# Sanitation: The neglected Siamese twin of water in achieving the Millennium Development Goals (MDGs) in Ghana


## 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


## 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. 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 five 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, 2010), and

"alongside poor water quality, lack of sanitation and poor hygiene are the main culprits" (Overseas Development Institute (ODI) (2006:1).

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 two weeks preceding the 2008 Demographic and Health Survey while 3.1 percent had diarrhoea with blood, which is a symptom of dysentery (Ghana Statistical Serve (GSS), 2008). As expected, the GSS (2008) 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 (Esrey et al, 1991; Pruss et al, 2002; Pruss-Ustun et al., 2008; Black & 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 percent and 37 percent respectively, whereas water supply interventions decreased diarrhoeal diseases by a mere 25 percent. 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 percent in diarrhoea risk, good sanitation reduced diarrhoea risk by about 36 percent. 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 was improved sanitation (Black & 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.

Meanwhile, Ghana has already exceeded its Millennium Development Goal (MDG) water supply targets of 77 percent coverage, but very unlikely to achieve the

sanitation target of 54 percent by 2015. The national coverage for improved sanitation was only 13 percent in 2011 (see Figure 1), reflecting a marginal increase from 6 percent in 1990. The implication is that about 19.2 million people did not use improved sanitation facilities in 2008 and that about 1.2 million more people need to have access to an improved sanitation per annum until 2015 in order to meet the MGD goal. 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".

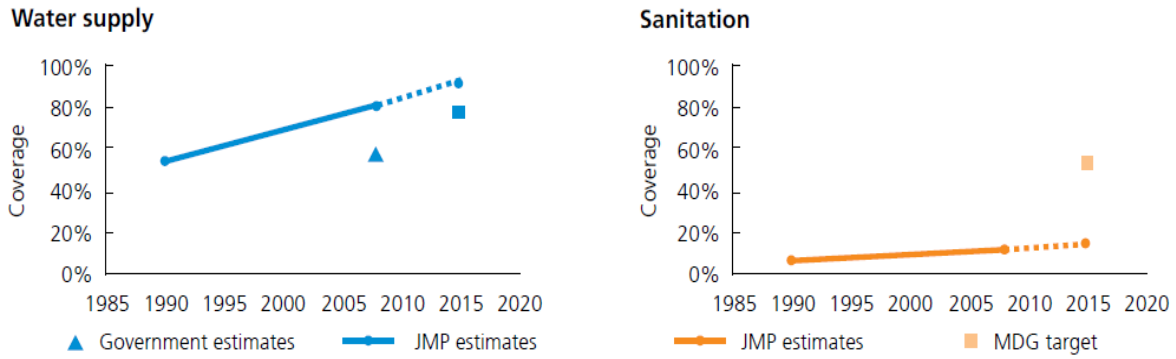


**Figure 1: Progress in water supply and sanitation coverage in Ghana**
Source: Water and Sanitation Programme (2011)

The foregoing observations raise the research question: why has sanitation received less attention than water from 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 paper is important in the sense that sanitation practices and decision-making do not take place in a social 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: 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). This is particularly important for Ghana which attained a lower-middle income country status in 2010, a status that is reflective of a steady improvement in the economic performance of the country over the past three decades (Todd & Majerowicz, 2012). Thus, as a lower-middle income country doing so well in so many arenas (including water), it 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 & Evans, 2011).

## 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 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.

## 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; GSS, 1993, 1998, 2003, 2008). Even in 1990 urban water supply (83 percent) was above the MDG water target of 80 percent set for Ghana and has further improved gradually since then (Table 1). However, since 1995, 44 percent of the population gained access to improved drinking water in 2011 as compared with only 8 percent 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 percent in 1990 to 32 percent in 2011. 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-hour 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, WHO/UNICEF's 2013 figures indicate that the proportion of 2011 population that gained access to sanitation from 1995 was 8% which was among the lowest on the African continent compared to countries with similar or even worse economic standings such as Angola (37%), Cameroon (15%), Djobouti (18%), Gambia (29%) and a host of other developing countries (see

WHO/UNICEF, 2013). 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 25 percent from 1990 compared with only 5-percentage point decline for Ghana (WHO/UNICEF, 2013). In urban Ghana, Table 2 reveals that access to improved sanitation increased from 12 percent in 1990 to 19 percent in 2011, with an additional 72 percent using shared facilities (up from 45 percent in 1990) whilst 6 percent of the urban population are estimated to practice open defecation, indicating a decrease from 11 percent in 1990. Across the country, the proportion using shared facilities increased from 29% in 1990 to 59% in 2011, which, according to WHO/UNICEF (2012), represents 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 commonly) 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 classify 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, 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 & Mathenge 2010; Katukiza et al. 2012) and lack of decision-making power by individual tenants who just rent a room or two.

**Table 1: Use of drinking-water sources (proportion of population)**

| | | | Year | | |
|---|---|---|---|---|---|
| Locality | Sanitation options | | 1990 | 2000 | 2011 |
| Urban | Improved | Total Improved | 83 | 88 | 92 |
| | | Piped on premises | 41 | 37 | 32 |

| | | | | | |
|---|---|---|---|---|---|
| | | Other Improved | 42 | 51 | 60 |
| | Unimproved | Unimproved | 8 | 8 | 8 |
| | | Surface Water | 9 | 4 | 0 |
| Rural | Improved | Total Improved | 36 | 58 | 80 |
| | | Piped on premises | 2 | 3 | 3 |
| | | Other Improved | 34 | 55 | 77 |
| | Unimproved | Unimproved | 11 | 10 | 9 |
| | | Surface Water | 53 | 32 | 11 |
| Total | Improved | Total Improved | 53 | 71 | 86 |
| | | Piped on premises | 17 | 18 | 18 |
| | | Other Improved | 36 | 53 | 68 |
| | Unimproved | Unimproved | 10 | 9 | 9 |
| | | Surface Water | 37 | 20 | 2 |
| Proportion of 2011 population that gained access since 1995 | | | | 44 | |

Source: WHO/UNICEF (2013)

**Table 2: Use of sanitation facilities (proportion of population)**

| | | | Year | | |
|---|---|---|---|---|---|
| Locality | Sanitation options | | 1990 | 2000 | 2011 |
| Urban | Improved | Improved | 12 | 15 | 19 |
| | Unimproved | Shared | 45 | 59 | 72 |
| | | Unimproved | 32 | 17 | 3 |
| | | Open defecation | 11 | 9 | 6 |
| Rural | Improved | Improved | 3 | 6 | 8 |
| | Unimproved | Shared | 19 | 32 | 44 |
| | | Unimproved | 49 | 31 | 16 |
| | | Open defecation | 29 | 31 | 32 |
| Total | Improved | Improved | 6 | 10 | 13 |
| | Unimproved | Shared | 29 | 44 | 59 |
| | | Unimproved | 43 | 25 | 10 |
| | | Open defecation | 23 | 21 | 18 |
| Proportion of 2011 population that gained access since 1995 | | | | 8 | |

Source: WHO/UNICEF (2013)

## 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 2013 shows that 80 percent of rural dwellers have access to improved water supply, showing a significant improvement of the 1990 figure (36 percent). These population 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 76.2% in 2008 (GSS, 2008). From Table 3, it can be seen that the total number of water facilities provided multiplied about five times between 1999 and 2009, from 3,329 to 15,056 respectively, whereas the number of small town piped 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 ten-year period, about four-folds from 2,837 in 1999 to 12,954 in 2009.

**Table 3: CWSA facility delivery status (1999- 2009)**

| Type of Facility | 1999 | 2009 |
|---|---|---|
| *Water* | | |
| Boreholes | 2,837 | 12,954 |
| Hand-dug wells | 379 | 1,484 |
| Small Community piped schemes | 88 | 279 |
| Small Town Piped schemes | 25 | 339 |
| Total Water Facilities | 3,329 | 15,056 |
| *Sanitation* | | |
| Household latrines | 7,666 | 61,384 |
| Institutional Latrines | 410 | 3,470 |
| Total Sanitation Facilities | 8,076 | 64,854 |

Source: CWSA Annual Report (2009)

In terms of rural sanitation, while the WHO and UNICEF Joint Monitoring Programme 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 1, access to improved sanitation in rural areas increased marginally from 3 percent in 1990 to 8 percent in 2011, and by 2011, 92 percent of the rural population in Ghana used unimproved sanitation facilities. Table 1 further reveals that open defecation which has the greatest impact on health and environment is still practised by most people

in Ghana, especially among the rural populace which saw an increase from 29 percent in 1990 to 32 percent in 2011. 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%.

**Table 4: Rural Sanitation Coverage by Region-2006**

| Region | Sanitation coverage (%) | VIP* | KVIP** | Population served |
|---|---|---|---|---|
| Ashanti | 8.45 | 5,304 | 367 | 199,840 |
| Brong-Ahafo | 5.77 | 3,052 | 176 | 100,920 |
| Central | 3.25 | 1,088 | 95 | 48,880 |
| Eastern | 13.65 | 7,294 | 431 | 245,340 |
| Greater Accra | 33.56 | 4,484 | 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 | 9,938 | 832 | 432,180 |
| Western | 1.12 | 971 | 16 | 16,110 |
| Total | 9.98 | 43,175 | 2,510 | 1,435,750 |

*VIP= Ventilated Improved Pit

**KVIP= Kumasi Ventilated Improved Pit

Source: Community Water and Sanitation Agency (2007)

Though the provision of sanitation has historically been slow in general, CWSA (2009) reports increase in the number of sanitation facilities provided between 1999 and 2009 (Table 3). Table 3 further shows that the total number of sanitation facilities rose from 8,076 to 64,854 between 1999 and 2009. Most significant was the rise in the number of household latrines from 7,666 to 61,384. The increase in the number of institutional latrines was also noteworthy, rising from 410 in 1999 to 3,470 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 & Scott, 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 and limited to water-related sanitation. It provides 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 are 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.

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 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. This approach is about both creating community demand for better sanitation and avoiding subsidies (Karr and Pasteur, 2005). 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.

## 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. 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, which was 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 is US$117 million annual investment gap (in terms of what exists and what is required to achieve the MDGs) in the water sector, that of sanitation is US$352 million, and in spite of this wide investment gap between water and sanitation, the government's current planned investment in sanitation, which is about $50 million for 2014, is only about 42% of that of water supply which is $120 million (Smith-Asante, 2014). The rest of the gap is expected to be funded by development partners (external donor support) which in general has 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 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 GoG and what is provided by donors". However, in the case of sanitation the budget covers a several subsectors, including solid waste and drainage. Such budgeting structures make 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 target as an afterthought. Sanitation has been avoided among international policy and decision makers to the extent that Black & Fawcett (2008) have termed sanitation “the last taboo” and the “unmentionable”. At a Conference on Water, held in Argentina in 1977, The 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 & 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". International development agenda in most cases shape the development programme and

prioritisation in most developing countries, including Ghana. 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 national governments to improving access to sanitation in Ghana.

### Institutional factors

With regard to institutional and policy issues, we also see much emphasis on water supply than with sanitation. 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, the 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 72 percent of households in urban areas (WHO/UNICEF, 2013), 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 '*samansaman*' (meaning the one who summons), the traditional role of the Environmental Health Officer (EHO) was that of 'sanitary inspector', who enforced bye-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 disposed off waste into gutters and drains (Crook & 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, 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 yourself and your family when you secure better water supplies, but you benefit the rest of the community when you use better sanitation facilities (McGranahan & 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 a networked sewer system or to pay for other 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 & Mulenga, 2009). Moreover, 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 & Sparkman, 2010).

Another economic factor for the low uptake of sanitation is supply-driven approach to sanitation provision in Ghana: sanitation facilities have historically been provided by external agents such as government and NGOs instead of 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 (Ayee & Crook, 2003), not to mention those built by local governments and NGOs for use for free by small towns and rural communities. The wide-spread traditional use of public toilets for sanitation in Ghana has been found by Jenkins and Scott (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 also explains why there is low private investment in sanitation, with less than 30% household coverage in urban areas and even far lower in rural areas (Ayee & Crook, 2003; WHO/UNICEF, 2006). Meanwhile, it has become evidently clear that public funding of sanitation provision is inadequate to bridge the gap in sanitation provision (Jenkins & Scott, 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 & Scott, 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 a necessary and useful service, people do not see the need to invest in it. The question is; if poor people own mobile phones and 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 (2009:7) 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 do open defecation because they want to prevent their bodies from bad odour or smell from the toilet/pit latrine, and also along the coast, where open defecation on the beaches is a common phenomenon for similar reasons. These practices can also be observed in some other west African countries particularly among the Idoma people in Nigeria, where WaterAid (2009:7) 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 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 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 (Kolsky & Diop, 2004; Samantha & van Wijk, 1998; Wright 1997). McGranahan & 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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**Table 1: Use of drinking-water sources (proportion of population)**

| | Year |
|---|---|

| Locality | Sanitation options | | 1990 | 2000 | 2011 |
|---|---|---|---|---|---|
| Urban | Improved | Total Improved | 83 | 88 | 92 |
| | | Piped on premises | 41 | 37 | 32 |
| | | Other Improved | 42 | 51 | 60 |
| | Unimproved | Unimproved | 8 | 8 | 8 |
| | | Surface Water | 9 | 4 | 0 |
| Rural | Improved | Total Improved | 36 | 58 | 80 |
| | | Piped on premises | 2 | 3 | 3 |
| | | Other Improved | 34 | 55 | 77 |
| | Unimproved | Unimproved | 11 | 10 | 9 |
| | | Surface Water | 53 | 32 | 11 |
| Total | Improved | Total Improved | 53 | 71 | 86 |
| | | Piped on premises | 17 | 18 | 18 |
| | | Other Improved | 36 | 53 | 68 |
| | Unimproved | Unimproved | 10 | 9 | 9 |
| | | Surface Water | 37 | 20 | 2 |
| Proportion of 2011 population that gained access since 1995 | | | | 44 | |

Source: WHO/UNICEF (2013)

**Table 2: Use of sanitation facilities (proportion of population)**

| | | | Year | | |
|---|---|---|---|---|---|
| Locality | Sanitation options | | 1990 | 2000 | 2011 |
| Urban | Improved | Improved | 12 | 15 | 19 |
| | Unimproved | Shared | 45 | 59 | 72 |
| | | Unimproved | 32 | 17 | 3 |
| | | Open defecation | 11 | 9 | 6 |
| Rural | Improved | Improved | 3 | 6 | 8 |
| | Unimproved | Shared | 19 | 32 | 44 |
| | | Unimproved | 49 | 31 | 16 |
| | | Open defecation | 29 | 31 | 32 |
| Total | Improved | Improved | 6 | 10 | 13 |
| | Unimproved | Shared | 29 | 44 | 59 |
| | | Unimproved | 43 | 25 | 10 |
| | | Open defecation | 23 | 21 | 18 |
| Proportion of 2011 population that gained access since | | | | 8 | |

| 1995 |
|---|

Source: WHO/UNICEF (2013)

**Table 3: CWSA facility delivery status (1999- 2009)**

| Type of Facility | 1999 | 2009 |
|---|---|---|
| *Water* | | |
| Boreholes | 2,837 | 12,954 |
| Hand-dug wells | 379 | 1,484 |
| Small Community piped schemes | 88 | 279 |
| Small Town Piped schemes | 25 | 339 |
| Total Water Facilities | 3,329 | 15,056 |
| *Sanitation* | | |
| Household latrines | 7,666 | 61,384 |
| Institutional Latrines | 410 | 3,470 |
| Total Sanitation Facilities | 8,076 | 64,854 |

Source: CWSA Annual Report (2009)

**Table 4: Rural Sanitation Coverage by Region-2006**

| Region | Sanitation coverage (%) | VIP* | KVIP** | Population served |
|---|---|---|---|---|
| Ashanti | 8.45 | 5,304 | 367 | 199,840 |
| Brong-Ahafo | 5.77 | 3,052 | 176 | 100,920 |
| Central | 3.25 | 1,088 | 95 | 48,880 |
| Eastern | 13.65 | 7,294 | 431 | 245,340 |
| Greater Accra | 33.56 | 4,484 | 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 | 9,938 | 832 | 432,180 |
| Western | 1.12 | 971 | 16 | 16,110 |
| Total | 9.98 | 43,175 | 2,510 | 1,435,750 |

*VIP= Ventilated Improved Pit

**KVIP= Kumasi Ventilated Improved Pit

Source: Community Water and Sanitation Agency (2007)

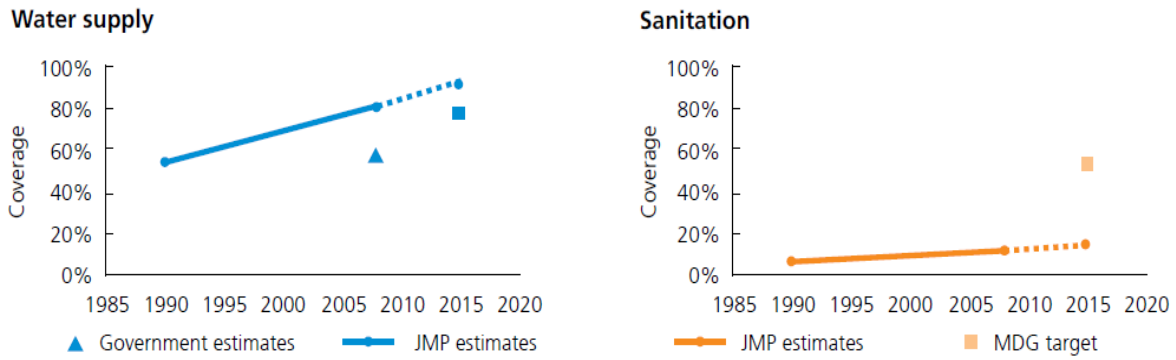


**Figure 1: Progress in water supply and sanitation coverage in Ghana**

Source: Water and Sanitation Programme (2011)