

Sanitation Challenge for Ghana (SC4Gh): motivating local authorities through innovation prizes to achieve SDG6

Carolyn Stephens, Jonathan Parkinson, and Christopher Sackeyfio

Abstract: *As part of the UK Government-funded Ideas to Impact programme, the Sanitation Challenge for Ghana (SC4Gh) ran from 2015 to 2019 aiming to incentivize local authorities in Ghana to prioritize resources to improve municipal sanitation services towards the achievement of Sustainable Development Goal (SDG) 6. The paper reviews the overall results of the SC4Gh and discusses selected results for the Metropolitan, Municipal, and District Assemblies (MMDAs) involved. The most notable outcome was that MMDAs involved were able to make significant improvements across the sanitation value chain with limited technical support and no upfront external donor funding. Another important outcome was the empowering aspect of the prize process which enabled MMDAs to innovate their plans based upon their own ideas to improve sanitation services. The prize process was an unprecedented opportunity for MMDAs throughout the country to participate in an international programme, resulting in encouraging results particularly from smaller, less well-resourced MMDAs in remote parts of Ghana who secured prizes in both stages of the Challenge.*

Keywords: innovation prizes, local government, Sustainable Development Goals, liquid waste management, Ghana

IN GHANA, SIGNIFICANT PROGRESS HAS been achieved in increasing access to water, achieving the Millennium Development Goal (MDG) target of 77 per cent coverage seven years ahead of schedule (Monney and Antwi-Agyei, 2018). However, even by 2019, four years after the start of the Sustainable Development Agenda, sanitation coverage lagged significantly behind the previous MDG target of 54 per cent – with urban coverage at only 25 per cent and rural coverage still worse at 17 per cent (Appiah-Effah et al., 2019; WHO/UNICEF, 2019). This equates to only one in every five households having access to an improved sanitation facility (GSS, 2018). Over 13 million Ghanaians (45 per cent of the total population) use shared facilities and one in every four households depends upon public facilities (GSS, 2018). Neither shared nor public facilities contribute towards the attainment of the Sustainable Development Goal (SDG) 6 Target 6.2 for sanitation, as they are not considered to be ‘improved sanitation’.

Carolyn Stephens (carolyn.stephens@lshtm.ac.uk), Honorary Professor, UCL Bartlett Development Planning Unit; Jonathan Parkinson, Associate Director: Cities and Resilient Development, IMC Worldwide Ltd; Christopher Sackeyfio, Senior Consultant, Maple Consult Ltd, Ghana
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The disparity between sanitation and water coverage can be attributed partly to the increased investment in water services. TrackFin, part of the Global Annual Assessment of Sanitation and Drinking Water (GLAAS), calculated that expenditures on water accounted for more than 80 per cent of total expenditure on water, sanitation, and hygiene (WASH) in 2015 with only 20 per cent for sanitation. In Ghana, spending between water and sanitation is close to even, with sanitation accounting for 48 per cent of spending and water for 51 per cent. Urban areas receive about two-thirds of the water and sanitation spending (WHO/UN-Water, 2017).

In addition, rapid urbanization continues to place a strain on infrastructure and the provision of sanitation facilities competes alongside demands for other public services (e.g. education, health, transport, electricity, and water). Therefore, prospects for increased funding for sanitation without reduced expenditure in other sectors remain low. In addition, Ghana's transition to a lower-middle income status country has resulted in reduced financial aid offered by donors and international financing institutions.

The WASH sector in Ghana has gone through substantial institutional reforms, including most recently the establishment of a dedicated Ministry of Sanitation and Water Resources (MSWR) in 2017. Nationally, a district-wide approach of service delivery and decentralized management of WASH services requires central government to transfer governance to district assembly level, leaving national institutions to facilitate/coordinate internal relationships with and among local assemblies through the administrative regions. Unfortunately, this approach has not been entirely successful in Ghana partly due to the lack of devolution to the Metropolitan, Municipal, and District Assemblies (MMDAs), but also due to an apparent lack of political will which has meant that sanitation, and WASH generally, has not been prioritized by central government, nor by MMDAs themselves.

In this context, new approaches are required. This paper discusses the results of an innovative programme aimed at developing and testing the concept of using prizes to drive innovations in integrated urban sanitation systems to improve access to clean sanitation facilities and protect health. We base this paper primarily upon evidence derived from the verification process led by IMC Worldwide and the evaluation report documenting the results of the Sanitation Challenge for Ghana (SC4Gh) (Gould and Brown, 2020). This paper follows a preliminary review of the early learnings of the first stage of the prize (Di Bella and Minkley, 2017).

Overview of the Sanitation Challenge for Ghana prize

Already used by philanthropists and private businesses, prizes giving financial incentives to induce change through competition have also become of interest to the donor community. Such prizes stimulate innovation, resulting in social benefits (Bays et al., 2009; Everett et al., 2011, 2012; Trémolet, 2015; Ward and Dixon, 2015). The *Ideas to Impact* (I2I) programme was an action research launched by the UK Department for International Development (DFID) in 2015 (as of 2020 the Foreign, Commonwealth and Development Office (FCDO)). The programme aimed to test the idea of 'prizes' as a new development aid mechanism to promote innovative

pro-poor solutions for development challenges in thematic areas of climate change adaptation, energy, water supply, and sanitation. With a total prize purse of £4.5 m, it focussed on Ghana, Kenya, and Nepal and was delivered by a consortium of partners led by IMC Worldwide Ltd. The evaluation was led by Itad Ltd. Due to the challenges related to sanitation coverage and services as described above, Ghana was chosen to develop and test the concept to drive innovations and improvement in integrated urban sanitation. In November 2015, the Ministry of Local Government and Rural Development launched the *Sanitation Challenge for Ghana (SC4Gh)*, managed locally by IRC Ghana, supported technically by MAPLE Consult Ghana.

SC4Gh objectives and methodology

The aim of the SC4Gh prize, which focussed on MMDAs with populations greater than 15,000, was to incentivize the design and implementation of innovative sanitation strategies resulting in transformational changes and significantly improved city-wide sanitation services across the sanitation value chain (see Figure 1).

The specific expectations were for MMDAs to:

1. *Make urban sanitation a political priority* for Chief Executives and core management of the MMDAs and take the leadership in ensuring access to sustainable and affordable sanitation for all.
2. *Use innovative approaches* to transform and significantly improve sanitation service delivery and prioritize existing public funding to facilitate pro-poor sanitation.
3. *Mobilize resources* (technical, human, financial) to support the design and implementation of sanitation strategies focussing on equal benefit for the urban poor.
4. *Create pro-poor public-private partnerships* with incentives for private entrepreneurs and businesses to provide sanitation services for the urban poor and partnership with communities to solve sanitation challenges.
5. *Partner with civil society, academia, NGOs, and innovators* to harmonize sanitation programme approaches and make more effective use of the inclusive and collective human, material, and financial resources at national level, regional, and local levels.

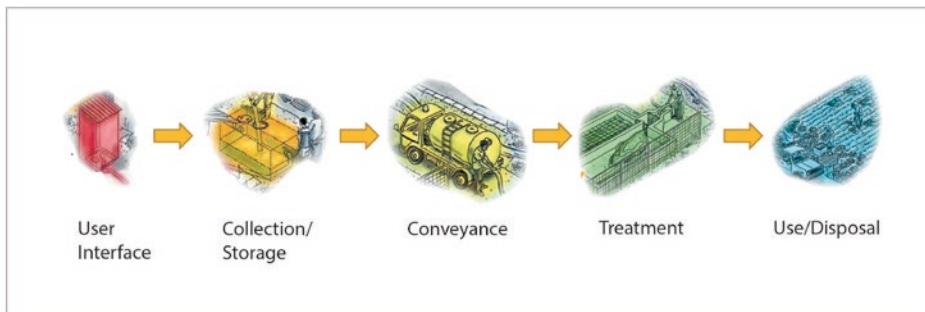


Figure 1 Sanitation value chain

Source: Image provided courtesy of Eawag-Sandec (<https://www.eawag.ch/en/department/sandec/>)

Stages in the challenge

The SC4Gh was implemented as a two-stage competition: Stage 1, the Duapa Award, which ran from 2015 to 2016; and Stage 2, the Dignified City Prize, which ran from 2016 to 2019. During the course of the Challenge, practice and learning workshops were undertaken by the prize team to assist the MMDAs with design of their objectives and means of verifying their activities. These were led by IRC and supported by technical advisors from the prize team. For the Duapa Award, all 139 eligible local authorities in Ghana were invited to submit sanitation plans and compete for the prize. These plans were referred to as liquid waste management strategies (LWMS) to make the differentiation between solid waste management, which is also considered to be part of sanitation in Ghana.

MMDAs in Ghana are different in terms of their organizational structure and access to financial resources. Whereas Metropolitan Assemblies have dedicated Waste Management Departments which are staffed with public health engineers, Municipal and District Assemblies only have Environmental Health and Sanitation Units staffed with environmental health officers (EHOs)/assistants, an indication of the different levels of staff capacity and expertise. Regarding financial resource allocation from central government, Metropolitan Assemblies receive more funding from the District Assemblies Common Fund. Metropolitan and Municipal Assemblies also benefit from the Urban Development Grant. By meeting certain minimum conditions, Municipal Assemblies receive funding through the World Bank-funded Ghana Secondary Cities Support Programme. In addition, Metropolitan Assemblies due to their size and level of development are able to raise more internally generated funds from property rates and business operating permits. In order to ensure a level playing field between MMDAs of different scales, capacities, and levels of access to resources, MMDAs were categorized as 1) Metropolitan and Municipal Assemblies, or 2) District Assemblies. From the official launch in November 2015, the applicants had approximately six months (up to end of April 2016) to register and submit an application, with the awards presented at the end of June 2016. MMDA proposals for the Duapa Prize needed to demonstrate a LWMS to achieve the following aims:

- elimination of open defecation;
- increased access to hygienic sanitation for all at home, in public buildings, and in workplaces;
- improved faecal sludge and wastewater management;
- reduction of sanitation services gap between the rich and poor.

The winners and all runners-up from Stage 1 were invited to participate in Stage 2 (Dignified City Prize) initially by completing and submitting a questionnaire and by the passing of a resolution by the General Assembly/Executive Committee of the Assembly to demonstrate political commitment. The official launch of Stage 2 took place at the award of Stage 1 in June 2016, which involved implementation of the proposed LWMS over a period of 30 months. At the close of Stage 2, each MMDA was required to submit a report on the results achieved towards the fulfilment of the objectives of their LWMS.

Judging criteria and process

Two different sets of criteria and weightings were developed and utilized for the basis of judging the submissions in Stages 1 and 2 as shown in Table 1.

These criteria were presented to the MMDAs at SC4Gh learning and practice workshops to ensure that local officials understood the basis for evaluation of their LWMS. A panel of local and international judges reviewed the submissions in both prize stages using the agreed judging criteria to shortlist MMDAs. In both stages, the judges, who were selected to be both objective and independent, rated each proposal individually, blinded to the scores of their peers. Two Stage 1 judges (one local; one international) became technical advisors to Stage 2. None of the core prize management team was involved in judging Stage 1. Also, none of the technical experts or SC4Gh prize team was involved in judging of Stage 2.

Table 1 Judging criteria for Stages 1 and 2

<i>Stage 1 judging criteria</i>	<i>Stage 2 judging criteria</i>
<p>i. <i>Increasing access to safe sanitation:</i> The strategy should set out the baseline and targets for increasing access for various groups by end of implementation period</p> <p>ii. <i>Comprehensiveness of the approach throughout the sanitation value chain:</i> The strategy should set out what will be done to manage all steps of the liquid waste management chain in a sustainable and environmentally friendly manner</p> <p>iii. <i>Service delivery models:</i> The strategy should set out how services will be delivered and by whom</p> <p>iv. <i>Behaviour change and community engagement:</i> The strategy should explain the critical behaviours that will be changed (and how) and present what has been done to involve the community in its preparation</p> <p>v. <i>Operational and environmental sustainability:</i> The strategy should set out how the sustainability of the investments made during the implementation period will be ensured</p> <p>vi. <i>Financing strategy:</i> The strategy should present the associated financing strategy for implementing the plan and sustaining change over time</p> <p>vii. <i>Reduction of inequality of access:</i> The strategy should describe its approach to reach the poor equitably and at scale</p> <p>viii. <i>Monitoring of sanitation progress:</i> The strategy should identify how progress in increasing access to sanitation will be measured</p>	<p>i. <i>Achievement of strategy:</i> Consistency of delivery on strategy; delivery of programmes using own resources and comprehensiveness of intervention across sanitation value chain</p> <p>ii. <i>Innovation:</i> Service, social, and environmental innovations</p> <p>iii. <i>Sustainability:</i> relating to institutional, social, financial, and environmental sustainability</p> <p>iv. <i>Focus on the poor:</i> Delivery of strategy with focus on poor neighbourhoods/ households</p> <p>v. <i>Leadership commitment:</i> Extent and continuity of engagement of the Chief Executive; core management, technical staff, and elected officials</p> <p>vi. <i>Private sector/non-state actor involvement:</i> private sector and non-state actor involvement in technological, research, and human resource development</p> <p>vii. <i>Community participation:</i> Engagement with community members from poor neighbourhoods and inclusion of youth, elderly persons; girls and disabled people</p>

In Stage 1, MMDA proposals were ranked by 32 international judges with each proposal evaluated by three judges independently. This produced a shortlist of the highest ranked proposals. Of these shortlisted MMDAs, the highest ranked were interviewed with a six-person, face-to-face panel of international and local judges. Stage 2 final reports submitted by the participating MMDAs were also reviewed and assessed by a panel of 15 local and international judges based upon the judging criteria. Judges for Stage 2 also had access to independent verification reports (see below) which allowed them to assess the reliability of the evidence provided by MMDAs. The scoring was used to identify the finalists who then presented their achievements to a panel of international and local judges who ranked the MMDAs independently before convening and coming to consensus on the winners.

The verification process

SC4Gh used an independent verification process to assess the information presented by the MMDAs in order to support the judging process. Baseline verification took place in late 2016, prior to the MMDAs starting implementation of their LWMS in Stage 2. This baseline involved an assessment of the MMDA sanitation situation in the context of their planned LWMS. Stage 2 ended in March 2019 and was followed immediately after submission of the final reports with a verification of their reports and visits by the verification team to each MMDA. The Stage 2 verification assessed the reliability of the information put forward by the MMDAs in their final reports. This was undertaken through a process of document inspection to cross-validate data, followed by field visits, including interviews with the MMDA team, and site visits for spot checks of 'hardware' interventions. Wherever possible, the verification team sought to cross-validate evidence to verify and improve the confidence of the information presented in the final reports. A pre-piloted verification template and information confidence grading matrix was used to rate the level of confidence achieved by the information and analysis provided by the MMDAs.

Overall results from the Sanitation Challenge

As shown in Figure 2, out of the total 139 MMDAs, 91 MMDAs registered interest and 48 MMDAs submitted Stage 1 proposals. Three MMDAs emerged as winners in the Duapa Prize, with the first, second, and runner up receiving £30,000, £25,000, and £20,000, respectively. Twenty-one MMDAs reached the judging stage of Stage 1 with their strategies. Surprisingly, none of the winners was from the larger metropolitan and municipal areas. All three MMDAs to win in the first stage were district assemblies, each of which was ranked with the most innovative and original strategies in their proposals. The remaining 18 MMDAs were awarded honorary prizes for their innovative strategies.

In total, 21 prequalified MMDAs from Stage 1 were invited to express their intention to participate in Stage 2 (Dignified City Prize) for a share of a total prize of £1,285,000. At this stage, four MMDAs declined to go further with the competition.

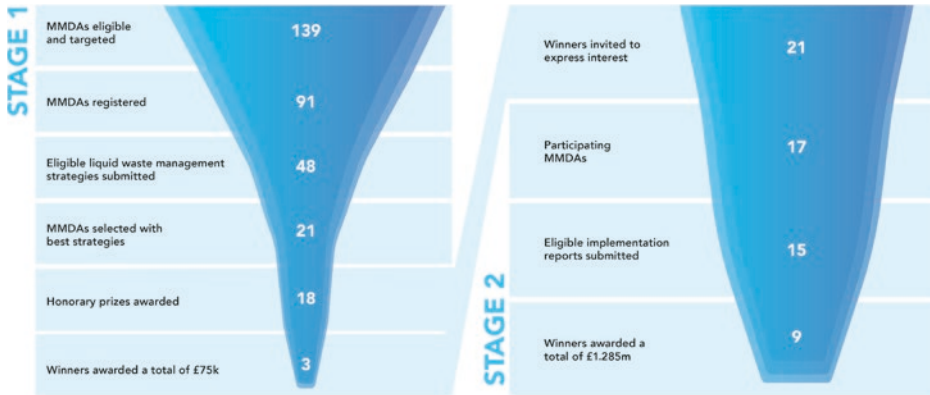


Figure 2 Sanitation Challenge for Ghana: Stages 1 and 2 participant MMDAs
 Source: Gould and Brown, 2020

Figure 3 shows where the 17 MMDAs participating in Stage 2 are located, indicating a good spread of Stage 2 MMDAs coming from various parts of Ghana, with significantly different geographic and socio-political environments, ranging from the capital Accra in the south to Kassena Nankana, located in the conflict-affected area in the north of the country.

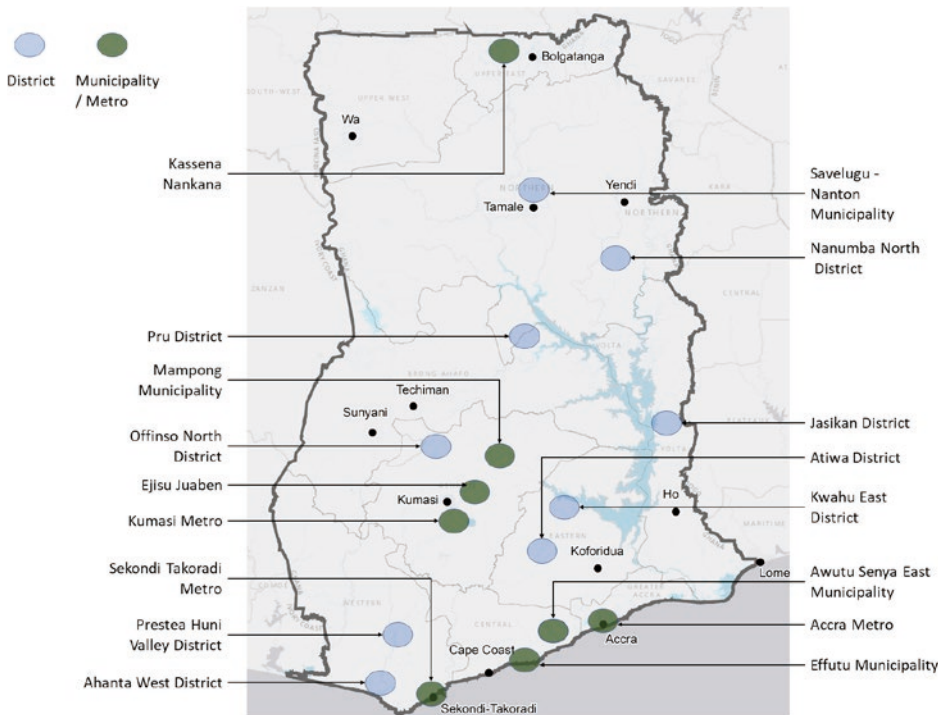


Figure 3 Location of the MMDAs participating in Stage 2 of the Sanitation Challenge

Table 2 Overall winners of the SC4Gh Stage 2 Dignified City Prize according to different prize categories

<i>Prize category</i>	<i>Prize definition</i>	<i>Prize winner</i>	<i>Prize</i>
Metropolitan and municipal assembly	1st place	Kumasi Metropolitan Assembly	£400,000
	2nd place	Effutu Municipal Assembly	£225,000
	3rd place	Sekondi Takoradi Metropolitan Assembly	£125,000
District assembly	1st place	Nanumba North District Assembly	£285,000
	2nd place	Kwahu East District Assembly	£150,000
Special prizes	Community engagement	Prestea Huni Valley Municipal Assembly	£25,000
	Financial commitment	Offinso North District Assembly	£25,000
	Disability inclusion	Savelugu Municipal Assembly	£25,000
	Leadership commitment	Kassena Nankana Municipal Assembly	£25,000

At the end of Stage 2, 15 out of the 17 MMDAs participating in Stage 2 submitted their final reports. In this stage, prizes were awarded to both the winning MMDAs and runners up. There were also special prizes awarded to MMDAs that demonstrated excellence in community engagement, financial commitment, disability inclusion, and leadership commitment. The winners of the Dignified City Prize were rewarded at a grand award ceremony in July 2019. A sister prize, funded by the Bill & Melinda Gates Foundation, also awarded MMDAs for public-private partnerships.

Table 2 shows details of the MMDAs selected by the judges for the various prizes.

Main achievements from the Sanitation Challenge

The SC4Gh evaluation found that all MMDAs made good progress in their strategy implementation, with most being found innovative by the judges. All MMDAs had a focus on improving sanitation service delivery for the poor and engaged community members from poor neighbourhoods and from vulnerable groups during strategy implementation. The most successful MMDAs tended to be those who received support from external actors including donors, INGOs, or the private sector. Several MMDAs drew from clever adaptation of existing plans and strategies, whereas others took inspiration from other MMDAs during interactions at workshops in Accra.

The results from the Challenge based on the activities and outputs reported by the MMDAs that were deemed to be 'reliable' or 'very reliable' during the verification process are presented below. These achievements are summarized in relation to leadership commitment, mobilization of funds, improvements in the sanitation service delivery chain and the associated benefits to the poor (see Table 3).

Table 3 Examples of physical improvements in the sanitation service delivery chain

<i>Household facilities</i>	
Kumasi Metropolitan Assembly (KMA)	Establishment of container-based sanitation (CBS) service in partnership with Clean Team Ghana and the supply of 149 CBS units to low-income households. KMA plans to use prize money to intensify awareness creation on CBS and expand coverage to 1,500 households by 2021.
Kwahu East District Assembly	Improved toilet facilities via subsidies to households to convert ventilated improved pits (VIPs) to flush toilets connected to a bio-digester for waste treatment. The Assembly also supported shops to provide free toiletries and cleaning agents, benefitting the poor and elderly citizens.
Salvelugu District Assembly	Provision of disability friendly pour-flush toilets with support from International Development Enterprise (iDE) under the SAMA SAMA project. The toilets incorporate special features such as a metal rail installed in the interior walls of the superstructure to enable use by people with disabilities.
<i>Public facilities</i>	
Kwahu East District Assembly	Improved toilets in schools and at markets replacing VIPs and improving water supply to toilets for flushing and hand washing.
Atiwa District Assembly	Construction of three public toilets with ramps to enable disabled-access and established a system of toilet user fees to cover operational and maintenance costs.
Pru-East District Assembly	Rehabilitation of four public toilets with hand washing facilities through a build operate transfer contract with the private sector and constructed three school latrines.
<i>Septage management</i>	
Pru-East District Assembly	Maintenance of the municipal cesspit emptier
Nanumba North District Assembly	Rehabilitation of existing cesspit emptier
Atiwa District Assembly	Drain clean-up exercises to remove overgrown weeds and silt and street sweeping.
<i>Wastewater treatment</i>	
Atiwa District Assembly	Commissioned Biogas Technologies Africa Ltd to carry out a feasibility study at the Enyiresi government hospital for the construction of a biogas plant at the hospital.
Prestea Huni-Valley District Assembly	Acquired land for construction of a waste stabilization pond
Pru-East District Assembly	Acquired land for a liquid waste treatment plant and implemented a pilot construction of one institutional biogas plant at a hospital facility through public-private partnership
Kumasi Metropolitan Assembly	Sewage treatment ponds rehabilitated and improved to rear catfish on a commercial scale to generate funds for sustainable operation and maintenance of the facility.

Other achievements focussed on the enabling environment for sanitation improvements relating to community engagement and partnerships with private sector actors (see Table 4). It is notable that all these achievements were accomplished with no donor funding from the prize.

Table 4 Partnerships with communities and the private sector

<i>Community participation</i>	
Nanumba North District Assembly	<ol style="list-style-type: none"> 1. Bi-partisanship leadership commitment from both past and present chief executives 2. Innovative private partnership to implement LWMS strategies. 3. Working with Nanumba Youth Parliament on a ‘Sanitation for Peace’ campaign to mobilize and sensitize communities and unite warring factions 4. Training of staff from Environmental Health and Sanitation, Community Development and Information Service Departments.
Prestea Huni-Valley District Assembly	<ol style="list-style-type: none"> 5. Special prize for ‘Community Engagement’ to promote public sensitization for environmental sanitation and behaviour change using weekly programmes on local radio
Ahanta District Assembly	<ol style="list-style-type: none"> 6. Community-level sensitization activities funded by municipal assembly’s internally generated fund were carried out in two communities to promote good personal hygiene and behavioural change and environmental sanitation practices. 7. Households were encouraged to construct toilets through the CLTS approach. 8. Innovative communication for awareness-raising included community radio, local megaphones, posters, flyers, and billboards.
Sekondi Takoradi Metropolitan Assembly	<ol style="list-style-type: none"> 9. Innovative public engagement strategy ran a hygiene education/ sanitation competition among basic schools, which was projected to be a learning ground for others in the area and beyond: MMDA staff developed a Communication Plan to improve awareness and attitudes of the public in relation to sanitation and liquid waste management, and developed radio sensitization and awareness-raising on local radio
Accra Metropolitan Assembly (AMA)	<ol style="list-style-type: none"> 10. Established a stakeholder platform using social media handles and WhatsApp where citizens report nuisances, citizen feedback page on the AMA website.
Ahanta District Assembly	<ol style="list-style-type: none"> 11. Sent out letters to Assembly members to inform landlords on the need to ensure that toilets are provided in all homes.
Pru-East District Assembly	<ol style="list-style-type: none"> 12. Trained artisans on the construction of different types of latrines, and Prestea Huni-Valley District Assembly organized training for EHOs and other personnel engaged in liquid waste management and prosecutions.
Sekondi Takoradi Metropolitan Assembly	<ol style="list-style-type: none"> 13. Developed guidelines for the provision of household latrines within the Metropolitan area; formation and capacity building of Sanitation Task Force and capacity-building of school health education programme coordinators, head teachers, and sanitation clubs.
Atiwa District Assembly	<ol style="list-style-type: none"> 14. Formed a Local Sanitation Committee (LSC) to aid in addressing sanitation issues in the community, training of LSC members and local leaders, and organization of community-level clean-ups.

(Continued)

Table 4 Continued

<i>Partnerships with private sector</i>	
Kumasi Metropolitan Assembly	15. Innovative partnership with private sector partner Aquaculture. One of the public–private partnerships for KMA was supported by other initiatives, i.e. both projects contributed to this result.
Effutu Municipal Assembly	16. Innovative partnership with the private sector and governmental institutions including the local prison service

Leadership commitment and amendments to legal or regulatory instruments

This category aimed to stimulate MMDAs leadership to make commitments to participate in Stage 2 and implement the LWMS that they had developed under Stage 1 of the prize. Overall, evidence suggests that the prize raised awareness of the importance of sanitation with both MMDA chief executives and central government ministry representatives indicating that the prize was a political ‘wake-up call’ to the sanitation needs in their cities.

A positive change in planning, policy, resource allocation, and/or attitudes was noted by international judges for 8 of the 15 finalist MMDAs, with LWMS included in the medium-term development plans of these MMDAs. Evidence suggested that this improved planning was linked to overall leadership, not only of the chief executive, but of the entire team within the MMDA. Kassena Nankana Municipal Assembly won the special prize for leadership commitment with the chief executive and his staff showing excellent guidance and consistent management throughout the programme and commitment to embed sanitation into their policy.

MMDAs also made amendments to legal or regulatory instruments that enabled or facilitated the achievements of each strategy as well as providing a foundation for future improvements. Ten of the 17 participating MMDAs reported that they had reviewed their local sanitation by-laws, and eight MMDAs reported that they had improved enforcement of their by-laws.

Mobilization of funds

MMDAs were assessed in terms of the application of existing public finance such as the Internally Generated Fund or District Assemblies Common Fund to implement their strategies. Verification of the allocation of funds for sanitation improvements was enabled by the inclusion of a separate budget line for sanitation in the municipal accounts. This was introduced during Stage 1 and included in the *Guidelines for the Preparation of the Budgets* issued by the Ministry of Finance. Subsequently, in accordance with MMDA budgets audited by the Ghana Audit Service, all 17 MMDAs participating in Stage 2 reported increased budget allocation and spend for implementing their sanitation strategies for the duration of the prize.

Innovations in the sanitation service delivery chain

As shown in Table 3, many of the MMDAs took initiatives to improve access to sanitation using a variety of different approaches for implementation. Rehabilitation

and construction of public or institutional toilets (notably for schools) was the most widely adopted intervention, while others offered subsidies for household toilets via private sector actors or promoted latrine construction through a Community-led Total Sanitation (CLTS) approach. In relation to disposal of liquid waste, due to the high investment cost for construction of treatment facilities, most MMDAs focussed their resources on less costly activities for the rehabilitation of septage transportation vehicles. Several MMDAs made significant steps towards the installation of treatment plants – commissioning feasibility studies and acquiring land for construction.

Community participation and private sector involvement

Community participation was one of the key facilitating mechanisms within the prize and, in many cases, this included capacity-building for MMDAs to engage with communities as a key mechanism for improving sanitation. Partnerships with the private sector was another key factor contributing towards the winning MMDAs. Together with a sister prize (referred to as the private sector and non-state actors prize) funded by the Bill & Melinda Gates Foundation, evidence suggests that SC4Gh facilitated and strengthened partnerships and networks across the MMDAs. The private sector and non-state actors prize was an inducement award for private and non-state actors to partner at least one of the 17 MMDAs participating in the SC4Gh. The introduction of the sister prize fostered partnerships which influenced innovations and leveraged expertise and investments for the implementation of the LWMS. On account of this, winning MMDAs demonstrated strong and effective partnerships with the private sector and non-state actors. A total of 31 private partnerships and agreements were identified to have been entered into by 16 of the 17 participating MMDAs. Table 4 shows the range of partnerships developed by MMDAs during SC4Gh.

Challenges and reflections

Although there were considerable achievements, the SC4Gh was not without its challenges during design and implementation which were identified during programme evaluation and feedback from the participating MMDAs. The winners of Stage 1 were MMDAs who produced the most well-developed and presented plans, but these were often overly ambitious and, without sufficient resources or capacity, they were unable to fully implement their plans and achieve their stated goals.

Political and organizational changes

Perhaps one of the most significant challenges faced by the MMDAs during the SC4Gh that hindered their ability to implement their sanitation strategies was the frequent changes in leadership and managerial and technical staff, which resulted in a loss of institutional memory, lack of buy-in, changes in priorities, and the need to retrain new staff. The most significant change that occurred in

December 2016, only a few months after Stage 2 was launched, affecting the overall prize process, was a change in the national government. The resultant political changes had knock-on effects on the level of progress made by MMDAs over the three years of Stage 2. In addition to problems related to a high level of staff turnover and the MMDAs' ability to finance their LWMS during the transition, the new government resulted in new chief executives in all of the participating MMDAs. The process of replacement of staff and MMDA leadership was not completed until June 2017, resulting in a six-month 'leadership vacuum' and delaying decisions about budget and time allocations for prize-related activities. These problems were compounded by the fact that 7 of the 15 finalist MMDAs underwent organizational-level change during the prize, changing their status (municipality/metropolitan/district), geographical boundaries, and size. In terms of the impact of leadership commitment, it was highly notable that one of the winning MMDAs managed a smooth transition from the old chief executive to the new, with the former leader of the MMDA remaining involved, and supportive, to the end of the prize process.

Duration and scope of the prize process

An interesting challenge, with implications for donors and local government strategy generally, related to the duration of the prize process (4 years in total), and the ambition of the MMDAs. Notably, several interventions proposed by MMDAs require a longer time for implementation, and others required a longer time scale for their impacts to be observed. For example, many MMDAs proposed changes in legislation or the introduction of new regulatory instruments, which take time to be ratified, and also have repercussions which would not be achieved in the short period of the prize. Other interventions had potential for ongoing impact after the end of the prize that may also benefit MMDAs across the country as a whole. For example, the inclusion of LWMS in medium-term development plans and budgets was a policy change that had national reach and was a long-term, significant shift affecting more than just prize participants. The inclusion of additional sanitation budget-lines in MMDA national reporting is another important step forward which has potential to benefit the sector as a whole. Understandably, within the short time period of the SC4Gh, delivery on this was patchy. This implies a need to work with national government (e.g. MSWR) to establish how MMDAs can improve their documentation of their LWMS expenditure and enable this shift in MMDA policy towards LWMS.

Technical capacity at MMDA level

Technical capacities within the MMDAs, which affected their ability to design, implement, and report on their plans, was a significant challenge. Most MMDAs were unaccustomed to the rigour required for the reporting and lacked the administrative systems in place to easily track expenditure for specific sanitation projects. Differing levels of staff capacity also related to the size/status of the MMDA, with the Metropolitan Assemblies having significant technical capacity

advantage due to existing Waste Management Departments staffed with public health engineers and other support staff. In comparison, the functions for waste management in the District and Municipal Assemblies are carried out by Environmental Health and Sanitation Units with reduced staffing and technical capacities. This can be partly corroborated by evidence from other countries which suggests that local authorities generally lack a planning culture, especially in contexts where informed decision-making is constrained by the lack of a good information and planning base, and in some cases donor reliance (Tayler and Parkinson, 2005). This suggests a need to support MMDAs as they develop their local LWMS and to train MMDA staff to support implementation of the strategies. A national programme of capacity-building focussed on the smaller municipal and district authorities is also one of the key attributes of the National Sanitation Authority (NSA) currently proposed by MSWR.

Funding and access to financing constraints

Although the MMDAs were observed to allocate a greater proportion of municipal funds for sanitation, the amount was not as much as was hoped based upon the MMDA accounts. In addition, it was not easy in all MMDAs to ascertain exactly how funds had been expended. Checks on the composite budgets from 2018 for three MMDAs indicated that only Kwahu East District Assembly made specific reference to their SC4Gh activities in their composite budget for 2018. Similarly, although Jasikan's composite budget statement referenced some activities that could be attributed to the SC4Gh, without line items showing the associated budgets, it was not possible to track the finances.

The majority of the MMDAs stated weak financial capacity and constrained budgets as one of the main challenges they faced in implementing their strategies. A lack of funds led to two finalists dropping out from the competition. The majority sought additional funding from other actors to complement public finance, especially as some indicated that they expected to receive funding from DFID to support the implementation of their strategies. The perception that DFID would provide upfront funding was exacerbated by the fact that a number of more traditional donor-funded sanitation programmes ran concurrently to the prize.

It is likely that the MMDAs would have achieved more – particularly some of their more ambitious 'hardware' aims, if they had been able to secure additional funding linked to the prize process. One possibility in the future would be to enable MMDAs to access finance from the proposed National Sanitation Fund, a 'basket fund' managed by the Ministry of Finance, to co-finance MMDA-led city sanitation programmes (IMC et al., 2018; IMC Worldwide, 2019). SC4Gh appeared to empower MMDAs to move away from an external, donor-led approach in both strategy and innovative delivery. However, it has to be recognized that substantial funding to support national institutional and liquid waste management development in MMDAs is also still likely to be needed given the scale of the investment requirements to achieve SDG6 (UNDP, 2021).

Conclusions

The achievements demonstrated by the MMDAs in planning and implementation of interventions across the sanitation value chain combined with political leadership, innovative partnerships with communities and the private sector, and institutional and legal reforms provide evidence that the prizes offered under the SC4Gh incentivized MMDAs to improve their LWMS. In spite of real challenges, it was observed that all the MMDAs managed a significant level of improvement, without any upfront donor funding. Very notably, in the context of striking political, institutional, and economic challenges, many MMDAs undertook shifts in policy beyond the scope of many donor-led projects and programmes.

It was also highly significant to see that the SC4Gh prize process inspired MMDAs who were not the 'usual suspects' for either donor or national attention. When the prize started, there were obvious candidates in the competition from the large Metropolitan and Municipal authorities, particularly in the south of Ghana. But the challenge gave a fairly unprecedented opportunity for local authorities in less well-resourced and less well-known areas of Ghana, notably those in the north, which face the additional challenges of outbreaks of conflict. These MMDAs not only participated in a prestigious competition supported by the international development community, but they *won prizes* in both stages. This highlights the empowering aspect of the prize process which enabled any local authority to take the initiative to improve sanitation services in their areas of jurisdiction.

Perhaps the most significant legacy of SC4Gh is that many local authorities, although lacking substantive funds and technical expertise, have the ability to derive innovative and sometimes ingenious solutions using their own resources, ambitions, and collaborative initiatives. This suggests an opportunity for development of Ghana's sanitation sector in line with the government's 'Beyond AID' agenda (Ananpansah, 2019). The SC4Gh approach may also offer lessons for other local governments across Africa and beyond, on the value of empowering local government teams to innovate towards LWMS progress in towns and cities for the achievement of SDG6 sanitation targets.

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