1998; Wright 1997). McGranahan and Mulenga (2009) are of the view that sanitation problems affect groups rather than individuals, and that the related health risks each resident faces result primarily from the practices of others. Therefore, the authors conclude that if the group affected can combine their individual demands for sanitation, and create a collective demand, the market failures due to the public good characteristic of sanitation can be overcome.

As a matter of bylaw by all the District Assemblies, house owners must have toilet facilities in their houses even if it means converting some of the existing sleeping rooms into toilet facilities. To effectively ensure compliance, the government of Ghana should reintroduce the concept of sanitary inspectors with a renewed mandate of ensuring that landlords construct toilets before renting out houses and householders see to cleanliness of toilet facilities in their premises.

Finally, in the face of failure of government intervention in sanitation delivery, there is the need to shift from supply-led sanitation to demand or motivation-led sanitation, particularly in rural areas. This is where scaling up community-led total sanitation (CLTS) becomes imperative. CLTS does not only help stimulate effective demand for sanitation and help change behaviour, it is less expensive and more sustainable in improving both private and community access to improved sanitation.

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