

# THE TRANSFORMATIVE ROLE OF CITY-COMMUNITY PARTNERSHIPS IN THE **FIGHT AGAINST EBOLA** AND BEYOND IN GREATER MONROVIA, LIBERIA



**Cities Alliance**

Cities Without Slums

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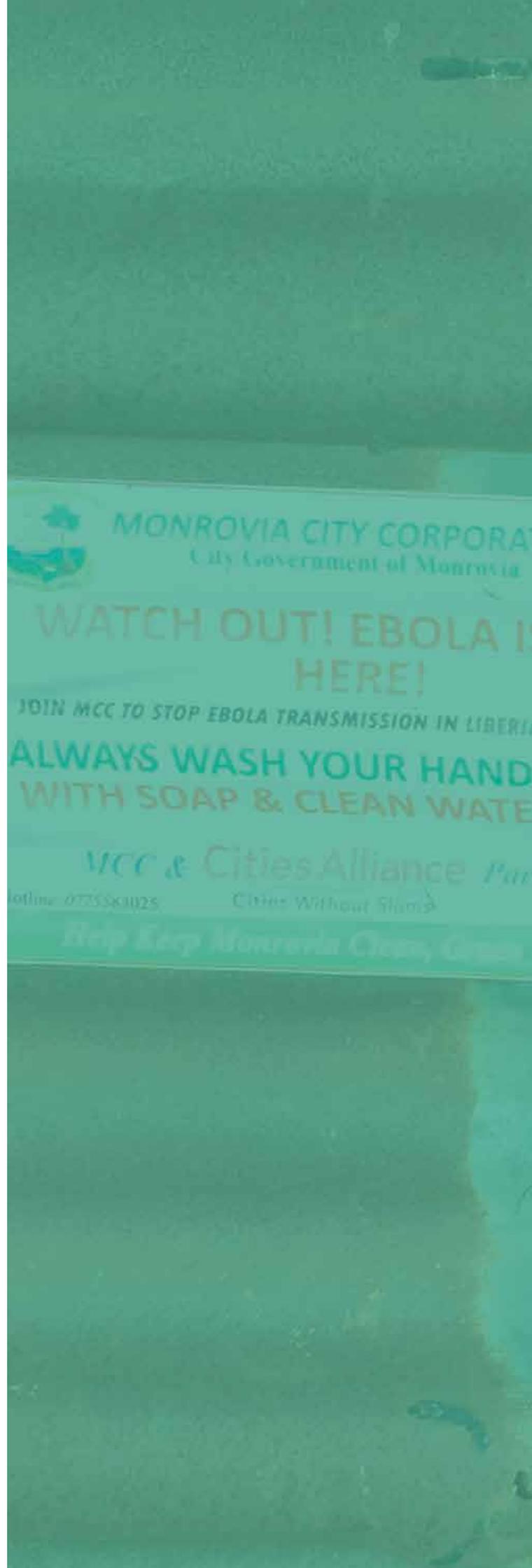
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# Foreword



Last year, the UN Secretary-General's High-Level Panel on the Post-2015 Development Agenda, which was co-chaired by Liberia, released its report setting a clear roadmap for eradicating extreme poverty. We believe cities are central to achieving that goal for our country.

Following the adoption of the 2030 Agenda, Liberia's National Report to the Third United Nations Conference on Housing and Sustainable Urban Development (Habitat III) in Quito in October 2016 highlighted the importance of inclusive governance systems in cities and the remarkable achievements of Monrovia's Community Based Enterprises (CBEs) in addressing basic sanitation services.

This report demonstrates how active partnerships between communities and local government can support economic, social, and environmental gains in cities and towns. Lessons

learnt from the Improved Primary Waste Collection in Poor Communities (IMPAC) and from the Ebola response suggest that the CBE model should be expanded geographically to new areas, vertically to higher value activities in the waste management value chain, and horizontally to other services, such as sanitation, water, and street paving. CBEs have already started to expand their business operations in all three directions and local government has embraced the approach, creating new opportunities for this type of partnerships with communities.

Liberia's proposed Local Government Act recognizes solid waste management as a key municipal service delivery duty for mayors. Our recently established National Solid Waste Management Policy sees solid waste management as an entry point duty for mayors and calls for public-private partnerships between municipal entities and CBEs to ensure inclusive municipal governance and sustainability in service provision.

As Liberia embarks on its first National Urban Policy with support from the Cities Alliance and UN-Habitat, we need to create the enabling environment to achieve economic transformation at the local level. This entails the need to improve livelihoods, harness people's innovation, and promote the potential of the informal economy to meet this goal. The CBE model established under the Monrovia City Corporation IMPAC project is a prime example of an implementation model to partner with community enterprise development for more productive and effective cities.

Honorable Stephen Y. Neufville  
*Deputy Minister of Urban Affairs*  
*Ministry of Internal Affairs*  
*Republic of Liberia*



When Ebola first began to spread in Liberia, there was denial at all levels—people refused to acknowledge its existence, the medical community did not understand how to deal with the virus, and awareness campaigns or messages urging preventative measures did not reach city’s residents.

As the death toll mounted, reality finally set in. Doctors and medical personnel flocked to Monrovia, Liberia’s principal urban center and home to 40 percent of its total population. Ambulances were everywhere and Liberia was virtually cut off from the rest of the world. It was the worst Ebola outbreak in Liberia’s history; some 4,000 people died of the virus, many of them city dwellers and specifically, women because of their traditional role as caregivers.

This report highlights the strength of the Community Based Enterprise (CBE) model, which was demonstrated when the city decentralized its response to work with communities as partners in this critical urban health crisis. With the intrinsic knowledge about communities and the trust enjoyed from community members, CBE workers could collect invaluable information about suspected cases, as well as transmit scientific knowledge about the disease in an authentic manner, acceptable to community members—while continuing solid waste collection: a highly critical public service especially during the health emergency.

Looking forward, the successful partnership between the Monrovia City Government and communities in combating Ebola will serve as a good foundation for the Cities Alliance Liberia Country Programme, a long-term partnership that will support greater Monrovia and Liberia in becoming more resilient and improving the living and working conditions of its poorest residents.

A handwritten signature in cursive script that reads "Clara D. Mvogo".

Honorable Clara Doe Mvogo  
*Mayor of Monrovia*

# Introduction from Cities Alliance



The Cities Alliance was introduced to Monrovia when it was requested to act as the substantive intermediary between the Monrovia City Council and the Bill & Melinda Gates Foundation, which financed the Improved Primary Waste Collection in Poor Communities (IMPAC) project.

What began as an oversight function of a well-designed and important project was transformed by the impact of the Ebola Virus Disease, not only in Monrovia, but throughout Liberia, Sierra Leone, and Guinea in the largest and most devastating Ebola outbreak in modern history, claiming over 11,000 lives. Ebola also provided a huge setback to the Liberian economy, which was finally beginning to emerge from a crippling civil war.

This crisis was unique in that it was the first-time Ebola hit major urban centers in Africa, magnifying its impact and, as this report shows, providing important insights as to how local and collaborative approaches can succeed where traditional responses are shown to be hopelessly

inadequate. In this respect, Monrovia shares many features of African cities, with overburdened and extremely basic urban services, a dysfunctional land market with little access or tenure security for the urban poor majority, and an enormous reliance on a poorly-understood informal market. Poorer neighborhoods in Liberia's capital were linked to more intense, widespread transmission of Ebola, compared to more well-off parts of Monrovia, a pattern seen with other infectious diseases. It has been estimated that some 75 percent of victims in Liberia were women and girls because of their role as primary care givers.

Liberia's strategy shifted in 2015 from a top-down approach resulting in the forced quarantine of slum communities in Monrovia to a decentralised response engaging urban poor communities and local authorities in partnership. This move played a key role in turning the trajectory on new Ebola infections in the city. Now, Liberia's response is a success story, serving as a vital lesson for African cities undergoing rapid urban growth.

The Cities Alliance partnership commissioned this report to document a significant knowledge gap on how the partnerships between communities and local government contributed to the eradication of Ebola in Monrovia. The report found that in Liberia's urban slums, strong community networks were enlisted to help battle the disease. These networks were functional—and indeed, transformational—despite the infrastructure problems. This in turn facilitated government efforts to engage communities to help overcome the crisis. We hope this report contributes to a better understanding and appreciation of the vital importance of these partnerships, not only for future infectious disease outbreaks, but for crises of all kinds.

We would like to thank the government of Liberia, especially the Ministry of Internal Affairs, the Ministry of Public Works, the Ministry of Commerce and Industry, the City of Monrovia, and the City of Paynesville, as well as the local authorities in Greater Monrovia, the National Association of Community Based Enterprises (CBEs) and its members, the Federation of Community Management Teams (CMTs) in Greater Monrovia, YMCA Liberia, SDI, the National Association of Petty Traders Union of Liberia (NAPETUL), StreetNet International, WIEGO, UNICEF, UN-Habitat, and Oxfam GB. Finally, we would like to acknowledge the vision of Melanie Walker and the Bill & Melinda Gates Foundation for funding this project, out of which the Liberia Country Programme has emerged.

A handwritten signature in blue ink, which appears to read 'William Cobbett'.

**William Cobbett**  
*Director*  
*Cities Alliance*

# Executive Summary

The Improved Primary Waste Collection in Poor Communities (IMPAC) project is a good example of how city-community partnerships can deliver essential services to poor communities in resource-poor situations, including informal high-density townships with substandard access to basic services, such as the West Point community. Established in Monrovia, Liberia, in 2010, the project was funded for four years by the Bill & Melinda Gates Foundation. However, as intended, the Community-Based Enterprises (CBEs) that were established by the project continue to operate and collect primary solid waste from households and small businesses.

The Republic of Liberia is situated in West Africa on the North Atlantic Ocean. It shares land borders with Sierra Leone, Guinea, and Cote d'Ivoire. Similar to its neighbors, it had only recently begun to recover from a protracted civil war when the Ebola Virus Disease (EVD) arrived in early 2014. In addition to the loss of life, the war had destroyed key infrastructure, prevented the education of a large youth cohort, and devastated the country's economy. These factors (combined with the fact that the Ebola outbreak had a large urban dimension, for the first time in the disease's history) meant that the disease spread rapidly, infecting and killing thousands of people.

This report documents the delivery model of the IMPAC project, including how the city-community partnership established under the project was leveraged in the fight against Ebola. It also explores how the partnership might be further built upon, as a platform for delivering additional socio-economic development projects. The report was compiled during three phases: (i) the inception phase, which focused on the analysis of secondary data mostly pertaining to the IMPAC project prior to the Ebola outbreak; (ii) the field mission where interviews were conducted with key stakeholders and further documentation was obtained; and (iii) the production of the actual report.

The project's name is somewhat misleading, as the project's scope extends beyond waste management. The project also aimed to (i) create jobs for the urban poor, (ii) improve health and the environment, and (iii) increase participation of the poor in government processes. As such, key features of the project included the following: the employment of locals as waste collectors; reducing inappropriate/illegal dumping of waste; and the establishment of Community Management Teams (CMTs) to act as mediators between the community, CBEs and the Monrovia City Corporation (MCC).

As the grant recipient, the MCC established a dedicated IMPAC team to manage the project and to support CBEs. In addition to monitoring and administering the project, the team was responsible for establishing and training CBEs and conducting public awareness campaigns to inform the urban poor of the health and environmental benefits of improved waste disposal. Because of resource limitations, local authorities (such as townships and boroughs) were limited in the support they were able to provide to CBEs and CMTs, although they supported the project in principle.

CBEs entered into official contracts with the MCC, which outlined the obligations and responsibilities of each party, and provided some level of official recognition of the CBEs. Following several mergers, which were undertaken for CBE operations to be more cost effective, 14 out of the 57 CBEs originally established by the IMPAC team were operational in February 2015. A primary solid waste collection (PSWC) fee paid by households and small businesses in the community served by the CBE finances CBE's operations. The individual CBE determines the fees, which in many cases are negotiated on an individual basis with communities and even households. Similarly, the system for waste collection also varies between CBEs as it is tailor-made to local conditions. Although the methods vary, all systems involve collecting primary solid waste directly from individual households and transferring it to a local skip bucket from where a private company (contracted by the MCC to provide secondary waste collection services) takes the waste to the landfill.

CMTs are a core component of the IMPAC project's delivery model and complement CBEs. The core role of CMTs can be broken into three components: (i) vetting of CBEs; (ii) stakeholder coordination; (iii) education and awareness. CMTs aim to solve issues without needing to involve the police, court system, or local authorities. As a strategy, CMTs heavily rely on a process of education and negotiation, for which they received training. An indication of training success and community trust in the CMTs is that they are asked to take on additional responsibilities, not just those related to waste management, such as mitigating conflicts among community members, abuse (such as gender based violence), and theft.

The Ebola Virus reached Monrovia in June 2014 and by July there was panic in the streets, including the above-mentioned West Point community, which suffered from high population densities, under-provision of basic services, low-education levels

and a lack of life-affirming economic opportunities for their youth majority. Eventually these factors, **combined with the unprecedented magnitude of the Ebola outbreak and a lack of understanding of the respective risks and transmission vectors, may have contributed to the looting of the West Point Ebola Treatment Unit (ETU)—**after which the armed forces quarantined the settlement—demonstrating that conventional top-down information strategies were ineffective in reaching the poorest and most vulnerable citizens. It was around this time that the MCC decided to actively engage CBEs in the fight against Ebola. Working directly with communities, through such structures as CBEs and CMTs proved **to be the right decision. The shift from national to community-based responses is widely credited with changing the trajectory on new Ebola infections.** A train-the-trainer model was used to deliver training on Ebola prevention and awareness to CBE workers. Training included information on the following: **how waste collectors could protect themselves; identification and reporting of potentially contaminated waste; and key awareness and prevention messages that they should disseminate to the community.** In addition, CBEs were provided with some equipment, including gloves, masks, boots, buckets, chlorine, and spray cans. However, quantities were insufficient, meaning that CBEs needed to purchase additional equipment, especially such consumables as gloves.

**Providing training and equipment was essential in enabling all CBEs to continue furnishing PSWC services during the Ebola crisis.** As a result of the training received, CBEs made modifications to **their waste collection practices to ensure that their workers were not infected and that they did not contribute to the spread of the disease.** Despite a number of challenges (such as households and medical facilities improperly disposing of potentially contaminated material), **not a single waste collector fell victim to Ebola because of CBEs' diligence in following these extra precautions.**

One of the biggest challenges faced by CBEs during the Ebola crisis was the collapse of revenue due to multiple reasons: reduced access to income opportunities, that is, households could no longer afford the PSWC fee; reduction in the number of waste collectors willing to work, meaning that CBEs had to cut back their operations; shrinking customer base; and duplication of services by donors. However, CBEs recognized the heightened importance of providing PSWC services during this time, and they continued to operate, even though this meant reducing (and in some cases, completely abolishing) fees.

CBEs and CMTs played an important role in creating awareness around Ebola. They spread key messages

**designed to increase acceptance and understanding in the community that Ebola was real.** In addition, they told people how they could minimize their risk of infection through hygiene measures and **increased caution in waste management, and what to do when they encountered a suspected case of Ebola.** The persistence of CBE workers and CMTs **helped to overcome binding constraints, such as high-risk behavior often rooted in traditional beliefs.** Furthermore, they were able to help with reporting suspected Ebola cases or high-risk behavior because of their presence literally in the community.

The IMPAC project demonstrated that the CBE model is a successful model for PSWC. CBEs have also been introduced successfully to manage other services, for example, public toilets. Many of the benefits of the CBE model accrue to the local community, particularly because workers are sourced from the communities in which they operate. Not only does local employment provide an income and help the money stay in the community, but it also helps create trust and a greater sense of community ownership. In terms of health, the IMPAC project proved beneficial not only during the Ebola crisis, **but also in terms of reducing diarrheal and respiratory diseases.**

Despite the successes of the project, CBEs and CMTs **continue to face challenges that need to be addressed to strengthen existing PSWC before consideration can be given to expanding the model.** Limited access to capital was identified as a significant obstacle for CBEs in their ongoing operations in PSWC, as well as for future expansion. Access to credit could be improved by providing a one-off grant, revolving seed funding, and regular micro, small, and medium microenterprise credit. Any of these options may work through empowerment of the National CBE Association as a financial intermediary.

Another ongoing challenge relates to collection of fee payments from households and small businesses. During the field mission, stakeholder groups stated that an appropriate mechanism to enforce payment needs to be identified for the long-term sustainability of the service. After exploring a number of options, it became clear that compulsory subscription is the most promising way in which to increase coverage to 100 percent. However, compulsory subscriptions may not be introduced at the expense of social inclusion. Instead, social safety nets (such as fee pricing graded by household expenditure categories or community meetings making discretionary decisions about fee waivers and other solidarity measures) are required to support and include the most vulnerable households. Stakeholders produced a range of options for introducing and enforcing mandatory subscription. They generally considered some sort of legal mechanism to enforce payment

to be favorable; however, a detailed analysis and greater understanding of the institutional system (such as statutory laws, subordinate regulations, **policies, and ordinances**) would be required before deciding on any option. Similarly, the stakeholders identified and suggested a number of options for resource mobilization piloting: ranging from top-down collections (such as piggy-backing on existing taxes or levies); continuing the current model with CBEs themselves making the collections; and, lastly, **empowering CMTs to manage collections and, in turn, to charge an operational spread covering their operational expenditures (but not paying remuneration)**. During the focus group discussion, it was decided that the third option would be piloted in selected areas, jointly chosen and identified by CBEs and CMTs.

Different key stakeholders involved in Monrovia's solid waste management system require ongoing support. As a start, CBEs can invest in training themselves, as some are already doing, and develop a peer-learning process. Additional support is, however, required from the government in providing in-depth training in business management and in raising public awareness about issues related to solid waste management, in particular, negative externalities arising from improper waste disposal. Furthermore, the secondary solid waste management system needs to be improved and regularly monitored to ensure that backlogs do not continue to act as a disincentive for proper primary solid waste management. Multiple policy options may be considered, including vertical expansion of CBEs into secondary collections, along with densification of the skip bucket network to reduce distances and increase capacity per area served. However, the subsector apparently suffers from larger constraints, such as remote location of transfer stations and garbage dumps (which require long commutes) and severe traffic congestion, making the servicing of skip buckets and dumping in landfills extremely costly. Thus, unless this is addressed through better connected transfer stations and landfills, it may not be possible to solve the most critical constraints. Connectivity may be either improved through relocation or addition of new transfer and dumping sites or large-scale transportation investments, such as building a Bus Rapid Transit system that doubles as express lane for secondary waste collection (as for other emergency vehicles). For local governments to provide the necessary support, they need to be empowered to do so, which is largely the national government's responsibility of the national government: two draft documents—the National Solid Waste Management Policy and the Local Government Act—have already flagged this.

Lessons learnt from IMPAC and from the Ebola response suggest that the CBE model should be expanded geographically, vertically, and horizontally.

- i. Geographic expansion may be easier to obtain as it does not require any significant **adjustment of the business model**. It essentially advocates the expansion of service provision to other communities within Greater Monrovia and into other districts and counties. Expansion may involve the creation of new CBEs, as well as further consolidation of CBEs, with individual CBEs covering more communities.
- ii. Vertical expansion refers to moving into higher-value steps along the waste management value chain. Activities to be considered include the following: PSWC from larger establishments; secondary solid waste collection (SSWC); recycling; animal farming; and composting. For expansion into some of these services, in particular SSWC, CBEs would require capacity development and access to resources to help them transform into small and medium enterprises.
- iii. Horizontal expansion entails expanding the types of services provided by CBEs beyond waste management. There are numerous areas in which services could be provided, including health and sanitation, infrastructure (such as lighting, street paving, and drainage), rainwater harvesting, vocational training, and microfinance. Many of these could occur within the broader context of slum upgrading. CBEs could decide whether to deliver a whole range of services along a specific value chain (such as sanitation), or whether to manage interlinked value chains (such as solid waste management, drainage, and sewerage). As with geographic expansion, horizontal expansion can be achieved either by creating new CBEs or by adding additional sectors to the portfolio of existing CBEs.

CMTs are integral to the IMPAC delivery model; however, they require ongoing support to enable them to carry out the tasks already assigned. CMTs require not only handholding and training, such as in negotiations and conflict resolution, but also an expenditure allowance to reimburse for associated costs. This could be provided by budgeting a small amount into service fees. In line with CBEs horizontal expansion into other services, CMTs may also expand their role horizontally and take on responsibility for collecting and distributing fees related to the provision of other services. After some initial resistance to this proposal, all the stakeholders contacted during the field mission agreed that the idea would at least be worth piloting. In addition, it

would be important to ensure that the CMT model was expanded alongside the geographic expansion of CBEs, given its critical importance to the success of IMPAC.

In summary, the following conclusions can be made:

- i. In a situation of limited financial resources, local governments need alternative mechanisms through which essential services can be delivered to the communities they serve.** The IMPAC project has demonstrated that the CBE/CMT approach is an effective partnership model through which poor communities can be capacitated to create economic opportunities that simultaneously result in improvements to their health and environment.
- ii. CBEs succeed as service providers in PSWC, because they can better understand what communities need and how to operate in challenging environments.** This is inter alia evident in the vibrant ecosystem of CBEs that has been created through the IMPAC project and market forces, putting unsuccessful CBEs out of business, rewarding successful CBEs, and promoting mergers to enjoy economies of scale.
- iii. The strength of the CBE model was also demonstrated during the response to the Ebola crisis: “Ebola started to be defeated when the communities took ownership.”** (Deputy Minister Pratt meeting September 09, 2016) CBE workers were able to collect invaluable information about suspected information because of their intrinsic knowledge about communities and the trust enjoyed from community members. They were also able to transmit scientific knowledge about the disease in an authentic manner, acceptable to community members—while continuing to collect solid waste, which is a highly critical public service, especially during the health emergency.
- iv. Lessons learnt from IMPAC and from the Ebola response suggest that the CBE model should be expanded** geographically (to new areas), vertically (to higher value activities in the waste management value chain, such as SSWC, recycling, and composting), and horizontally (to other services, such as sanitation, water, street paving). CBEs have already started to expand their business operations in all three directions: geographically, vertically, and horizontally, and local government has embraced the approach, creating new opportunities for this type of partnerships with communities.
- v. CMTs have been a critical factor to the success of CBEs and may also be expanded.** CMTs educate the community about the benefits of service provision (PSWC) and support the settling of cases in situations where clients are not paying or CBEs are not delivering adequate service. However, CMTs, which operate in honorary capacity, face two critical challenges: funding their expenditures and receiving sufficient training (that is, in negotiation and conflict mitigation). However, CMTs provide the opportunity to evolve into a self-governance platform that may manage integrated service delivery and serve as an entry point for other development interventions.
- vi. In this regard, local governments warrant support for making city-community partnerships work.** In addition to support by national government, local governments may want to structure partnerships with development partners, including Cities Alliance and their members around the structuring of community partnerships and capacity development. Specific issues to be addressed include the following: assessment of the viability of vertical expansion of CBEs into recycling, composting, and secondary collections; horizontal expansion of the CBE model to other sectors (for example, spatial, financial, and organizational modelling of the viability of street vending cooperatives managing markets, vending permits, and fees), strengthening of the CMT role, system, and federation; design and enforcement of new regulatory frameworks, for example, in regard to fee collections and fines for littering; questions around metropolitan governance, including collective service delivery (for example, metropolitan waste management system) and related issues of revenue and expenditure sharing.
- vii. In conclusion, strengthening and expansion of the CBE-CMT model serves as an entry gate for collaboration with government, international organizations, and international nongovernmental organizations (NGOs)—**for example for delivering other services in geographic clusters of urban poor households (blocks and communities), with economies of agglomeration, scope, and density. When building such interventions, it is recommended to do incremental institutionalization, as pilots get reconfirmed.

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# List of Abbreviations and Acronyms

<b>BMGF</b>	Bill & Melinda Gates Foundation	<b>MCC</b>	Monrovia City Corporation
<b>CAP</b>	Community Action Planning	<b>MFI</b>	Microfinance Institution
<b>CBE</b>	Community-Based Enterprise	<b>MIA</b>	Ministry of Internal Affairs
<b>CBO</b>	Community-Based Organization	<b>MOCI</b>	Ministry of Commerce and Industry
<b>CDF</b>	Community Development Fund	<b>MOU</b>	Memorandum of Understanding
<b>CDS</b>	City Development Strategy	<b>MSME</b>	Micro, Small, and Medium Enterprise
<b>CMT</b>	Community Management Team	<b>MSMEA</b>	Micro, Small, and Medium Enterprise Act
<b>CUF</b>	Community Upgrading Fund	<b>NAPETUL</b>	National Petty Traders Union of Liberia
<b>CWT</b>	Community Watch Team	<b>NCE</b>	No-Cost Extension
<b>DIG</b>	Development Innovations Group	<b>NSWMP</b>	National Solid Waste Management Policy
<b>EMUS</b>	Emergency Monrovia Urban Sanitation	<b>NUP</b>	National Urban Policy
<b>EoI</b>	Expression of Interest	<b>PPC</b>	Paynesville City Corporation
<b>ETU</b>	Ebola Treatment Unit	<b>PHEIC</b>	Public Health Emergency of International Concern
<b>EVD</b>	Ebola Virus Disease	<b>PIU</b>	Project Implementation Unit
<b>FFW</b>	Food for Work	<b>PMU</b>	Project Management Unit
<b>FGD</b>	Focus Group Discussion	<b>PPE</b>	Personal Protective Equipment
<b>FISH</b>	Fostering Innovative Sanitation and Hygiene	<b>PSWC</b>	Primary Solid Waste Collection
<b>GMD</b>	Greater Monrovia District	<b>SME</b>	Small and Medium Enterprise
<b>GoL</b>	Government of Liberia	<b>SSWC</b>	Secondary Solid Waste Collection
<b>GPIMG</b>	Global Programme for Inclusive Municipal Governance	<b>SWC</b>	Solid Waste Collection
<b>HH</b>	Household	<b>SWM</b>	Solid Waste Management
<b>IMPAC</b>	Improved Primary Solid Waste Collection (in Poor/Grassroots Communities)	<b>UCLGA</b>	United Cities and Local Governments Africa
<b>INGO</b>	International Nongovernmental Organization	<b>UNICEF</b>	United Nations Children’s Fund
<b>ILO</b>	International Labour Organization	<b>UNMEER</b>	United Nations Mission Emergency Ebola Response
<b>LA</b>	Local Authority	<b>UNMIL</b>	United Nations Mission in Liberia
<b>LCP</b>	Liberia Country Programme	<b>UNOPS</b>	United Nations Office for Project Services
<b>LG</b>	Local Government	<b>WB</b>	World Bank
<b>LGA</b>	Local Government Act or Liberia’s Local Government Association	<b>WIEGO</b>	Women in Informal Employment: Globalizing and Organizing
<b>LRD</b>	Liberian Dollar (conversion rate used in this report: \$1 = LRD 90)		
<b>LVT</b>	Land Value Taxation/Taxes		
<b>M&amp;E</b>	Monitoring and Evaluation		
<b>MBO</b>	Member-Based Organization		

Please note: All dollar amounts are U.S. dollars unless otherwise indicated.

# Introduction

This report documents the IMPAC project, particularly the city-community partnership developed around the structuring of Community-Based Enterprises (CBEs) and the delivery of solid waste management services in urban poor communities. It also examines how this project and partnership served as a platform for additional socio-economic development projects, with a particular focus on leveraging the existing waste management partnership for fighting Ebola in a creative and pragmatic way. In addition, the report explores how the city-community partnerships might be further built upon, as a platform for delivering additional socio-economic development projects. The report has the following structure:

- i. **Introduction:** Provides the context for the information contained in this report and describes the purpose and methods of the diagnosis and policy recommendations derived.
- ii. **Part I. The IMPAC Project:** Describes the structure and key components of the IMPAC project, focusing on the delivery model (output), rather than improvements in primary solid waste management (outcome) or health, environment, and income/livelihoods (impact).
- iii. **Part II. Leveraging the Partnership for the Fight against Ebola:** Identifies how the structures put in place by IMPAC were used to combat Ebola at the community level.
- iv. **Part III. Post-Ebola and Post-IMPAC:** Details the current situation, including the ongoing challenges.
- v. **Part IV. Forward-looking Conclusions and Recommendations:** Explores options for the future, by building on what the project has achieved and establishing what is needed to address the ongoing challenges.

## CONTEXT

### Liberia

The Republic of Liberia is situated in West Africa on the North Atlantic Ocean. It shares land borders with Sierra Leone, Guinea, and Cote d'Ivoire. Located

north of the equator, the climate is tropical (that is, mostly hot and humid), with a dry season lasting from November to April and a wet season lasting from May to October. Monrovia, the capital city, has a reputation as being the wettest capital city in the world.

In 1821, freed American slaves founded Liberia, which is the oldest republic in Africa, having proclaimed independence in 1847. In December 1989, the country fell into a 14-year civil war. In 1997, during a period of relative peace, elections were held, but in 2000 major fighting resumed. Only in August 2003 did the civil war end with the signing of a peace agreement. During the following two years, Liberia was run by a transitional government. The current President, Ellen Johnson Sirleaf, was elected in democratic elections in 2005 and re-elected in 2011 (CIA, 2016). On June 30, 2016, the United Nations Mission in Liberia (UNMIL) handed over security responsibilities to the government of Liberia, although it will continue to maintain a minimal presence in the country.

Beyond the violence against the people, the civil war inflicted considerable damage on the economy and infrastructure of Liberia, particularly in Monrovia, which also experienced significant distress migration from rural areas. As a result, Liberia continues to rely heavily on foreign assistance. Between 2010 and 2013, the country experienced strong economic growth on the back of robust prices for its main export commodities.<sup>1</sup> In 2014 the Ebola Virus Disease outbreak and a steep downturn in commodity prices inflicted a heavy blow on Liberia's economy. The mining sector alone, which was a significant driver of economic growth, declined by 17 percent. Annual gross domestic product (GDP) growth plummeted from 8.7 percent in 2013 to just 0.7 percent in 2014, and slipped further to 0.3 percent in 2015. According to estimates for 2016, the growth rate should increase to 3.8 percent (World Bank, n.d.). This is likely to have a long-term effect, as many businesses and skilled workers left the country during this time. Furthermore, addressing the Ebola crisis took resources away from public investment.

The population of Liberia is approximately 4.615 million (United Nations Statistics Division n.d.). The country has a large youth cohort, with more than 60 percent of the population aged under the age of 25, and 42.3 percent under 15. The population is growing rapidly, with a population growth rate of 2.44

<sup>1</sup> Liberia's main exports are iron ore, rubber, gold, and timber (CIA 2016).

percent. Around half of the population lives in urban areas, and the urbanization rate (2010-15 estimates) lies at around 3.4 percent (CIA 2016). Water and sanitation facilities, although better in urban areas, still require significant improvement. In 2015, the share of the population using improved sanitation facilities in urban areas was 28.0 percent and only 5.9 percent in rural areas (United Nations Statistics Division n.d.)

The indigenous population is comprised of 16 ethnic groups, which can further be broken down into clans and subclans. Although English is the official language, many people speak an ethnic group language as their first language. Primarily as a result of the civil war, the literacy rate is very low, at around 47.6 per cent (CIA 2016).<sup>2</sup> According to the 2008 Census, 85.6 percent of the population identified as Christian, 12.2 percent as Muslim, 0.6 percent as traditional, 0.2 percent as other, and 1.5 percent as none (LISGIS 2009). However, other sources and anecdotal evidence suggests that traditional beliefs continue to play an important role for a significant proportion of the population, with many people practicing both traditional and theistic religions.

Liberia is a presidential republic and comprises 15 counties, which are further divided into districts. The capital city, Monrovia, was founded in 1822 and is the center of political, economic, and cultural activities (Pettersen, Jones, and Holsoe n.d.). It was originally built to service about 500,000 people. It is located in Montserrado county, which is the smallest of the counties in terms of area, but the largest in terms of population (LISGIS 2009). Montserrado is comprised of five districts, including Greater Monrovia, where the capital is located and which is set up by the government as a socioeconomic planning unit for the delivery and tracking of basic urban infrastructure and services (Krah meeting September 23, 2016). Greater Monrovia District is comprised of two cities (Monrovia and Paynesville), nine townships and one borough making up an estimated population of about 1.2 million people. The local government structure of the Greater Monrovia District comprises two city corporations (Monrovia City Corporation [MCC]) and Paynesville City Corporation [PCC]) and ten local authorities. These local authorities are “the representative bodies of the President at the township level” (Monrovia City Corporation 2014). The head of a city corporation is called the “mayor,” while the head of a local authority is called the “town commissioner,” except in the case of the borough of New Kru Town, where the head is called the “governor.” The city corporations and local authorities in Greater Monrovia comprise of 16 zones in total, which can be subsequently divided into 161 communities and 658 blocks (Figure 2).

## IMPAC Project

The Bill & Melinda Gates Foundation started the Urban Poverty Special Initiative in 2006 as an attempt to alleviate poverty and the negative effects of rapid urbanization in cities in the developing world. The portfolio, managed by the Cities Alliance, of over \$75 million contained 21 high-risk, experimental, and learning projects across a range of issues. The beneficiaries include diverse actors in urban development globally, such as national governments (Ethiopia and Uganda), city governments (Dakar, Harare, Monrovia), networks (Shack/Slum Dwellers International and Women in the Informal Employment: Globalizing and Organizing), and development partners (GIZ and KfW).

The MCC’s Improved Primary Waste Collection in Poor Communities (IMPAC) project was selected as part of a package of grants made to African municipalities through the Global Programme for Inclusive Municipal Governance (GPIMG), which fell under the Bill & Melinda Foundation’s Special Initiatives Portfolio focusing on urban poverty. The broad objective of the five GPIMG grants (which also included grants to the cities of Monrovia, Cairo, Lilongwe, Harare, and Luanda) was to improve the inclusion of the urban poor in municipal processes, thereby increasing the services delivered to the poor and the livelihood opportunities made available to them.

In this regard, IMPAC brought primary solid waste collection to the poorest and most vulnerable communities, including Greater Monrovia’s township West Point (see section on CBEs) that was quarantined during the Ebola crisis from August 16 to August 29, 2014 (see Part II):

*“West Point is home to about 75,000 residents, most of them young people, who, due to their circumstances, have been deprived of formal education and proper upbringing. Some of them are traumatized street children and therefore, have turned to drugs and alcohol, and to support their habits, they engage in criminal activities, including robbery. As a result of these conditions, these citizens of Liberia have become stigmatized and marginalized. INCHR recommends that the Government finds ways and means to improve the living conditions of its citizens in West Point and eventually the other urban slum communities such as New Kru Town, Clara Town, Soniwhein, Slipway, Buzzy Quarters and others. GOL must put in place a comprehensive development plan to raise these citizens from their present sub-standard living conditions by providing housing,*

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<sup>2</sup> Defined as the population aged 15 and over that can read and write.

*health facilities, schools, adult literacy programs, vocational training centers and public toilets.”*

Liberian Human Rights Commission; INCHR, 2014: Recommendation 1

*“Because of the circumstances of the Township of West Point as mentioned in Recommendation 1, INCHR further recommends that counseling sessions be organized by Government and NGOs, human rights and civil society organizations to help the youth of Urban Liberia beginning in West Point to cope with their anger, brought on by frustration, poverty, ignorance and stigmatization, and while at it, offer them hope. INCHR says in this connection, the youth be made to understand that the way forward is not through violence because Liberians experimented with the process before and the lessons learned are not worth repeating. The road to positive change is through the rule of law.”*

Liberian Human Rights Commission (INCHR 2014: Recommendation 6)

The IMPAC project was established in August 2010 when the MCC entered into a grant agreement with the Bill & Melinda Gates Foundation. The project aims to support and enhance Monrovia’s solid waste management (SWM) delivery system for improved sanitary and living conditions of the urban poor households and communities in the city (Krah 2010). A fundamental element of the project’s delivery model is relying on participatory processes, based on establishing CBEs who use local workers to provide primary solid waste collection (PSWC) services to households and small businesses.

IMPAC’s work focused on using PSWC as a community organizing platform that allows for participatory decision-making in local government processes. IMPAC aimed to reduce uncollected waste, create jobs for the urban poor, improve health and environment, and increase participation of the poor in government processes. Monrovia’s model allowed private CBEs to bid for primary waste collection contracts in specific communities. The CBEs formally employed poor people from the respective communities (often informal waste pickers) to collect garbage from households for a small fee and deposit the waste in skip buckets for secondary collection. The World Bank’s Emergency Monrovia Urban Sanitation (EMUS) project supported the secondary collection. In addition, resalable recyclables may be extracted from the waste to reduce dumped waste and to generate additional income.

Initially funded for four years, the project received a no-cost extension to June 31, 2015 in order to make up for the time lost in project implementation during the Ebola Virus Disease crisis (Monrovia City

Corporation 2015c). The exit strategy of the project recommended that key staff be integrated within the MCC in order to support the long-term sustainability of the CBE model (Monrovia City Corporation 2015c).

## Cities Alliance

In 2013, the Bill & Melinda Gates Foundation entered into an agreement with Cities Alliance to provide a range of advisory services and management to the Urban Poverty Special Initiative, as the portfolio had been winding down as part of the Foundation’s redesign to focus on global health and agriculture strategies.

Cities Alliance is a preeminent global partnership for the promotion of the role of cities in poverty reduction and sustainable development. It is a unique partnership with diverse members—local authorities, national governments, international nongovernmental organizations, foundations, and multilateral organizations—that have come together to strengthen both impacts and coherence in urban development. It was originally based in Washington, DC, with the World Bank and in 2013, it moved its headquarters to Brussels to be hosted by UNOPS.

Cities Alliance seeks to support cities in making local government more effective by promoting partnerships with an active citizenship under a supportive national enabling environment characterized by public and private investment. Since its establishment in 1999, it has become a global leader in supporting strategic city planning, slum upgrading strategies, and national policies designed to make cities more inclusive and sustainable. Its activities have helped leverage more than \$1.5 billion in additional funding. The current Medium Term Strategy is focused on promoting equity in cities through equitable economic growth, gender equality, and partnerships.

The Cities Alliance Liberia Country Programme (LCP) (previously the Monrovia City Programme) is a five-year programme that was officially launched in February 2016. The programme is currently supported by the membership partners of Cities Alliance, such as Slum/Shack Dwellers International (SDI), Habitat for Humanity International, Women in Informal Employment: Globalizing and Organizing (WIEGO), United Cities and Local Governments Africa (UCLGA), and UN-Habitat, as well as other development partners, such as Comic Relief, the YMCA, and StreetNet International. The LCP is a multidisciplinary program supporting various tasks:

- i. The country’s first National Urban Policy (NUP)

- ii. Strengthening Liberia’s Local Government Association (LGA)
- iii. A City Development Strategy (CDS) for greater Monrovia
- iv. A Slum Upgrading and Affordable Housing Strategy for greater Monrovia
- v. Local Government Capacity Building Programme, linked to the CDS
- vi. Community Upgrading Fund (CUF) for infrastructure projects in greater Monrovia
- vii. Profiling and empowerment of slum and street vendor communities.

### 2014 West African Ebola Epidemic

The West African Ebola epidemic began in Guinea in December 2013. As the village where the outbreak started is situated in a border province that is a major trading hub, the virus easily spread into Liberia by March 2014 and Sierra Leone by May 2014. Although deaths were reported in a number of other countries (such as Nigeria, Mali, United States, and Spain), Ebola primarily affected three countries: Guinea, Sierra Leone, and Liberia. Across these three countries, there were a total of 28,616 cases (suspected, probable, and confirmed) and 11,310 deaths (Table 1). On August 9, 2014, the World Health Organization (WHO) declared the Ebola outbreak a Public Health Emergency of International Concern (PHEIC).

**The urban element of this outbreak helps to explain why it became the largest and the longest Ebola outbreak to date.** As noted by David Nabarro, coordinator of the UN’s Ebola response, in August 2014, “We have never had this kind of experience with Ebola before [...] When it gets into cities, then it takes on another dimension” (Frankel 2014). The capital cities in all three countries experienced “large and explosive outbreaks” (WHO, 2014a). This Ebola outbreak, therefore, marked the first time that more than a handful of Ebola cases were registered in a capital

city (WHO 2014a). Urban environments are conducive to the spread of infectious disease—above all because large numbers of people living in close proximity creates more opportunities for the virus to spread between people.

**Moreover, poor areas, especially slums, are particularly suited for the rapid spread of disease** because of the following: higher densities (often overcrowding); lower education levels; lack of basic infrastructure, including water, sanitation, solid waste management and drainage, and street paving; and temporary building materials, such as dirt floors that are difficult to keep clean. As noted by Ibrahima Touré, director of the NGO *Plan en Guinée*, “People don’t think about washing their hands when they don’t have enough water to drink” (Originally in French in Diallo 2014 quoted in Gatherer 2014). Furthermore, because of their greater mobility (often needing to travel long distances to their place of work), slum residents may act as vectors for the spread of the disease (Fallah, Skrip, Gertler, Yamin, and Galvani 2015).

Although Liberia suffered the most deaths of the three countries, it is widely considered a success story because of how the situation was managed. Specifically, there was a shift in government priorities between October and December 2014 when investments went from government-driven responses to community-driven policing, monitoring, enforcement, and accountability for health and safety issues with the MCC. This point of view was validated in numerous interviews (for example, Deputy Minister Pratt meeting September 29, 2016). In particular, the partnership of urban poor communities and local authorities in Monrovia during the Ebola crisis helped turn the trajectory on new Ebola infections.

This report documents how city-community partnerships structured around CBEs and CMTs serve not only as a vehicle for primary solid waste collections but also constitute the opportunity to become critical change makers, such as during the Ebola response.

Table 1: Ebola Virus Disease Cases and Deaths in the Hardest Hit Countries

Country	Total Cases (Suspected, Probable, and Confirmed)	Laboratory-Confirmed Cases	Total Deaths
Guinea	3814	3358	2544
Sierra Leone	14124	8706	3956
Liberia	10678	3163	4810
<b>Total</b>	<b>28616</b>	<b>15227</b>	<b>11310</b>

(Source: CDC, 2016)

## MEET THE HONORABLE LORD MAYOR CLARA MVOGO, MCC

Clara Doe Mvogo was inducted as mayor of Monrovia in March 2014, the same month that the first case of Ebola was confirmed in Liberia. In June, Ebola reached Monrovia and by July, according to Mayor Mvogo, “The situation was really bad and there was panic in Monrovia.”

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“People could not imagine that because of sharing a cup people could be dead one week later.”

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According to the Mayor, Liberia’s low literacy rates help explain why Ebola infected so many people in Liberia. As she states, “People did not know the methods by which diseases are transmitted. They didn’t understand that the disease is real. We needed to transmit the message: Ebola is real. People didn’t want to believe that Ebola could be transmitted through many ways: shaking hands, sneezing in hands, sex, relationships with multiple partners, sharing spoons and cups – normal things. Because of lack of

education and lack of understanding, basic hygiene measures were not present.”

However, once Ebola started affecting people directly—once their kinship was infected, or a friend’s husband or child was lost—people started to understand that it was real and became willing to seek medical assistance.

In a number of interviews, Mayor Mvogo has gone on record as saying that it was the involvement of the community that underpinned Liberia’s successful response to the Ebola outbreak. As she told the author, waste collectors from CBEs played an important role in the community response and she is full of praise for the efforts of the CBEs during this time. In her own words, she explains: “CBEs supported us a lot. They continued to collect the waste, they did not let us down. They supported us through listening to the precautions. They also helped reporting sick people as well as clinics and pharmacies who were giving them bloodied material.”

Mayor Mvogo explains that there were several components of the training provided to CBEs. The Ministry of Health provided initial training and the Ministry had workers in all communities and could visit the CBEs directly. In July, the Ministry gave training at City Hall to CBE owners who served as trained trainers for waste collectors. In December, UNICEF provided comprehensive training and distributed sanitary kits for each worker. The kit contained a bucket, chlorine, soap, and a scoop for washing feet and hands when waste collectors arrived home from work.

CBE workers were at particular risk during the Ebola crisis, because Ebola can spread as a result of contact with items contaminated with body fluid of an infected person. Although waste collectors were scared, as they had seen the effects of Ebola first-hand, as Mayor Mvogo states, they listened to precautions, such as wearing protective clothing and not taking waste that is bloodied (but reporting it). Thus, according to Mayor Mvogo, one of the greatest success stories of the crisis is “that we did not lose any waste collector, given that health care workers and police were seriously affected.”

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“CBEs continued to collect the waste, they did not let us down.”

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## METHODOLOGY

**This research report was compiled during three phases: first, the inception phase focused on the analysis of secondary data, such as monitoring and evaluation mission reports provided by Cities Alliance and former IMPAC staff; second, the field mission facilitated the collection and analysis of primary and secondary data, primarily through interviews with key stakeholders; third, the production of the actual report. Validation of research findings occurred primarily through a focus group discussion, which was held on the last day of the field mission (Phase 2), the sharing and validation of meeting notes and interview abstracts (Phases 2 and 3) and follow-up tele-interviews during the production of the actual report (Phase 3).**

## Secondary Data

At the inception, Cities Alliance and former IMPAC staff gave key briefings and documentation. These documents were useful for providing background knowledge of the project, determining topics and specific issues for further investigation, and identifying key stakeholders.

During the field mission, the consultant became aware of additional documents relevant to the evaluation. Given that the initial literature review concentrated on the IMPAC project (as a result of the documentation available at the time), these documents were important in strengthening the secondary evidence concerning the broader policy context in which the CBE model is operating, and in developing proposals for a way forward. These documents included historic legal documents,

including MCC ordinances on municipal waste,<sup>3</sup> the Agenda for Transformation, the draft Local Government Act (LGA), and the draft National Solid Waste Management Policy (NSWMP).

## Primary Data

The field mission was the most intensive and important phase for yielding primary data, validating existing information, and testing out new ideas. The mission encompassed ten days in Monrovia, Liberia (September 21 to 30 2016) to conduct primary research comprised of three key components: (i) identification, collection, and review of additional literature and materials; (ii) semi-structured interviews with key stakeholders; and (iii) focus group discussion with key stakeholders.

### Semi-structured Interviews (in person)

Key stakeholder groups were identified during the inception phase. The consultant organized to meet with representative(s) from each of these groups (Annex 1):

- i. CBEs (management and waste collectors)
- ii. CMTs (including municipal representatives)
- iii. MCC leadership and staff of relevant departments (for example, Community Services, Planning and Waste Management)
- iv. Staff from relevant national government ministries and departments (for example, Internal Affairs, Public Works, Commerce and Industry)
- v. INGOs (Oxfam)
- vi. UN Agencies (UNICEF, UN-Habitat)
- vii. Clients
- viii. Former IMPAC project officers
- ix. Paynesville City Corporation (inter alia to use as a comparison).

In addition, the consultant held informal conversations on a regular basis with Mr. Frank Krah (National Consultant Ministry of Internal Affairs/UN-Habitat and former IMPAC Project Coordinator) to confirm understanding of information collected and clarify any uncertainties. Furthermore, when the consultant was shadowing of waste collectors, he had brief conversations with residents subscribing to the waste collection service.

The consultant asked selected questions during each interview depending on the position of the person (or the role of the organization they represented) in relation to the IMPAC project or the Ebola response. A typical sequence of questions in interviews moved from open to closed questions:

- What is your own view of the IMPAC project?
- What is your account of what happened during the Ebola outbreak and how was IMPAC useful to address the crisis?
- Specifically, how were the city-community partnership and community-based waste management services leveraged to address Ebola effectively?
- Specifically, are you able to articulate/ imagine what would have happened without IMPAC in urban poor communities not served by CBEs?
- How can we build on the success of the IMPAC project?
- How can city-community partnerships be further strengthened?
- How can they be used to deliver other basic services?
- Whom else should we meet? If anyone, are you able to establish contact?
- What material would you like to share, especially on IMPAC structures addressing Ebola?
- Lastly, what question did we forget to ask? What would you have asked if you were in our shoes?

### Focus Group Discussion

The consultant conducted a focus group discussion on the last day of the field mission as a means of sharing and validating collected information. In addition, the meeting allowed the consultant to test the feasibility and support for addressing the identified challenges and opportunities on the way forward. Stakeholders who had already been interviewed were invited to attend the discussion. This meant that the discussion comprised attendees from major stakeholder groups: CBEs, CMTs, MCC staff, national government, Mr. Frank Krah as former IMPAC Program Coordinator and current consultant with MIA & UN-Habitat, as well as Ms. Bernadette Leon from Cities Alliance. CMTs

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<sup>3</sup> Reportedly, MCC has not updated its city ordinances related to waste management after the below dates; thus, today the content is outdated: City Ordinance 1. Enhancement of the Cleanliness of the City of Monrovia (1975); City Ordinance 3. Petty traders and peddlers to obtain business permits from the City Corporation (1979); City Ordinance 7: Payment of Monthly Garbage Collection & Disposal Fee and City Real Estate Taxes (undated; presumably 1980s).

represented the clients. For a full list of focus group discussion attendees refer to Annex 2. Lastly, UNICEF and Oxfam were invited but could not join; thus, the discussion findings were subsequently shared and discussed with them.

The discussion participants well received the presentation of the preliminary analysis, only asking for minor points of clarification. The power point presentation has been updated to reflect participant feedback, and includes notes from the general discussion. The structure for this report is based on the agreed presentation's five sections:

- i. The IMPAC Program
- ii. The Fight against Ebola
- iii. (Current) Challenges Faced after Ebola/IMPAC
- iv. Opportunities for Expanding City-Community Partnerships
- v. Opportunities for Strengthening Participatory Municipal Governance

#### Additional Interviews

In addition to the interviews done during the field mission, further interviews were conducted via Skype or phone. Prior to the field mission, the consultant conducted an interview (via Skype) with Mr. Disselkoen, former consultant to Cities Alliance and former Development Innovations Group (DIG)<sup>4</sup> Grant Manager. This interview sought to verify the understanding of the documents read so far, seek clarification on uncertain issues, obtain more information about the CBEs role during the Ebola response, and identify lines of questioning, as well as methodologies for the field research.

Lastly, the consultant received generous comments on the draft report and conducted further interviews, inter alia, to discuss feedback on the draft report. The interviewees were Willem Vrins (external Monitoring and Evaluation Consultant, IMPAC Programme), Pat Horn (StreetNet International/WIEGO), Comfort Doryen (President, NAPETUL), and Delux Fahnbulleh (National Secretary General, NAPETUL).

## Production of the Final Report

As a means for verification and trust building, the consultant shared relevant notes with interviewees with the invitation to edit for clarification, addition, and correction, as applicable, before notes were incorporated into this report. Most interviewees responded, and changes have been made as requested.

Following the collection of all material and the confirmation of interview notes and case studies, the information was analyzed and classified according to the topics identified in the proposed table of contents. During this process, the consultant also sought to identify additional topics or subtopics that may have been overlooked during the preliminary analysis.

## Limitations

It should be noted that the primary evidence gathered for this report is based on personal accounts. Given that the Ebola outbreak reached Liberia in March 2014, and had become a serious problem by July of the same year, interviewees were recalling events from approximately two years ago. Therefore, it is unsurprising that the research identified some minor conflicting accounts. However, even without the time gap, given the large range of stakeholders consulted, one would expect to encounter differing points of view. In addition, given that the intention of this research was not to produce a report in strict accordance with monitoring and evaluation principles, particularly those based on quantitative methods, but rather to produce qualitative insights for policy development, this is not considered a significant problem.

Lastly, as in any research not all secondary documentation could be obtained. Given the preliminary knowledge about the content of this material, it is not expected, however, that obtaining any of the material would counter the evidence documented in this report. In the contrary, the missing material would most certainly have enriched the existing evidence with further detail, such as official documentation of the hygiene measures followed during Ebola.

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<sup>4</sup> DIG was hired by BMGF to monitor progress of the project.

# PART I

## The IMPAC Project

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“If you keep waste here it will affect the community and affect you. It’s better to take it away.”

Norris Forkpa, Community Representative

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The IMPAC project was not just about improving the collection and disposal of solid waste in urban poor areas of Monrovia. In addition, the project aimed to do the following:

- i. **Create jobs for the urban poor.** This was achieved by establishing CBEs who employed local people to fill roles in waste collection (such as wheelbarrow collector and tricycle operator), as well as in management and administration (such as supervisor or operations manager).
- ii. **Improve health and the environment.** The introduction of house-to-house waste collection services in IMPAC project areas has meant that fewer households are dumping their waste inappropriately, thereby diminishing negative environmental impacts (such as the contamination of waterways), and reducing flood risk caused by blocked drainage lines. Furthermore, anecdotal evidence collected during the field mission suggests that prevalence of diarrheal diseases has reduced substantially since the introduction of IMPAC. This has been attributed to the presence of fewer flies, as less waste (especially organic material) is left lying around in the community. It may also aid in reducing water contamination, as the water table in Monrovia is quite high (UNICEF 2015).

- iii. **Increase participation of the poor in government processes.** There were several mechanisms introduced by the IMPAC project to help achieve this aim. For example, the six monthly peer-exchanges held by the MCC with attendance by all key stakeholders identified challenges in project implementation and proposed solutions. In addition, the role of the CMTs was envisaged such that they could link the community directly with the CBE and the CBE directly with the MCC.

The model chosen to implement the project was a public-private partnership in order to meet the various aims of the project detailed above. With CBEs paying the MCC a monthly service fee, and the MCC providing establishment and ongoing support to CBEs and their communities, the model was a public-private partnership in both an economic/management and social sense. The delivery model was based on two earlier livelihood and waste management programs funded by the International Labour Organization and the World Bank (Development Innovations Group, 2013). Mary Broh (acting mayor at the time of project inception) and Frank Krah (IMPAC Project Coordinator) proposed that this model be adopted by the IMPAC project “as a vehicle to mobilize communities and improve solid waste collection for the urban poor” (Development Innovations Group 2013, p. 30).

Collection areas are based on the existing geo-administrative organization of Greater Monrovia. IMPAC was established in 11 zones of Greater Monrovia, covering 75 of 161 communities and 87,376 households (Vrins 2013a).<sup>5</sup> However, the MCC only requires that CBEs cover 60 percent of households (that is, 52,243) within the IMPAC catchment area (Vrins 2013a). This target was originally set based on the capacity of existing 120 skip containers (Krah meeting September 24, 2016) and has also been used to set the fee payment to the MCC.

## MONROVIA CITY CORPORATION (MCC)

As the grant recipient, the MCC established a dedicated IMPAC team to manage the project and support CBEs. Reflecting the importance of this project, the IMPAC Project Coordinator reported directly to the mayor. In addition to administering and monitoring the project, the IMPAC team was responsible for two main tasks:

- i. Helping establish and support CBEs to run a door-to-door primary waste collection service and providing them with training in business and safe collection methods, as well as required technical assistance.<sup>6</sup>
- ii. Conducting public awareness campaigns to inform the urban poor of the health and environmental benefits of improved waste disposal, inter alia to motivate payments.

The MCC collects fees paid by CBEs, which are set at 5 percent of expected total fee revenue (para 49), calculated based on serving 60 percent of households in the collection area and having 100 percent payment rates (Krah meeting August 24, 2016). In 2014 it was proposed that the fee be changed to a percentage of the positive balance amount (Monrovia City Corporation 2014). However, this did not occur as it may have resulted in CBEs underreporting their revenue (Krah meeting August 23, 2016). These fees are pooled with those paid by small contractors for tipping at the transfer stations and the landfill, as well

as from businesses in the city, and placed into an account. MCC's Project Implementation Unit (PIU) manages this account, which can only be used for the purposes of municipal solid waste collection and disposal (Government of Liberia 2015). According to the 2014 WASH sector report, fees collected through the IMPAC project made a significant impact on the sector (Government of Liberia 2015, p. 99).

The MCC organized six monthly peer exchanges. During these meetings, representatives from the MCC, CBEs, local authorities, and CMTs would share progress, discuss issues and challenges, and identify solutions related to the IMPAC project (Development Innovations Group 2014; Lake 2013). According to DIG, the meetings helped to support more inclusive governance (Development Innovations Group 2014), with the MCC being responsive to requests by CBEs for more support and willing to reshape its policies and strategies (Lake 2013).

## LOCAL AUTHORITIES

The activities of local authorities are restricted due to limited financial resources, resulting in the majority of staff working on a voluntary basis (Monrovia City Corporation 2014).<sup>7</sup> The financial situation may explain why some CBEs reportedly feel frustrated with the lack of assistance and support provided by local authorities, particularly regarding the collection of outstanding fees. These CBEs claim that local authorities are not interested in waste management, because it confers no financial benefit and they do not appreciate the positive externalities arising from PSWC services. On the other hand, Mr. Dennis, Deputy Town Commissioner for West Point states they have a good working relationship with CBEs and meet with them quarterly as well as when they have problems (meeting September 27, 2016). His overall experience with CBEs has been positive and he recognizes the important role they serve in municipal service delivery and beyond, including during the Ebola crisis. In any case, it is anticipated that the role of local authorities in waste management will increase once the NSWMP enters

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<sup>5</sup> As the grant agreement was between the MCC and the BMGF, communities in Paynesville (that is, those under the jurisdiction of the PCC) were not included in this project.

<sup>6</sup> IMPAC also trained CBEs established prior to the IMPAC project, that is, by the ILO or the World Bank project Emergency Monrovia Urban Sanitation (EMUS). Note here, "emergency" relates to the post-war lack of infrastructure and services, not to Ebola. (World Bank, 2009). However, they did not receive the same level of technical assistance, nor were they required to submit reports, which were analyzed by IMPAC's monitoring and evaluation team and used to provide specific feedback, inter alia on how to improve the respective business model of CBEs created by IMPAC.

<sup>7</sup> This was confirmed during conversations with CBEs, a Deputy Town Commissioner and Mr. Krah during our field visit.

into force (see section on how CBEs and community groups empower each other).

## COMMUNITY-BASED ENTERPRISES (CBES)

**The MCC entered into official contracts with CBEs, responsible for primary solid waste collection (PSWC)** within geo-delineated communities.<sup>8</sup> These contracts outline obligations and responsibilities of each party, recognizing the role of CBEs. Because CBEs are hired for PSWC from households and small businesses, up until now they were not allowed to collect from large businesses, nor engage in secondary solid waste collection (SSWC) and disposal.<sup>9</sup> However, it appears that this rule is not enforced, and some CBEs provide services to larger businesses and organizations to receive the higher fees.

**Following several mergers, 14 enlarged IMPAC CBEs were operational in February 2015** (Monrovia City Corporation 2015a). This contrasts to 57 CBEs that were initially established by the IMPAC Team—43 thereof signed contracts with the city. As at September 2013, 35 CBEs were considered financially sustainable. Monitoring and evaluation of the IMPAC project found that CBEs who covered more communities were performing better than those who were only covering one or two because of the economies of scale (Weah meeting September 29, 2016). Monitoring and evaluation expert Vrins (who was hired to work with the local monitoring and evaluation team) therefore recommended that mergers be undertaken to improve the profitability of CBEs (Vrins, 2013b). The ideal size of a CBE, according to Vrins, was one that covered five to six communities as administrative boundaries, in order to improve cost effectiveness, while still maintaining strong social relations to households served, which is important for fee mobilization and discretionary pricing (Vrins 2013a, p. 4.)

**Households and small businesses paid a PSWC service fee in a community serviced by a CBE.** The intention was for CBEs to be financially

sustainable, while remaining affordable for their clients (such as households and local businesses). The fee paid by the small businesses is usually higher than that paid by households, which helps cover operational costs. Vrins' field research (2013a) revealed that a standard fee based on household expenditure classification has not occurred (despite Vrins' recommendation of it). Rather, three main methods of determining prices were identified:

- i. **Set a flat fee for each community.** For example, the United Group of CBEs also serves two communities in Central Monrovia, in addition to seven communities within West Point. As the former area is more affluent, Central Monrovia households pay LRD 50 per week (\$0.56) rather than 30 per week (\$0.33) as in West Point. This approach may be considered as a form of cross-subsidization.
- ii. **Offer a discount for monthly payment.** This method helps combat the issue of non- or late payment. For example, the Environmental Sanitation CBE charges a weekly fee of LRD 50 (\$0.56), but offers households the option to pay a monthly fee of LRD 200 (\$2.22), resulting in a saving of around LRD 200 per year (as there are 13 four-week cycles per year, instead of 12 months).
- iii. **Individually negotiate with households.** For example, the Environmental Sanitation CBE also allows households in financial difficulties to negotiate paying a reduced weekly amount of LRD 30 (\$0.33) or reduced monthly amount of LRD 120 (\$1.33), instead of LRD 50 and 200 respectively. Similarly, Oceans CBE consciously pursues a cross-subsidy model, by allowing vulnerable households to pay as little as LRD 20 (\$0.22), while charging more to affluent households (and small businesses) so that collections average out to be LRD 40 (\$0.44). This is possible through the intrinsic knowledge of the community-based enterprise, with workers typically originating from the neighborhood.

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<sup>8</sup> An individual contract was made for each community covered by the CBE.

<sup>9</sup> Secondary waste collection includes two parts: transportation of waste from the skips to a transfer station, and transportation of waste from the transfer station to landfill.

**Each CBE pursues its own PSWC systems, tailor-made to local conditions, especially housing density, but also topography, width of pathways, and surface type.** Waste collectors directly collect waste from households and take it to the nearest skip bucket. From there, a secondary waste collector, contracted by the MCC, collects the waste and takes it to a transfer station or directly to landfill. (The relationship between primary and secondary collections is further discussed in subsequent sections of this report.) Each waste collector covers approximately 50 structures, which contain on average 2.5 households (Krah meeting September 23, 2016). This equates to approximately 110 to 125 households per waste collector (Monrovia City Corporation 2014). However, the method and effectiveness of conducting primary collections varies between CBEs and even within various areas covered by the same CBE, as the specific length of time it takes to collect from the households within each area depends on the above-mentioned local conditions. Three main PSWC methods were identified during the field mission, which depends inter alia on housing density, accessibility, and resources (that is, access to capital and machinery):

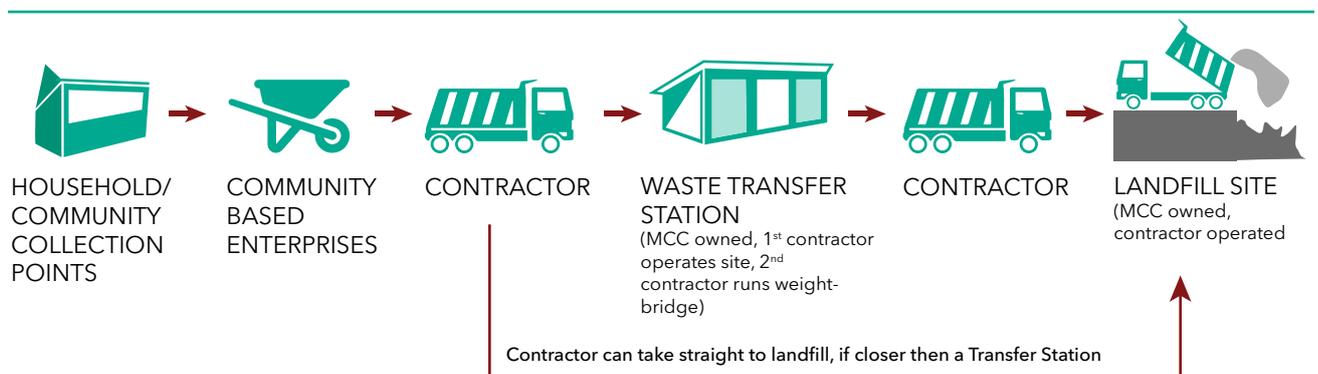
- i. **Nearby skip buckets:** wheelbarrows or pushcarts collect waste from households and small businesses located close to the skip bucket and take the waste directly to the skip bucket.
- ii. **Regular lanes remote from skip buckets:** tricycles (using one operator and one assistant) service areas situated further away from the skip bucket and with circulation wide enough to operate the tricycle. Waste is collected from households and placed directly in the tricycle.

- iii. **Narrow lanes remote from skip buckets:** waste collectors use wheelbarrows to collect waste from households and small businesses located along lanes that are too narrow for tricycle operation. Eventually, the waste is transferred to tricycles that take the waste to the remote skip bucket. For every two wheelbarrows, there is one tricycle operator.

**Each CBE is comprised of manager(s)/owner(s), administrative staff, supervisors, and waste collectors.** In some CBEs, staff members take on multiple roles. The number of staff can vary according to a CBE’s current situation in terms of number of households being collected from and the revenue collection rate. External events can influence the collection: for example, sea erosion destroyed a significant number of households in West Point earlier this year, resulting in the CBE having to lay off three workers (Ponpon meeting September 24, 2016). In general, all staff members come from the communities that they serve. Each CBE determines staff compensation individually.

- i. **Managers** have overall responsibility for daily office and waste collection activities and usually are also the owner of the CBE (Vrins 2013a). In addition, the managers keep “in close contact with the communities in the serviced area and deal in a professional manner with complaints, whenever needed.” (Vrins 2013a, p. 9). Managers generally receive a monthly wage of LRD 25,000 (\$278 USD) (Vrins 2013a).

Figure 1: Collection from Authorized Locations through Transfer Stations to the Landfill Site



(Source: Government of the Republic of Liberia 2015, p. 96)

- ii. **Administrative staff** are also employed by CBEs to assist with managing the business. For example, the Public Allies CBE has five office staff. The most highly educated of these, a university graduate, is paid LRD 30,000 (\$333) per month as an accountant (Ammons meeting September 29, 2016).
- iii. **Supervisors** monitor the collection and disposal of waste to ensure that it is being done properly and that the equipment is being looked after. They also meet with the community to resolve complaints and are responsible for collecting the PSWC fees. Supervisors generally receive a monthly wage of LRD 11,000 (\$122 USD) (Vrins 2013a).
- iv. **Waste collectors** are recruited from the local community. This is considered a key strength of the delivery model, as it contributes to positive social relations, and importantly, the willingness to pay for service (Vrins 2013a, p. 3). During the consultant's field visit, CBEs reported paying wheelbarrow operators between LRD 3,500 (\$39) and 5,000 (\$56) per month. In contrast, tricycle operators are paid between LRD 4,500 (\$50) and 8,000 (\$89) per month. Collectors are not members of any formal social insurance scheme so they are not paid if they don't work, for example, if they become sick (which needs to be seen in the local context where this is likely the default situation of their peers).

**Collectors have been able to significantly improve their personal situation because of their employment**, even though the income is still relatively low. Here are some ways this has happened:

- i. Renting their own place (rather than sleeping at a friend's place).
- ii. Furnishing their own place (for example, with mattress, bed, and television).
- iii. Setting up their own business (for example, selling goods at the market after finishing their waste collection duties).
- iv. Investing in their own education (for example, attending evening classes).

**In addition, revolving funds established by a number of CBEs have played an important role in enabling larger investments.** Prior to Ebola, the United Group of CBEs had run a revolving fund: 12 workers contributed LRD 1,500 (\$17) per month each while one worker would take home LRD 18,000 (\$200). This "usefully large lump sum" (Rutherford 1999) enabled workers to make significant investments; for example, in their home

or secondary business (Ponpon meeting September 24, 2016). Similarly, the Environmental Sanitation CBE also has a revolving fund, with each worker contributing LRD 2,500 per month (\$28). At this CBE, workers are encouraged to invest in education (Kamara meeting September 28, 2016).

## COMMUNITY BUY-IN

**Communities eventually understood that without paying for solid waste collections, environmental and health improvements are not possible.** Initially, however, the community belief was that waste collection should be a free service delivered by the municipality (Weah meeting September 29, 2016 and Krah meeting September 23, 2016). However, the existing solution of households bringing their waste to the skip buckets wasn't working. Therefore, following a social marketing campaign and robust public education, communities began to accept the principle of "pay as you throw," that is, paying for the garbage you produce (Krah meeting September 23, 2016). A town hall meeting with the mayor was subsequently held and each community willing to participate in organized door-to-door waste collection services signed a **Statement of Willingness and Commitment**, stating that they would not pollute the environment and that they would pay for this service (Krah meeting September 23, 2016).

**Satisfied customers play an important role in increasing subscription rates.** All the customers the consultant spoke to in Sinkor were satisfied with the service provided by the CBE and many noted visible improvements in their environment – specifically related to the reduction in the number of flies and mosquitoes. Some of these customers also reported trying to get their neighbors to join to help keep the community clean, while others said that what their neighbors do is none of their business. Moreover, in September 2013 a Household Socio-Economic Impact Assessment was conducted to "elicit the views of households towards subscription to CBEs services, willingness/affordability to pay for waste collection/disposal services, payment terms/preferences, rating of customer satisfaction, household's role in waste segregation" (Lake 2013 p. 13). The survey discovered the following:

- i. 95 percent respondents stated their willingness to pay for (satisfactory) service.
- ii. 93 percent of respondents stated they could afford to pay.
- iii. 59 percent rated the quality of service provided by CBEs as good.



Mr Kamara (second from left) with Mr Marckmonseh and four waste collectors wearing their protective equipment.

## MEET MR. ALPHONSO KAMARA, PRESIDENT OF THE NATIONAL ASSOCIATION OF CBES AND CEO OF THE CBE ENVIRONMENTAL SANITATION

### Background

Mr. Kamara is CEO of Environmental Sanitation, a CBE that was established under the World Bank's Emergency Monrovia Urban Sanitation (EMUS) project. However, as evidenced by Mr. Kamara becoming president of the recently formed National CBEs Association, there is no longer a clear distinction between CBEs established under the EMUS and IMPAC projects. In fact, even during the IMPAC project, EMUS CBEs were also invited to attend training sessions provided under the IMPAC

project. Mr. Kamara is speaking in both his roles (as President and CEO) when he says "I want to appreciate the Bill & Melinda Gates Foundation for their intervention, for creating jobs, for helping put food on our tables".

### Ebola: Training and Equipment

Following the arrival of Ebola Virus in Monrovia in March 2014, all CBEs attended a meeting, where the Monrovia City Council (MCC) and the Ministry of Health trained them. Mr. Kamara recalls: "We were advised what to do: how to use protective equipment such as gloves, boots, masks, and long sleeves. It was very tiring for the workers [to wear this equipment] because of the heat, and it took some time for them to get used to the new procedures." The CBEs set up their own safety committee to enforce adherence to safety precautions. Workers were also told during this period, "Not to open anything tied in plastic, and to stop collecting cans and water bottles for recycling."

According to Mr. Kamara, CBEs were given two full sets of equipment, but the rest they had to pay for themselves. Some CBEs also bought helmets for their workers who transferred the waste into the skip buckets. Later, UNICEF also provided buckets and chlorine for the workers so the workers could wash their gloves, boots, and hands after returning home from each shift. As can be seen in the photo above, the workers continue to wear the protective equipment, even after the Ebola crisis.

### Ebola: Reporting of Suspected Cases

Echoing the comments from other CBEs, Mr. Kamara noted that it was important to respect community structures when reporting suspected Ebola cases: "Workers were told that if they suspected someone with Ebola was being hidden, they should first call the community leader [different from CMT]. The community leader would then come to investigate and call the emergency hotline number, 4455, if needed. It was important to respect community relationships and not report directly to 4455."

### Ebola: Awareness Raising

CBE workers and CMTs played an important role in informing the community about Ebola. As well as using megaphones to spread key messages, they directly engaged with individual households and sellers in the market.

The MCC gave CBEs a template with key messages that they should be spreading: "Ebola is real. Ebola kills. Protect your family, protect your community, protect yourself." Regarding protection measures, CBE workers told households, "Keep washing your hands. Put contaminated waste into two plastic bags. If your child gets sick, don't touch them—first put on plastic bags to



Mr. Marckmonseh (Director for Administration at Environmental Sanitation) showing a bucket provided for hand washing during the Ebola crisis.

cover hands and arms, then carry them to the Ebola Treatment Unit (ETU) or call the hotline.”

## Ebola: Waste Collection

Speaking as President of the National CBEs Association, Mr. Kamara stresses the importance of CBEs continuing to work during the Ebola crisis: “We told our CBEs to work, to save lives, even in the absence of funding.” He recalls: “We decided to work for free, very few people were paid during Ebola. We [most CBEs] weren’t even breaking even during this time.”

In addition to financial difficulties, there were also staffing issues during this time, with many of Mr. Kamara’s workers being too afraid to work. Of his 30 workers, only 15 worked during the Ebola crisis, meaning that the frequency of waste collection had to be reduced from daily to thrice weekly. This lower frequency has remained in place until today because of continuing financial difficulties.

## Post-Ebola

The post-Ebola recovery continues to be a very difficult period for CBEs financially. This is because the number of clients is significantly lower than pre-Ebola. Mr. Kamara attributes this to the following: “Clients leaving the country [during Ebola] who are only returning gradually, clients dying from the virus, and clients who are still not working [because of the negative impact the crisis had on Liberia’s economy].”

To attract more clients, the Environmental Sanitation CBE has modified its fee arrangements. Rather than paying a weekly fee of LRD 50 (\$0.56), households are now able to pay a monthly fee of LRD 200 (\$2.22), resulting in a saving of around LRD 200 per year. Households in financial difficulty are also able to negotiate paying a reduced monthly amount of LRD 120 (\$1.33).

On the brighter side, while Ebola has reduced the number of clients, the payment rate has increased to 85 percent as “Ebola helped clients understand the importance of a clean environment.” The CBE has also gained some new clients, because households no longer want their children carrying and dumping waste, as they now understand the potential hazards associated with this practice.

## Post-IMPAC: Looking to the Future

As recommended in the IMPAC Exit Strategy, CBEs organized themselves, forming the National Association of CBEs in 2015, and registering this body as an NGO. However, according to Mr. Kamara, both the association and the MCC have serious capacity issues, which limits the scope and effectiveness of their work.

Mr. Kamara has a strong vision for the growth of the CBE model, with services extending to cover all of Monrovia and some CBEs transforming into small and medium enterprises. To make this happen, Mr. Kamara insists that “support for the purchasing and maintenance of equipment, as well as follow-up training and on-site visits are required.” Although further handholding is required to build the capacity of CBEs, Mr. Kamara concedes that support for equipment need not come in the form of a donation. Instead, “each CBE could be given two tricycles and a start-up amount, for fuel and maintenance, and be provided with support to help them become more financially responsible and pay back the loan over time.” The current problem is that “CBEs don’t have [sufficient] assets to be able to finance investment in equipment, and they aren’t in the financial stream, so they can’t get access to [bank] loans.”

A shift from wheelbarrows and push carts to tricycles is necessary, according to Mr. Kamara, because “you need to hire less people, but can cover a bigger distance. To cover 100 persons [in Sinkor] you need three people using wheelbarrows or pushcarts. If you have a tricycle, you only need two people.”

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**“We cannot be static, we must grow. CBEs have to become adults.”**

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**“We have the passion, we have the commitment. We want to work!”**

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To support the sustainability of CBEs as well as future growth, Mr. Kamara believes that, “there should be a bill passed to force every community to pay an amount to collect garbage.” This was echoed by Mr. Marckmonseh, who stated that: “People don’t know importance of what we are doing. If there is a law, something tangible, then they will also know the importance. Participation is voluntary now.”

## CMT COMPONENT

**CMTs, a core component of the IMPAC project’s delivery model, complement the CBEs.** They were established in each block in which CBEs operate. Originally the MCC wanted to use the existing community leadership structure. Since there had not been any elections for more than 20 years and people were no longer held accountable in many areas, IMPAC opted to create the new CMT structure (Krah meeting September 28, 2016). In reality, some overlap between the two structures existed—such as, IMPAC team asked performing development chairmen to serve as CMTs (Tarplah meeting September 28, 2016). Furthermore, other communities opted to exclusively use the existing community leadership structure (Saydenuh meeting September 28, 2016 and Ammons, meeting September 29, 2016). Alternatively, in some areas community members appointed the CMT members, who often had existing leadership roles.

**The CMT structure exists at each level of the geo-administrative organization of Greater Monrovia.** CMTs across all blocks within each community then elect a CMT chairman. In addition, the Secretary General and Chaplain, as well as youth, women, and elderly leaders, support the CMT Chairman; see Figure 2 (Tarplah meeting September

28, 2016). All community CMT chairmen within each zone then elect a zonal chairman who serves as the main interface with the authorities (Krah meeting September 22, 2016). All CMT members at the zonal level then vote for their Greater Monrovia representation. Where CBE service areas cross zone boundaries (for example, as a result of mergers), a chief CMT member is reportedly appointed to represent the other CMT members to that CBE (Monrovia City Corporation 2014, p. 15)

The core role of CMTs can be broken into three components: (i) vetting of CBEs; (ii) stakeholder coordination; (iii) education and awareness. In detail, they include these activities:

- i. Assistance with the vetting of CBEs. CMTs were established during the initial stages of project implementation, even before CBEs became operational, so that they could assist with the selection of CBEs and make sure that the enterprises were part of the community (Tarplah meeting September 28, 2016).
- ii. Coordination among MCC, CBEs, and the community related to PSWCs. This involves the following:
  - Conflict resolution or mediation

Figure 2: CMT Structure in September 2016

GEOGRAPHIC AREA	GOVERNMENT STRUCTURE	CMT STRUCTURE
District	MCC, PCC, and 10 Local Authorities (townships) make up Greater Monrovia	1 CMT General Chairman Mr. Oliver Saydenuh (MCC and townships, excl. PCC)
Local Government	City corporation or township	–
Zones	16 Zones <sup>10</sup>	11 Zonal CMTs
Communities	161 Communities	63 Community CMTs
Blocks	658 Blocks	1 CMT chairman 1 Secretary, 1 Treasurer 3 Leaders (Youth, Women, Elderly)
Households	Approx. 203,254 hh (2014) <sup>11</sup>	Approx. 87,376 hh (2013)

<sup>10</sup> Number of zones, communities, and blocks is based on where IMPAC CBEs provide services. Additional CBEs (for example, EMUS) provide services in six zones, including two additional zones, and 38 communities (UPDATED LIST OF ZONES AND THEIR COMMUNITIES.docx, shared by Krah email Sept.11, 2016).

<sup>11</sup> 2014 estimate based on LISGIS Statistics (MCP households.docx, shared by Krah email Sept. 11, 2016).

- Monitoring of CBE performance with regards to the responsibilities
- Helping with fee collection
- Solving boundary disputes between CBEs.

iii. Education and awareness raising:

- Educating community about importance of proper disposal of solid waste and encouraging them to subscribe to PSWC services
- Raising awareness of hygiene and sanitation
- Encouraging community to use mosquito nets and take children for vaccinations
- Advising households what can and cannot go into waste bucket.

CMTs are frequently required to assist resolving payment-related issues. For example:

- To obtain payment from households who fail to pay their weekly/monthly PSWC fees.
- To solve misunderstandings on PSWC fee amount between household and CBE.
- To negotiate fee reductions on behalf of households who cannot afford to pay standard amount (also during the Ebola crisis).
- To ensure service provision where households are paying but CBE is not collecting.
- To support CBEs with post-Ebola recovery by appealing to MCC to waive the fee for the period in which households did not (fully) pay.

**CMTs aim to solve issues without escalating it to police, court system, or local authorities.**

As a strategy, CMTs heavily rely on a process of education and negotiation. It is likely because of a combination of these two factors that the community has come to see them as “honest brokers” (Development Innovations Group 2013, p. 33). The CBEs also view CMTs favorably, with the most profitable CBEs recognizing the role the CMTs play in building trust with the community members as significantly contributing to their success (Development Innovations Group 2013, p. 33).

The communities are demonstrating trust in CMTs by asking them to take on additional responsibilities

(not just those related to waste management): mitigating conflicts between community members (for example, love affairs), abuse (for example, domestic violence), and theft. In addition, some CMTs have also taken their own initiative to establish Community Watch Teams (CWTs). This came about because CBEs were having to pay a fine when people illegally dumped waste in areas of CBE responsibility (Tarplah meeting September 28, 2016). In addition, CBEs felt that other crimes, especially armed robbery, were increasing. Currently they are using mobile phones to report issues, but this is expensive, so they have developed a proposal to obtain funding for radios (Tarplah meeting September 28, 2016). CMTs in some areas were involved in the constitutional review process: educating communities about the laws and discussing and proposing amendments to the proposed changes (Doyah meeting September 26, 2016).

**CMTs that are transparent and accountable to their constituencies could be leveraged more broadly and more strategically.**<sup>12</sup>

In some cases, CMTs are already leveraged by other projects. For example, YMCA/SDI work with all levels of community leadership structures for the introduction and implementation of new projects. This is achieved by holding broad-based community leaders’ meetings and ensuring community representatives are present at the project inception/ orientation workshop (Paye email September 26, 2016). The reason why CMTs are reported being involved in some YMCA/SDI projects is because in some communities CMT and community leadership structures overlap.

**As volunteers, CMT members are not paid for their services, albeit they may (and should) be compensated for their expenditures.**

Under IMPAC, CMT members did receive some compensation, such as mobile phone credit and allowances for transportation. They were also provided with rain boots and raincoats. However, shortfalls in the funding of such expenditures have reportedly undermined the efficient operations of CMTs and adversely affected CBEs, too. For example, when awareness and education campaigns could not be sustained, fee collections dropped and littering in the community increased. Therefore, the report section “Improving Participatory Municipal Governance” discusses how necessary expenditures may be funded.

<sup>12</sup> The field mission did not reveal any problems, but of course nothing is perfect. Therefore, any project wanting to leverage CMTs may use them strategically, while ensuring that the system is transparent and accountable. Other grassroots models exist that provide potential strategic linkages, such as federations of slum dwellers built through YMCA/SDI and federations of street vendors built through NAPETUL/StreetNet International/WIEGO, both under the Cities Alliance Liberia Country Programme.



Two of YMCA's peer educators: Josiah W. Nmah (left) and Gabriel M. Fonnoh (right)

## MEET MR. JOSIAH W. NMAH AND MR. GABRIEL M. FONNOH, YMCA'S PEER EDUCATORS

Mr. Josiah W. Nmah and Mr. Gabriel M Fonnoh worked as peer educators during the Ebola crisis, as did many other youths involved in YMCA's slum project. In addition, Josiah also serves as Youth Secretary in the West Point community. The two young men explain what happened during the Ebola Virus crisis.

### Awareness raising

The peer educators went house to house, raising awareness about the effects of the disease and the preventive measures that should be taken. The peer educators also took the opportunity to educate households on other health issues, particularly regarding the prevention of sanitation-related diseases. As Gabriel notes, "The house-to-house method was important because people tried to avoid large gatherings during the Ebola crisis." Initially, not all people believed what they were being told, but Josiah and Gabriel explain that after two to three weeks of repeated awareness raising the number of new cases dropped significantly. According to Josiah, the peer educators were listened to "because we were part of the community, and weren't strangers. Even older people listened to us."

### Hygiene

According to Josiah and Gabriel, the Ebola crisis has resulted in some lasting behavior changes in the community: "Before Ebola people wouldn't wash their hands before eating or after going to the bathroom, but this practice has continued: now people do wash their hands. People who have private bathrooms still use their bucket [that was distributed during the Ebola crisis] for hand washing."

### Reporting of Cases

During household awareness campaigns, the peer educators would also look out for people displaying symptoms of Ebola. Operating in groups of two, if they found somebody who they suspected was suffering from Ebola, one of them would go immediately to one of the YMCA booths established on many street corners in the community. The peer educator in charge of the booth at that time would record the case and call the Ebola Treatment Unit (ETU) to arrange an ambulance. Furthermore, once a person returned home from the ETU, the peer educators would make daily visits to support them during their recovery.

### Solid Waste Collection

The peer educators are not directly involved in waste management operations. However, they noted that during the Ebola crisis, the services provided by the CBEs did not appear to be functioning optimally and may even have stopped in some areas. They speculate that this was due to lack of support from the Monrovia City Corporation (MCC). As a result, two local CBOs, with the support of the YMCA, began to collect household waste in West Point as part of the Food For-Work (FFW) Program.

### Leveraging community structures

Comic Relief and Y-Care International piggybacked on the already mobilized and organized community to deliver their Ebola response: the peer educators distributed buckets and chlorine to public latrines to ensure that people could wash their hands. They would then monitor and re-supply when required and make sure the facility was kept clean.

### The future

When asked how communities could be used by agencies to deliver more and improved services into the communities, Josiah and Gabriel were cautious in their response. "NGOs are a big problem," noted Josiah, "Some of them are not real, they just get funds, but they don't do anything." He then went on to stress the importance of working through existing local structures. Josiah believes that "the YMCA is successful because the organization works through local leadership."



From left to right: Gabriel M. Fonnoh (Peer Educator), Jerry Paye (YMCA), William T. Dennis (Deputy Town Commissioner), Matt Nohn (Consultant), Josiah W. Nmah (Youth Secretary & Peer Educator), Adele Vosper (Consultant)

# PART II

## Leveraging City-Community Partnerships for the Fight against Ebola

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“What helped Liberia so much in the fight against Ebola was the community. Communities themselves understood what to do.”

Jackie Okao, Oxfam Great Britain

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### OVERVIEW

When Ebola spread to Liberia in March 2014, the country, including Monrovia, was understandably not prepared for a disease outbreak of that scale. There are myriad reasons why this was the case, which have been examined in detail elsewhere. What is important to note regarding this report is the following:

- i. **Liberia’s infrastructure, including waste management, was severely weakened following years of conflict** (WHO 2016). Projects, such as EMUS, and later IMPAC, were developed to address this. However, weaknesses persisted and “inadequate basic services and infrastructure aided in the initial, rapid spread of the disease” (Forbes 2015).
- ii. **The prolonged civil war also resulted in a cohort of young adults with low literacy** (WHO 2015), considered largely responsible for the fact that Liberia suffered

the highest number of deaths during the 2014 Ebola outbreak in West Africa (Mvogo meeting September 27, 2016). According to Mayor Mvogo:

*“People did not know the methods by which diseases are transmitted.*

*[They] didn’t understand that disease is real [...] Because of lack of education and lack of understanding, basic hygiene measures were not present.”*

Mayor Mvogo meeting September 27, 2016

For this reason, education and awareness raising became a cornerstone of the EVD response.<sup>13</sup> However, when the national and international response effort took off in mid-2014, the outreach communities initially was through newspapers, radio, and television—media not easily accessible in poor communities (Monrovia City Corporation 2015b, p. 2) or media that communities may not recognize, due to lack of personal relationships.

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<sup>13</sup> Coordination among stakeholders occurred at the Ebola Command Centre (ECC). This was the highest-level panel and the operational arm of the Incident Management System (IMS). It was in a large hall with representatives from key groups and organizations, each having their own desk (for example, WASH, contact tracing, and WHO). Using routinely updated maps, it was possible to see who was doing what and where (Sackor meeting September 26, 2016).

Ebola reached Monrovia in June 2014 and by July the situation was very bad and there was panic in Monrovia (Mayor Mvogo meeting September 27, 2016). It was around this time that the MCC decided to actively engage CBEs in the fight against Ebola. Partnering with CBEs to strengthen efforts to combat Ebola makes sense for many reasons, including, but not limited to the following:

- i. CBEs employ an established community-based workforce with intimate knowledge of the community they serve.
- ii. CBEs possess already established relationships and trust within the community.
- iii. CBEs operate through an existing working relationship with the MCC.

Working directly with communities through such existing structures as CBEs and CMTs, proved to be the right decision. The shift from national to community-based responses is widely credited with changing the trajectory on new Ebola infections (Forbes 2015). In this regard, the UNMEER<sup>14</sup> Chief of Party, Peter DGLISH, praised Liberia's efforts, believing Liberia deserves a Nobel Prize and stating that "it has been an extraordinary international effort but it is [the] people of Liberia that made the difference" (Monrovia City Corporation 2015b, p. 8). Deputy Minister Pratt who earlier served as MCC Mayor Mvogo's planning advisor notes:

*"Ebola started to be defeated when the communities took ownership. Because we started to understand that it was a cultural issue. People did not accept the scientific facts, like cannot wash or touch the body of a deceased person. There was a conflict between the scientific advice and the community culture. Thus, MCC and PCC went out with the same message: you as a community need to be at the alert; otherwise, the people will keep dying. The trust was established at the community level through the community-based waste management system. IMPAC was already there: the CBEs were already working. The CMT team and social facilitators provided community awareness for waste management and did handholding for management. We were doing this already. Then we used the same process but changed the deliverable: awareness for Ebola."*

Deputy Minister Pratt meeting  
September 29, 2016

## TRAINING AND EQUIPMENT

A train-the-trainer model was used to deliver training on Ebola prevention and awareness to CBE workers. In July 2014,<sup>15</sup> the MCC and Ministry of Health provided training at City Hall to CBE owners/managers. In December, UNICEF provided comprehensive training to CBE owners/managers (Mayor Mvogo September 27, 2016). The train-the-trainer model was also used through the CMT structure (Doyah meeting September 26, 2016 and Saydenuh meeting September 28, 2016).

The main components of the training sessions, as well as the key messages, were the following:

- i. Personal protective equipment (Note: In the case of waste collectors, personal protective equipment refers to gloves, masks, and boots)
  - Importance of using personal protective equipment consistently.
  - How to use personal protective equipment correctly.
- ii. Disposal of household waste
  - Do not open plastic bags, put directly into wheelbarrow, pushcart, or tricycle.
  - Do not touch rubbish with bare hands.
  - Do not get close to customers.
- iii. Potentially contaminated waste
  - Do not touch discarded clothing, medical waste or personal protective equipment, call MCC.
  - Do not touch bloodied material, call MCC.
  - Do not collect from medical facilities.
- iv. Prevention methods
  - Do not touch people (including shaking hands).
  - Wash hands regularly, using sanitizer, soap, or chlorine (taught how to mix).
  - In general, do not allow visitors, not just when somebody is infected.
- v. Reporting of potentially infected individuals
  - Tell infected individuals to go to hospital immediately.
  - Call emergency team on 4455.

The following equipment was supplied through the MCC to CBEs:

- i. Gloves
- ii. Masks
- iii. Boots
- iv. Spray cans (some).

<sup>14</sup> UN Mission Emergency Ebola Response.

<sup>15</sup> According to another source, this training did not occur until mid-August (Monrovia City Corporation 2015c, p. 5).

Quantities were insufficient, however, meaning that CBEs needed to purchase additional equipment, especially consumables, such as gloves. Yet, extra supplies were often of inferior quality because the cost of high quality was often prohibitive. In addition, following the training, some CBE managers understood the importance of skin not coming into contact with contaminated material and purchased long-sleeved shirts through their own initiative or they encouraged their workers to wear long-sleeved shirts. Some also bought helmets for workers who transferred waste into the skip buckets.

Some CBEs found personal connections to international NGOs to be a valuable resource. For example, before training had been provided to IMPAC CBEs, the operations manager of the OCEANS CBE, Mr. Kendamah asked a personal contact that worked for Médecins Sans Frontières (MSF) what he should be doing differently (meeting September 29, 2016). He was told that households should place waste in plastic bags and was given 30 rolls of plastic bags, as well as thicker plastic gloves for his waste collectors and chlorine to clean equipment and hands. When the plastic bags ran out, he was told to tell his clients to use the ones from the market.

In December, UNICEF distributed 780 hygiene kits for the Ebola response to waste collection staff, including CBEs (UNICEF 2015, p. 28). The sanitary kit included a bucket, chlorine, soap, and a scoop (for disinfecting gloves and boots when arriving home). UNICEF also provided additional gloves, boots and masks (Mayor Mvogo meeting September 27, 2016). Buckets and chlorine were also provided to CMTs.

Compliance improved during the Ebola crisis. Normally workers do not like wearing gloves because of the heat, but during Ebola they understood the importance of doing so. Because they had seen for themselves the effects of Ebola, and understood the risks associated with their work, they listened to the precautions (Mvogo, meeting September 27, 2016). A safety committee established among CBEs was responsible for enforcing extra precautions (Kamara, meeting September 28, 2016).

## WASTE COLLECTION

**Ebola is highly infectious** (WHO 2014c). It can be spread not only by direct contact, but also through contaminated surfaces and materials (WHO 2014c, 2016). This means proper waste management<sup>16</sup> is an essential element of prevention and control efforts.

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“We told our CBEs to work, to save lives, even in the absence of funding.”

Alphonso Kamara, National Association of CBEs

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However, waste collectors are at particular risk of becoming infected, as primary waste is a potential source of contamination.

### **Providing training and equipment was essential in enabling waste collection to continue.**

Although many waste collectors ceased working during the Ebola crisis, there were enough that kept working to enable all CBEs to continue providing PSWC services. Waste collectors from the Environmental Sanitation CBE reported they kept working and were not afraid because the training provided meant that they knew what to do (Meeting September 28, 2016). However, a couple of workers did acknowledge that they were afraid that the gloves might break, or that they might touch something contaminated and accidentally touch someone afterwards. In contrast, in Paynesville, approximately 10 CBEs were providing PSWC services at the time of the Ebola outbreak and only one was not affiliated with IMPAC.<sup>17</sup> However, only one Paynesville CBE, OCEANS, continued operations during the Ebola crisis (Kolubah meeting September 29, 2016). Some argue that this was because the others were underprepared and scared, as they had not received training (Kendamah meeting September 29, 2016). In contrast, OCEANS had IMPAC training as it originally operated in Monrovia before expanding to Paynesville and this training provided the knowledge and confidence needed for continuing the essential service.

CBE managers also made other changes to their business operations because of the training they received. For example, at least one CBE stopped collecting cans and bottles for recycling, because of the contamination risk, although this posed an additional financial constraint. Another CBE that would collect waste in wheelbarrows and then transfer it into big bags to be transported to the skip bucket with tricycles would dispose of the entire bag daily during Ebola—instead of the normal system of replacing the bag only because of wear and tear.

Some CBEs sprayed household waste; however, this does not appear to have been done consistently across all CBEs. Some CBEs and key stakeholders reported that all rubbish was sprayed because they didn't know which households were affected and who might

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<sup>16</sup> For protocols to be followed for waste collection during Ebola contact Eugene Caine (Acting Coordinator for the WASH Secretariat at the Ministry of Public Works).

<sup>17</sup> To the best of the author's knowledge these CBEs had been established independently.

be hiding the disease. Others said they didn't spray at all because they didn't have the equipment. In addition, some CBEs sprayed or washed equipment (tricycle or wheelbarrows) every day and thoroughly washed gloves. But again, this was not consistent across the board, and the Director General of the Services Programme at the MCC's Department of Planning and Waste Management, Mr. Garneo, noted that a lack of spraying of wheelbarrows was a significant gap in the Ebola response (Meeting September 26, 2016). Supporting CBE efforts, the MCC undertook regular spraying of skip buckets as potentially hazardous waste may not always be apparent (Peabody meeting September 26, 2016). If identifiable hazardous material, such as **personal protective equipment, was found in the community, CBEs were told to call city hall and the environmental health team would be sent to conduct additional spraying** (Peabody meeting September 26, 2016).

Households disposed of contaminated household items, such as used clothing and bedding from infected patients, as well as hygiene and Ebola home care kits into the normal primary solid waste collection stream (Monrovia City Corporation 2015c, confirmed by field research). This was especially problematic in areas with particularly high infection rates where international NGOs distributed Ebola hygiene kits without telling households how to use or dispose of them correctly (Garneo meeting September 26, 2016 and Moore meeting September 28, 2016). In some cases, households were even told to burn the kits, which is contrary to MCC policy. It has created a serious challenge to get residents to unlearn this behavior (Moore meeting September 28, 2016) and this behavior was a concern where household personal protective equipment entered the PSWC stream, because it meant that skip buckets were turned into potential sites of infection (Garneo meeting September 26, 2016).

Waste collection from medical facilities was meant to be collected separately. Mr. Tarplah—CMT Coordinator and nurse who was working at the ETU in West Point during the outbreak—confirms that at this facility medical waste was sealed properly in plastic bags and collected by a waste truck (Meeting September 28, 2016). However, in addition to contaminated household items, there was “evidence of the presence of Personal Protective Equipment (PPE) and sharps used by medical facilities in the general municipal solid waste stream” (Government of Liberia 2015, p. 101). Although skip buckets are the CBEs' responsibility, access is not restricted. Thus, the CBE manager of Swary and Dunbar CBE was held accountable and jailed because medical waste was found in the skip bucket. The field mission identified differences of opinion concerning who is to blame—medical center for dumping, or CBEs for

collecting illegally (especially from pharmacies and smaller medical centers).

At least one CBE faced competition in providing PSWC services during the Ebola crisis. Because people could not afford to pay for waste collection services during the emergency period, the YMCA (funded by Comic Relief) organized a free door-to-door service during this time (Paye Meeting September 27, 2016). The YMCA worked with two youth-based community-based organizations—West Point Health and Sanitation Organization (WAPSO) and Health and Sanitation Inc. (H&SI)—who usually undertake health awareness activities. YMCA collaborated with the Commissioner of West Point to recruit youth to work in the Food For Work (FFW) project doing waste collection. They were provided with necessary protective materials. The MCC was alerted to the situation and a solution was negotiated between relevant parties (Monrovia City Corporation, 2015c). The H&SI CBO now has an ongoing relationship with the United Group of CBEs in West Point (Paye Meeting September 27, 2016; for more information refer to: Monrovia City Corporation 2015c).

## Finances

Total CBE revenues collapsed in July and August because of the Ebola crisis (Table 2) (Government of Liberia 2015, p. 94). The field mission identified a number of reasons for this:

- i. **The socio-economic impact of Ebola.** The Ebola crisis was not only felt in terms of the number of infections or deaths, but also in terms of reduced access to income opportunities. This was due to a combination of myriad factors: restrictions on movement of goods and people, including attending work; unwillingness of people to go to crowded public places, such as markets; and death of workers resulting in lower output and thus affecting workers further upstream. Therefore, not only did household income generally reduce during this period, but the price of basic commodities also increased. Thus, the priority for many households was to find enough money to buy food and other priority goods, including protective items (for example, chlorine, buckets, and sanitizer), rather than to pay for PSWC services. Thus, some CBEs substantially decreased their fees during this period and in the immediate aftermath to maintain their client base and attract new customers. Frequently this meant that although the number of households and amount of waste collected increased, total revenue still decreased.

- ii. **Reduced services.** Despite training, some waste collectors were afraid and ceased working during the outbreak. As a result, some CBEs had to cut back their operations and cease providing services in some areas.
- iii. **Shrinking customer base.** The number of customers was reduced due to deaths, which sometimes wiped-out entire households and many people moved away to what they perceived to be safer areas.
- iv. **Duplication of services by donors.** Sometimes donor emergency relief actions also affected CBEs. For example, the Food For Work (FFW) program under the Comic Relief initiative through YMCA may have undermined client subscriptions since waste was being collected for free (Krah and Weah meeting September 29, 2016).

**CBEs put in place fee reductions as a strategy to maintain their client base and keep their communities clean**, which was especially important during the Ebola crisis (Monrovia City Corporation 2015c, supported by field research).

Waste collectors and CMTs were an important part of implementing this strategy, with the former agreeing to a reduction in wages and the latter assisting with the price negotiations between CBEs and clients (Monrovia City Corporation, 2015c, supported by field research). In some areas, PSWC services were even provided for free for a short period of time (Monrovia City Corporation 2015c, Doryen meeting September 26, 2016). For example, recognizing the importance of proper waste disposal and the economic hardship during the West Point quarantine, the United Group of CBEs stated that they waived fees during this period, while continuing the service.<sup>18</sup> Waste collectors understood the importance of the task and agreed to work for free. The impact of loss of income for CBE workers was mitigated by the distribution of relief food and nonfood items in some cases. Alternatively, to encourage waste collectors to keep working during the crisis, some CBEs allowed their workers to collect the fees from the households and pay themselves directly, meaning that little money was going to the CBEs for equipment maintenance (Weah meeting September 29, 2016).

Table 2: Revenues Received by CBEs (in LRD)

ZONE NAME	Jan '14	Feb '14	Mar '14	Apr '14	May '14	Jun '14	Jul '14	Aug '14	Sep '14	Oct '14	Nov '14	Dec '14
New Kru Town	116,260	109,505	87,345	41,730	0	41,791	71,485	68,089	85,065	87,295	106,585	103,687
Clara Town	17,170	17,170	13,340	106,205	158,345	222,860	10,600	9,920	15,800	8,240	5,020	8,060
West Point	89,050	90,025	83,000	22,900	75,220	75,700	41,980	22,640	47,800	38,800	32,000	65,000
Central Monrovia	-	-	-	48,020	52,500	56,900	-	-	-	-	-	-
Sinkor	176,090	207,520	170,645	176,825	205,005	-	144,330	173,260	159,655	136,390	147,930	148,930
Lakparzee	66,165	78,915	68,775	30,745	54,725	56,000	54,905	25,515	34,715	71,850	68,350	-
Old Road	261,690	218,595	222,705	230,865	232,465	258,710	100,255	134,450	76,345	122,750	271,250	232,590
Congo Town	69,150	96,760	64,470	71,170	81,865	76,151	79,005	83,985	82,014	81,668	82,240	86,020
Gardnersville	176,240	189,380	201,205	184,045	247,665	272,775	139,060	90,510	56,740	62,390	64,625	95,630
New Georgia	183,190	156,150	185,050	238,740	262,185	265,985	258,150	129,500	249,460	266,000	241,750	241,865
Barnerville	16,760	18,080	16,725	97,000	86,310	119,065	69,600	74,100	60,350	33,900	28,700	33,900
Total	1,171,765	1,182,100	1,113,260	1,248,245	1,456,285	1,445,937	969,370	811,969	867,944	909,283	1,048,450	1,015,682

(Source: Government of Liberia 2015, p. 94)

<sup>18</sup> The consultant collected additional information from other sources during the field mission, showing that this is a likely scenario, but also received conflicting information that the West Point CBE did not continue service provision during the quarantine period. Possible explanations include the following: limited information of some stakeholders; variation or reduction in services across areas served by the CBE.



Arthur using a pushcart to collect waste in Sinkor.

## MEET WASTE COLLECTORS FROM THE CBE ENVIRONMENTAL SANITATION

Waste collectors are the backbone of CBEs. Matt Nohn (author of this report) visited the Environmental Sanitation CBE, where he had the opportunity to speak with four waste collectors: Andrew Kamara (tricycle operator, pick-up driver and operations manager); Emmanuel Bugar (waste collector with wheelbarrow and assistant to tricycle operator); Arthur Kolubah (pushcart operator); and James Y. Padmore (waste collector and marketing manager).

This CBE collects household waste from communities close to the skip bucket using wheelbarrows, pushcarts as the streets are relatively wide, and tricycles for serving communities located further away.

### Emmanuel's Story

Emmanuel is one of the CBEs longest serving waste collectors, having worked for them for almost six years. However, Emmanuel never applied to work as a waste collector, instead it was CBE CEO Mr. Alphonso Kamara who asked Emmanuel to come and work for him. Emmanuel has a mental disability, and prior to working for Mr. Kamara, he would spend his days scavenging food in local dumpsites. Mr. Kamara took him from the dumpsite and gave him a job, along with providing

him with three meals a day (each worth about \$1) to make sure that he would not return to scavenging. Mr. Kamara explains: "We were taught not to discriminate, so we took people with disabilities." Asked what he would be doing now if Mr. Kamara had not offered him a job, Emmanuel replied: "I would be picking from people's garbage."

### Waste Collection: More than Just a Job

Matt Nohn had expected that people would not actively choose to become a waste collector, and that their main motivation would be monetary—the need to have a job, any job. This suggestion was strongly and immediately repudiated, particularly by James who stated: "You cannot live in an environment that is very dirty. Somebody has to do this job. It's an important job. We want to make the community better. We don't get paid much, but we love the job. If we don't love it, we don't do it." James suggests that medical care be included as part of their compensation, "because waste can be very harmful, and [on our current salary] we can't afford to go to the medical center if we get sick."

However, it's not always easy being a waste collector. The most difficult part, according to Arthur, is feeling discouraged when people are disrespectful: "People hold their nose when you walk past, your friends insult you." Andrew says this makes it difficult to find and retain waste collectors and stresses the importance of the waste collectors supporting and motivating each other to keep going. Accompanying Arthur on one of his rounds, Matt saw firsthand how even some clients showed disrespect, for example, by leaving their rubbish scattered on their porch.

### Ebola

All four of the waste collectors interviewed continued working during the Ebola crisis. This is because, as James explained: "We weren't afraid because we knew what to do." The waste collectors had been provided with training by CBE staff who had received the MCC training. They were told the importance of always washing hands



Left to right: Emmanuel, Andrew and James sitting on one of CBE's tricycles.

and using sanitizer, not touching waste with their bare hands, not opening plastic bags of rubbish, and not collecting from medical facilities. In addition, they were provided with gloves, boots, and masks and told to wear long sleeves.

Andrew and Emmanuel, two waste collectors, did admit being frightened at times during the outbreak. Andrew remembers feeling “worried that the gloves would break because they weren’t that strong, and that [he] might touch something contaminated and then touch someone else.” Emmanuel admitted feeling scared when he saw dead bodies, but he knew what to do, and would immediately call a community leader.

The waste collectors were also involved in raising awareness about Ebola in the community. They would go from house to house to spread key messages, such as the importance of hand washing. Even though they weren’t always listened to, the waste collectors persevered and said they would continue returning to the same households to repeat the message.

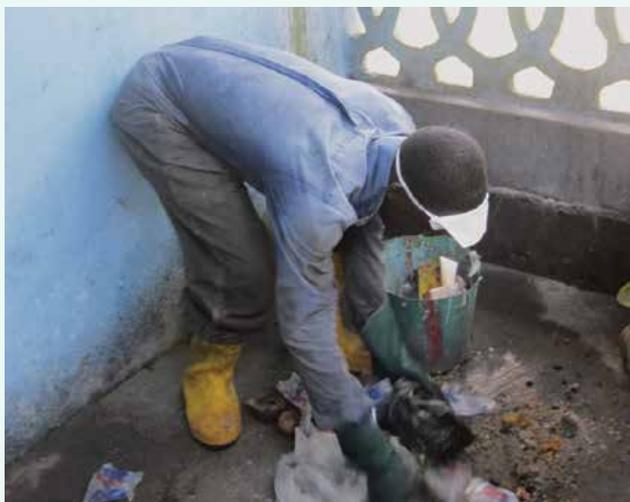
Andrew, Emmanuel, Arthur, and James report that the Ebola crisis has had a lasting impact, both on themselves as waste collectors, and on the community at large. The waste collectors are continuing to be more careful, always wearing gloves and making sure to wash their hands thoroughly. They have also become more involved in actively recruiting new clients and report that since the Ebola crisis, people are more willing to subscribe to the service. This is because Ebola helped them understand how waste can be dangerous and, therefore, why proper waste disposal is important.

## Improvements

A disconnection exists between primary and secondary waste collection in Monrovia. In particular, the waste collectors are frustrated with the MCC’s repeated delays in emptying the skip bucket. According to Andrew, this means that sometimes they are forced to stop collecting household waste, because the skip container or transfer station is full.

The waste collectors also believe that the MCC can provide support in other ways, by providing equipment, creating community awareness of the importance of proper waste disposal, enforcing payment, and stopping dumping of waste by households directly into skip buckets.

Andrew believes that they “still need to learn more about waste disposal [because] this job is very dangerous. If we’re not guided, we won’t be able to do the job.” He continues “We need more awareness for waste collectors—so they can educate the community. The community thinks we don’t know anything, that we’re just common garbage collectors. We need to have more information to convince the clients [of the importance of primary solid waste collection].”



Arthur collecting scattered waste.



Emmanuel with two satisfied clients who joined following the Ebola crisis.

## AWARENESS RAISING

**Comprehensive social mobilization campaigns are essential for the effective control of disease outbreaks** (WHO 2014b, p. 11). According to the WHO, these campaigns should “include feasible, culturally-appropriate, and technically sound interventions for the affected population” (WHO 2014b, p. 11). These measures are important to improve the willingness of communities to comply with control measures and adopt preventative practices (WHO 2014b). Importantly, social mobilization is not a top-down approach, rather it listens to and seeks to understand the community’s view from their sociocultural perspective and to address their concerns accordingly (WHO 2014b). Liberia’s public awareness campaign has been credited with contributing to “Liberia’s stronger and much more effective response, as compared to neighboring countries Guinea and Sierra Leone” (Monrovia City Corporation 2015b, pp. 2–3). “Although the number of Ebola cases was much higher than in the other two countries, the containment and reduction of Ebola in Liberia was more successful” (Monrovia City Corporation 2015b, pp. 2–3).

**CBEs and CMTs played an important role in creating awareness around Ebola.** CBEs and CMTs complemented efforts from the MCC who also sent workers door-to-door to tell people that Ebola is real (Garneo meeting September 24, 2016). The key messages spread by CBEs and CMTs included the following:

- i. **Ebola is real!** Ebola Kills! Protect your family! Protect your community! Protect yourself!
- ii. **General hygienic precautions.** Wash your hands. No handshaking. No embracing. Don’t even allow people from other communities to come into your community (unnecessarily).
- iii. **Dealing with suspected Ebola cases.** Get help and report suspected infection. Call the CMT first or the rapid response directly (#4455). Don’t touch the sick or the deceased. If a child gets sick, use plastic bags on hands if need to touch/carry them. Safe burials.
- iv. **Increased caution in waste management.** Don’t touch potentially contaminated waste with bare hands. Use a bag to pick it up, put it in a plastic bag and immediately seal it. Place contaminated

waste in two plastic bags. Area around skip bucket is not a safe play area for children.

**Some people consider the CBEs to have been the key source of education for the community and believe that without them, the situation would have been much worse** (Cole FGD September 30, 2016). Unlike social mobilization campaigns where external awareness teams were brought in by MCC or other partners, CBE workers and CMTs were based in the community and reinforcing the same messages day in, day out. In addition, CBEs would provide support and courage to households. In the words of the President of the National CBEs Association, Mr. Kamara, CBEs “helped people to believe that they can manage Ebola” (FGD September 30, 2016). Not only did they have a continuous presence, but they were often more trusted than the authorities (Monrovia City Corporation 2015b, field research). The same was true for the YMCA’s peer educators who were also involved in door-to-door awareness raising. According to one of them, the peer educators were listened to “because we were part of the community, and weren’t strangers. Even older people listened to us” (Nmah meeting September 27, 2016). Building on the broader partnership between MCC and CBEs and CMTs, MCC provided megaphones and awareness materials (for example, posters and leaflets) to assist the communities with awareness raising efforts (Brooks 2014, field research).

**CBE workers became deeply involved, as waste collections were not only their livelihood, but they also “realized their lives were at greater risk [than others], so took it on with commitment and passed information onto friends, family, other members of the community”** (Okao meeting September 30, 2016). Both CBE workers and CMTs spread key messages by going from house to house, person to person, as well as by using megaphones while walking through streets and market places. The house-to-house method was particularly important as people tried to avoid large gatherings during this time. During the field mission, residents confirmed that workers did provide information about Ebola and about other diseases that could arise if waste was not disposed of properly.

**Persistence of CBE workers and CMTs helped to overcome binding constraints, such as high-risk behavior often rooted in traditional beliefs.** Despite high level of trust and strong community connections there, awareness campaigns faced difficulties in convincing the community to change their behavior. Local religious

and cultural beliefs often resulted in community resistance to scientifically-based prevention efforts (Manguvo and Mafuvadze 2015). For example, “the community refuted the fact, they did not want to believe in the things that one is not supposed to do [to prevent the spread of Ebola]. They still bathed the body [as part of burial preparations]. It took them some time to stop it [...] The awareness was extensive, because people refused to accept that Ebola was real” (Stubblefield meeting September 29, 2016). However, workers were persistent and would keep going back to the same households to reinforce the key messages, even to ones that didn’t listen. Two YMCA’s peer educators reported that initially not all people believed what they were being told, but after two to three weeks of repeated awareness raising the number of new cases dropped significantly. As the crisis worsened and people started to see the effects of the disease first hand, they wanted to know what they had to do, and therefore listened to key messages.

**CBE workers and CMTs played an important role in reporting suspected Ebola cases or high-risk behavior** because of being on the ground in the community. For example, in West Point, the manager of the United Group of CBEs stated that as she was in the community every day because of waste collection and walking between houses, she could alert the Town Commissioner when Ebola emerged in West Point (Ponpon meeting September 24, 2016). CBEs made sure that reporting occurred in a manner that was appropriate for each community. This depended not only on the physical layout of the town, but also on cultural norms and practices. In most cases, the community did not accept open, direct reporting to the response hotline, with families often resisting having their loved ones taken away. For this reason, CBE workers reported in secret: they understood they would not be seen favorably, if the community knew who was reporting cases. Other CBEs would call the CMT or the community leadership as the first step. They would then come to assess the situation (from a safe distance) and then call the hotline, ambulance, or Ebola Treatment Unit (ETU), as appropriate. The community was also encouraged to report suspected cases by calling the Emergency Response Hotline (4455). Some people did this because they feared Ebola and did not want to become infected. CBEs also reported clinics and pharmacies (small businesses) that were giving them bloodied and otherwise potentially infectious material (Mayor

Mvogo meeting September 27, 2016). Such material was not meant to enter the normal waste stream.

## SUCSESSES

### **There “was no reported CBE worker casualty, despite their grave exposure to the Ebola and other infectious wastes”**

(Monrovia City Corporation 2015c). Mayor Mvogo also highlighted this as a major success of the response, especially given that health care workers and police were seriously affected (Mvogo interview September 27, 2016). This success can be attributed to the strong compliance with preventive measures (for example, wearing protective clothing, keeping distance, not collecting bloodied material). Furthermore, during the focus group discussion, some CBEs reported that in some communities they managed to “save” all residents.

**Despite their vulnerability, CBEs displayed a commitment to providing invaluable PSWC services during the Ebola crisis.** Their long-term perspective enabled flexibility to ensure continuation of the service. Waste collection services continued during the Ebola outbreak, even though in some areas CBEs were operating on a limited capacity or working for free. It has been reported that PSWC services were suspended in West Point during the 13 days quarantine because of not being able to access the community skip, which was located outside the quarantine (Monrovia City Corporation 2015c).<sup>19</sup> However, according to the United Group of CBEs, which operates in West Point, the manager’s personal relationship with some of the soldiers manning the quarantine zone enabled them to continue their operations as they could dump the collected waste in the skip. As recognized by Mayor Mvogo, the CBEs provided a great support to the MCC: “They continued to collect the waste, they did not let us down. They supported us through listening to the precautions.” (Meeting September 27, 2016).

### **The Ebola response improved the understanding about overall disease prevention and, therefore, induced lasting behavioral changes and aided in the mobilization of new waste collection clients.**

Ebola crisis has resulted in some lasting behavior changes. In this way, like many crises, the endemic also opened up opportunities and helped strengthen community resilience:

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<sup>19</sup> The quarantine of West Point lasted from August 16 to 29, 2014.

- i. Many people have continued the practice of **washing their hands before eating or after going to the bathroom.**
- ii. Waste collectors are continuing to be more careful, and are more diligent in wearing gloves.
- iii. Some people who had positive treatment experiences during Ebola are now more willing to seek medical treatment than previously. Multiple accounts stated that sick people sought professional treatment because of the risk that they may be infected with Ebola; afterwards they were diagnosed with other, potentially life-threatening, but easily treated, diseases, such as malaria.
- iv. Communities displayed commitment to and **understanding of the importance of PSWC** by continuing to pay for services during the crisis. **Despite the economic hardship** inflicted by the EVD outbreak, **“poor households still demonstrated commitment** to the environmental conversation by paying for garbage ...” (Monrovia City Corporation 2015b, p. 6).
- v. Workers increased awareness concerning the **overall importance of waste collection, which** aided in the recruitment of new customers: “You see now, Ebola is killing people, bring your waste!” (Moore meeting September 28, 2016). Thus, Ebola had the positive side of **attracting new customers, both during the crisis and immediately after.** For example, while shadowing waste collectors working for the Environmental Sanitation CBE, most (randomly interviewed) clients fell into this category. Per one, he “realized there was no need just to keep putting rubbish in the community, [as] it can help spread disease [...] If you keep waste here, it will affect the community and affect you – better you take it away” (Forkpa Interview September 29, 2016).
- vi. The Ebola crisis improved payment rates in some communities, as Ebola helped **clients understand the importance of a clean environment.** For example, Environmental Sanitation CBE (Kamara, meeting September 28, 2016) and other CBEs reported payment rates had increased to 85 and around 80 percent, respectively.<sup>20</sup>

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<sup>20</sup> For comparison, under the IMPAC project inroads were made already: between April 2014 and the publication of the final Monitoring and Evaluation Mission Report in February 2015, the average payment rate increased from 65 to 70 percent (Monrovia City Corporation 2015a, p. 14).

# PART III

## Post-Ebola and Post-IMPAC

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“I used to leave waste in the water and let it float away. Now I understand that this is dangerous and it can help spread disease.”

Korlu Sumo, Community Representative

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Initially funded for four years, IMPAC received a no-cost extension to June 31, 2015 in order to make up for the time lost in project implementation during the Ebola crisis (Monrovia City Corporation 2015c). Thus, the termination of both the project and Ebola approximately coincide.

**Currently, 26 CBEs are in operation.** This number comprises the 14 enlarged IMPAC CBEs and the 12 CBEs established earlier under the ILO and EMUS programs (Krah email September 9, 2016). Given that project funding for IMPAC has ceased, there is no longer a distinction made between the two groups of CBEs and both are represented in the National Association of Community Based Enterprises.

### CBE STRUCTURE/ ORGANIZATION/CAPACITY

**After project funding for IMPAC ended, the project structure was integrated into the MCC.** While the MCC reports that the transition was smooth, technical experts, CBEs and others identified some challenges: the knowledge-gap left by IMPAC staff who took jobs elsewhere; reduced support for carrying out awareness activities and further training; and lack of financial resources for adequate MCC staffing. In addition, it appears that the MCC has not continued to collect, analyze, and provide feedback on CBEs financial reports. On the positive side, Mayor Mvogo (Meeting September 27, 2016) notes that additional CBEs have been added since the integration. She also states that she tries to meet with the CBEs every four to six months to congratulate those who are doing well and listen to issues faced by others.

**The National Association of Community Based Enterprises was officially launched in February 2015 (Juduh 2015).** This body was formed in line with the exit strategy of IMPAC and was registered as an NGO representing CBEs (Kamara meeting September 28, 2016). The association holds monthly meetings where it collects and summarizes issues to present to the MCC. However, it claims that the MCC does not provide sufficient support in resolving these issues because of its own lack of capacity. Thus, while CBEs spoke positively of the good intentions of the association, it was also perceived as being weak. The purpose of the association was envisaged as an umbrella body of the CBEs.

*[The National Association would] contribute to the sustainability of the PSWC services delivery and the CBE model. The association launched in February 2015 will serve as a collective bargaining and social dialogue platform for the CBEs to interact with the external community such as municipal authorities, governmental agencies, private institutions and donor organizations. Beside serving as a voice for the CBEs, the association will seek opportunities for capacity development of the CBEs in proper business management and improved waste collection and disposal solutions and innovation. The association hopes to broker relationship amongst the CBEs and help to resolve internal conflicts between and amongst the CBEs. It presently has an organizing and interim leadership in place and plans to hold elections soon.”*

Monrovia City Corporation 2015c

**CBEs face challenges when potentially expanding into the provision of other services.** Capacity-related challenges can be attributed to the low-education level in local communities, to which many staff working in management roles within CBEs belong (Moore meeting September 28, 2016). A particular difficulty is that people lack the skills and knowledge to manage a business with a large number of staff (Moore meeting September 28, 2016). For this reason, a number of people involved with CBEs from the MCC believe that it would better for CBEs to focus on one service, rather than expanding horizontally. Consequently, the Fostering Innovative Sanitation and Hygiene (FISH) Project established new CBEs dedicated to this specific sector for their project (Moore meeting September 28, 2016), rather than using existing ones. Krah explained that the MCC did not want to get PSWC CBEs involved in toilet management, because one can make fast money from toilets, and there was a concern that CBEs might get distracted from their core business of waste collection (Meeting September 29, 2016).

**A significant capacity gap remains, especially in terms of financial management** (including reporting) after the end of the IMPAC project (Weah meeting September 29, 2016). Under IMPAC, CBEs would submit monthly reports to the IMPAC team who would then analyze the data to assess performance and determine CBE sustainability and viability (Weah September 29, 2016). Data validation would show that CBEs were often underreporting revenue (Weah meeting September 29, 2016), possibly to reduce the 5 percent fee paid to MCC. Since the end of IMPAC, many CBEs have not taken proper business analysis as they do not have the skills, knowledge, or experience to do this on their own. Without this analysis, CBEs do not understand what their recovery rate is and what might be going wrong with their business (Krah meeting September 26, 2016). While some CBEs could benefit from further training (although this is cost-intensive), for other CBEs having a low-education level at the time may always be a challenge (Moore meeting September 28, 2016). In addition, one CBE who acknowledged the need for more training, conceded that even with extra training, the problem of finding sufficient time to manage the business properly would remain, especially because of having reduced staff numbers following the Ebola crisis due to lower revenue (Kamara meeting September 28, 2016).

**Limited ongoing support provided by MCC to CBEs aggravates the financial challenges.** Since the end of the IMPAC project, the President of the National Association of Community Based Enterprises, Alphonso Kamara, has claimed that lack of logistical support provided by the MCC is a

major challenge faced by CBEs (Juduh, 2015). This was echoed by CBEs during field research. For example, support is no longer provided to recruit and retain clients, whereas under the IMPAC project, the MCC would send out field officers to conduct awareness sessions in the community every three months (Ponpon meeting September 24, 2016). Some CBEs believe that this is necessary to ensure people continue to subscribe to and pay for PSWC—at least as long as fee payments for solid waste collections are not compulsory and not enforced.

**On the other hand, MCC's capacity to assist CBEs (and to expand the model) is arguably limited by the fact that only about 50 percent of CBEs are paying their fees on time** (Mvogo meeting September 27, 2016). Furthermore, there is a widely held belief that CBEs do not fully disclose their revenue to obtain assistance from MCC or a reduction in the MCC fee. However, when CBEs are threatened with closure, they are determined to keep operating (Doryen, meeting 26/09/16). On the other hand, some CBEs seemed to have legitimate reasons why they have fallen into arrears, which is discussed further in this chapter.

**Some CBEs find it difficult to attract and retain waste collectors, especially trained workers.** This appears to result from a combination of the lack of competitiveness of the salary and the attractiveness of the job. In general, CBEs based in more affluent areas (that is, not slum communities) find it more difficult to recruit workers from that community, such that in some instances it was necessary to source labor from other informal communities nearby (Peabody meeting September 26, 2016).

During the field visit to Swary and Dunbar CBE, the staff there reported that they had difficulty recruiting and retaining workers because the salary was not sufficient for this 'unattractive' type of work. Furthermore, the low density of the area means that workers spend all day collecting and do not have time for secondary jobs. Possibly, under such conditions utilization of motorized equipment may aid in reducing working hours or receiving higher wages which may eliminate the need for a second job (see section CBEs supporting themselves).

On the other hand, the OCEANS CBE reported having no problem finding workers, but they have moved from being the lowest paying CBE when they started to the highest paying CBE. However, even CBEs operating in slum areas, such as West Point, report challenges, with the United Group of CBEs noting that driving a tuk tuk (aka motor rickshaw) was more lucrative than driving a tricycle, as the monthly salary for the former was LRD 12,000 (\$133) as opposed to 6,000 (\$67) only for the latter.

Another challenge affecting the ability of CBEs to retain staff is the lack of respect the communities have toward waste collectors. The waste collectors from the Environmental Sanitation CBE reported finding it difficult to keep motivated because people hold their noses when they walk past or hurl insults at them. During the Ebola crisis, some CBEs reported that it was easier than usual to retain staff, despite the work-associated health risk, because people were desperate for jobs because of few opportunities. In summary, both the disrespectful behavior displayed by the community and other job opportunities of already trained operators (for example, of motor tricycles) makes it difficult to find and retain waste collectors.

**CMTs are having difficulties providing services with funding ending.** Post IMPAC, CMTs must use their own money to pay for their transportation, communication, and other expenses. This has meant that in some areas CMTs have stopped providing services completely. Sometimes CMTs receive in-kind gifts of appreciation for resolution of community dispute, but this is not guaranteed. According to at least one MCC employee, CMTs are not functional in the absence of IMPAC and a reform of the system, including provision of allowances to CMTs, is required (Flomo meeting September 28, 2016).

## SERVICE SUBSCRIPTION

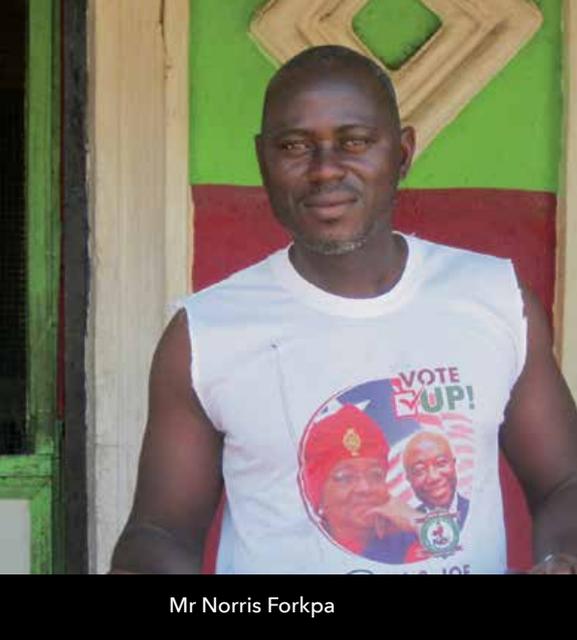
**CBEs are still rebuilding their client base in the post-Ebola recovery period.** They are reporting a slow return of previous clients, as some clients start working again (and thus can afford the service) and others come back to their homes successively. However, some of the client base is still missing because of the Ebola crisis, specifically because of death and loss of jobs (Kamara, meeting September 28, 2016). Some CBEs have modified their fee system in order to attract customers, both new and relapsed. For example, the Environmental Sanitation CBE has implemented a reduced price if customers sign up for monthly (rather than weekly) payments. Furthermore, they allow households in particular financial difficulty to negotiate individually, which the Environmental Sanitation CBE considers to be a way of building trust in the community (Kamara, meeting September 28, 2016). There is a positive side in terms of client numbers in the wake of the Ebola crisis. Parents now understand the dangers associated with waste and do not want their children carrying waste to dump it, so they would rather pay for this service (Kamara, meeting September 28, 2016). According to waste collectors at Environmental Sanitation CBE, people

are more willing to subscribe since Ebola, which was confirmed when the consultant spoke with clients during shadowing of waste collectors.

**Financial hardship following Ebola is ongoing for many CBEs.** Although the client base is recovering, some CBEs are still in arrears with their MCC payment because CBEs were still expected to pay the normal monthly fee to MCC, despite having collapsed revenues because of the Ebola crisis. The National CBEs Association is trying to negotiate a (partial) waiver of fees for the Ebola period, but they have not yet been successful. For some CBEs, other circumstances exacerbate the financial hardship. For example, sea erosion has been an increasing threat to the West Point community, with many homes being swept away. Thus, the CBE lost many of its clients: in addition to the reduction in the number of households due to displacement, others have started dumping their waste into the ocean to reclaim or stabilize the land (or to simply avoid the waste collection fee). The CBE estimates that sea erosion cost them approximately 60 percent of their client base, resulting in laying off three staff members (Ponpon meeting September 24, 2016), but states that the MCC still asks for collecting the full fee, based on the original larger number of clients.

**Collection of fee-payments remains an ongoing challenge for CBEs because of collective action problems.** Part of the problem with fee payment is historical: under the EMUS project, residents were told that they could either voluntarily subscribe to the IMPAC-delivered service or continue to take rubbish to the skip themselves. (Doryen meeting September 26, 2016). As legal enforcement was deliberately not considered under IMPAC, CBEs rely on persuasion and negotiation to convince their customers to pay (Weah meeting September 29, 2016). CBEs report being unable to get help from local authorities to address the issue of nonpayment because the local authorities are understaffed and do not recognize the positive externalities of waste management. Still today, as subscription is not compulsory, payment cannot be enforced and people can choose not to pay.

**Dumping is particularly prevalent in areas with underused open space,** such as swamps and wetlands (Yarngo meeting September 29, 2016 and Ammons meeting September 29, 2016). In some instances, dumping of waste is done as part of a conscious effort to try and create more stable land (Peabody meeting September 26, 2016 and Smith meeting September 30, 2016). It is, however, not just the availability of space, but the fact that people living in these areas tend to be poorer than those living on higher land, and therefore have limited



Mr Norris Forkpa

## MEET CLIENTS OF THE ENVIRONMENTAL SANITATION CBE

While shadowing some of the workers from the Environmental Sanitation CBE on their waste collection rounds, Matt Nohn had the opportunity to speak briefly with some of their clients.

### Mr. Norris Forkpa

Mr. Forkpa has been subscribing to primary solid waste collection services provided by the Environmental Sanitation CBE since the Ebola crisis. It was during this time that he realized that there was no need to keep leaving rubbish lying around the community, and that this could be harmful to the environment and help spread disease. During the Ebola crisis, the waste collectors informed him about steps he could take to avoid contracting Ebola, as well as information about other illnesses that

could arise if there was not proper waste disposal. He now knows that “if you keep waste here it will affect the community and affect you. It’s better to take it away.”

Mr. Forkpa is a satisfied customer and believes that the fee should be more given how hard the work is. According to the waste collectors, Mr. Forkpa is a great supporter of their work and often gives them bonuses. He also acts as an advocate for the service, telling his neighbors that they should also subscribe.

### Ms. Korlu Sumo

For Ms. Sumo, as with many people, Ebola served as a catalyst for deciding to subscribe to waste collection services. The Ebola crisis helped Ms. Sumo understand that it was better to have waste taken to a safe place than to have it floating around the community. Several small streams flowed through the community during the rainy season.

As Ms. Sumo explains, “I used to leave waste in the water and let it float away. Now I understand that this is dangerous and it can help spread disease.” She is a happy customer, stating that the workers always come to collect her waste as scheduled and that the fee is affordable. She has also experienced directly some of the benefits of waste collection, recalling: “Before [waste collection] I couldn’t sit here outside because there were too many mosquitoes and flies and lizards. Now the mosquitoes and flies are less.”

### Mr. Reewu G. Molubah and Mrs. Yassa P. Molubah

Mr. and Mrs. Molubah are satisfied customers who started paying for waste collection services prior to the Ebola outbreak. In fact, they signed up when the program was first launched in their community and sensitization activities were being undertaken. The couple understands the importance of a clean environment and have noticed that there have been less mosquitoes and flies since their waste has been collected. As with the other customers in the area, they consider the service to be very affordable.

### Ms. Noah

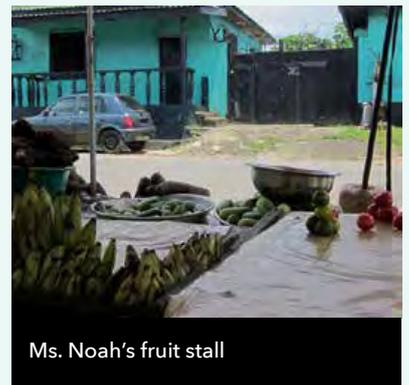
Ms. Noah is a small business owner, selling fruit on the side of a main road in her community. She has paid for waste collection since the service first began. Previously, she used to have to walk to put the waste in the skip bucket herself. Therefore, when the CBE manager Mr. Kamara came to tell her about the new service and the importance of proper waste management, she willingly subscribed. Regarding Ebola, she states, “I already knew about the importance of washing hands before Ebola,” but concedes that the waste collectors told her other information about preventing the spread of Ebola.

### Mr. Andrew Massaquoi

Mr. Massaquoi is another of Environmental Sanitation’s first customers. He recalls that prior to the introduction of the service, people didn’t dispose of waste properly. Therefore, when it was introduced, he immediately joined because he “wanted to embrace the program and sensitize the people on why it [waste collection] was important.” As a block leader in the community, he realized the importance of setting a good example.



Mr. and Mrs. Molubah with waste collector Arthur.



Ms. Noah's fruit stall



Mr. Massaquoi

ability to pay for PSWC services (Ammons meeting September 29, 2016).

**The problem of dumping is particularly bad during the rainy season:** it is unclear if the reason is that CBEs cannot access many low-lying areas at this time, at least not at the regular cost and time (Kendamah, FGD September 30, 2016), or whether dwellers prefer to just dump their garbage, which is carried away with the flood (FGD September 30, 2016). Probably, it is a mix of both reasons, with two major adverse implications: (i) the lack of waste management services during flooding is expected to cause major environmental damage and urban health problems, and (ii) CBEs servicing such flooded areas lose a significant proportion of their client base during the rainy season every year, preventing the professionalization of services and the financing of capital-intensive machinery, such as tricycles, as CBEs exposed to seasonal subscriptions are unable to maintain loan payments during off-peaks. Potential policy responses to address these issues are discussed below.

## TAKING AND INTEGRATED SERVICE DELIVERY SYSTEMS APPROACH

**Problems in secondary solid waste collection (SSWC)<sup>21</sup> adversely impact primary collections** (see for example Krah, Moore, Yarngo, and Doryen). For example, because of delayed clearings, waste backlogs originate from the overflow of skip buckets in communities and markets. Such improperly disposed waste is clearly visible and undermines household willingness to pay CBEs, thus harming financial viability of primary doorstep collections. In some situations, CBEs had to stop working because they had nowhere to dump their waste when skip buckets are overflowing, and in other situations skip buckets have even been closed down because they were not being emptied in a timely manner. For example, PCC closed four skip buckets for this reason (Kolubah meeting September 29, 2016). **In summary, the capacity of the SSWC system also limits the ability of and incentive for CBEs to improve their collection rates.**

**Thus, it is critical to consider the capacity of the SSWC system at the same time as planning for the strengthening and**

**expansion of the PSWC system.**<sup>22</sup> Reportedly, the insufficient capacity of the skip bucket network originally led to the target of servicing (only) 60 percent of households; thus, the capacity should be expanded. This may possibly happen through additional buckets, which would aid in reducing the distance to households served, then eventually reducing PSWC cost. However, neither the present municipal budget nor the CBE fee system accounts for the higher cost that universal coverage would imply, which would mean expanding the number of households served by 67 percent. In addition, the subsector apparently suffers from larger constraints, such as remote location of transfer stations and garbage dumps requiring long commutes as well as severe traffic congestion, making the servicing of skip buckets and dumping in landfills extremely costly. Better connectivity of transfer stations and landfills may be reached through two options: (i) relocation or addition of new transfer or dumping sites and/or (ii) large-scale transportation investments, such as building a Bus Rapid Transit (BRT) system, which doubles as express lane for secondary waste collection (as for other emergency vehicles). Given the increasing size of Greater Monrovia and the overall transport challenges faced, the latter may be an option to be considered.

**Water, Sanitation and Hygiene (WASH) and solid waste management strategies need to integrate.** The WASH sector affects PSWC services and vice versa:

- i. **Poor solid waste management adversely affects WASH and the function of critical basic infrastructure:** “drainage, solid waste and sewage need to be together. If not, you cannot be successful” (Yarngo and Weeks meeting September 29, 2016). Without proper solid waste management, sewers get clogged. Then during rains, waste and sewage enter the storm water drainage and pollute the environment, or the entire system becomes dysfunctional so that flooding carries solid waste and sewage into homes located in low-lying areas.
- ii. **Poor availability, affordability, safety, and accessibility of toilet facilities mean that some clients dispose of feces in their household waste** (Mulbah meeting September 23, 2016). This is a big problem because many houses do not have toilets and at night people do not want to go to community facility. The number of households putting feces in their waste

<sup>21</sup> Secondary collection is contracted by the MCC, and undertaken by operators under the World Bank’s EMUS project and other private companies, some of which are small and medium-size enterprises (Krah, meeting September 23, 2016).

<sup>22</sup> It appears that once the LGA is passed, Local governments will have greater responsibilities in waste management. However, support must be put in place to ensure they have the capacity to act on this.

bucket has reduced, but still about 15 percent of clients do this (estimate from Tarplah meeting September 28, 2016). This is also related to the education level of the community, with residents not understanding the difference between the types of waste (Moore meeting September 28, 2016). Thus, clients may get angry if workers refuse to take waste containing feces and may opt out of PSWC (Moore meeting September 28, 2016). The field mission also observed open defecation on the beach in West Point.

- iii. **Lastly, the IMPAC project design did not include special measures for dealing with infectious or hazardous waste.** Thus, such components are likely to continue to be found in the primary solid waste stream, as was the case during Ebola. This is because small pharmacies and medical centers tend to be considered small business and are thus potential clients of CBEs. Furthermore, some households pursue self-medication and then dispose of syringes and needles in their household waste (Ammons meeting September 29, 2016).<sup>23</sup> The MCC has already recognized the “need for urgent steps to address medical and infectious waste for the safety of CBE waste collectors because of the continued likelihood of their presence in the PSWC services delivery chain of the MCC” (Monrovia City Corporation 2015c). A proposal for a medical waste collection system was allegedly developed during the Ebola outbreak, but since Liberia has been declared Ebola free, it seems that the sense of urgency has also dissipated.

**In summary, the current combination of issues on both the demand and supply sides poses significant threats to the sustainability of municipal waste management.** On the one hand, the lack of enforcement mechanisms (“stick”) and the lack of continuous awareness activities (“carrot”) undermine service subscription and fee payments on the demand side. It also makes it challenging for CBEs to raise enough revenue to pay the MCC fee regularly and on time. However, recent experience is encouraging: it is possible to fine households and small businesses for littering, albeit not for delinquent payment (Caine meeting September 28, 2016). Using this lever, PCC has threatened to fine local households and businesses without PSWC receipts for any litter at their doorstep (Kolubah meeting September 29, 2016; Kendamah meeting September 29, 2016), resulting in increased demand for service subscription. In addition, compulsory fees may be a suitable strategy to improve service delivery in flooded neighborhoods or where households dump waste to claim land. If fees are to be paid in any case, then it is probable that households use the service, available at no additional cost, rather than dumping their waste locally. On the other hand, the supply side suffers from poor integration with secondary collections. Insufficient capacity and irregular clearing of skip buckets frequently cause overflows, which again undermine service subscription and fee collections. Insufficient capacity of skip buckets originally led to the target of servicing (only) 60 percent of households; thus, the capacity should be expanded. This may possibly happen through additional buckets, which would aid in reducing the distance to households served, then eventually reducing PSWC cost. Such strategies are discussed in the next section.

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<sup>23</sup> In addition, medical units may dispose of their waste in skip buckets, albeit they are not allowed to do so, as it reportedly happened during the Ebola crisis (Dunbar meeting September 24, 2016).

# PART IV

## Conclusions and Considerations for the Way Forward

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“We developed a model that works. Through this model, we have been able to make Monrovia cleaner. People have greater understanding of waste management. There are lots of people who appreciate the work of CBEs.”

Yondeh Moore, Monrovia City Corporation

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**Although IMPAC was a project with funding limited to four years only, it resulted in a new and improved model for municipal solid waste management (SWM) for Monrovia.**

In particular, IMPAC established structures and implemented processes that resulted in a new and improved system for municipal SWM in greater Monrovia, which have continued to operate since project funding ceased in mid-2015. This final part of the report is concerned with identifying forward-looking lessons from the IMPAC project, particularly focusing on how to structure city-community partnerships and how to leverage existing partnerships for larger impact. These considerations should not be confused with recommendations, but rather they are suggested for further multi-stakeholder discussions and participatory explorations. The section is divided into four sub-sections:

- i. What exists that one can build on?
- ii. How can the current model be strengthened?
- iii. How can the current model be expanded?

- iv. How can participatory municipal governance be improved?

**Any strategy for the way forward should consider multiple alternative, as well as complementary, strategies.** A one-size-fits-all approach should be avoided. For example, potential strategies should not be based solely on those CBEs that are successful, rather, the strategies need to consider the situation as a whole. In some instances, it may be most appropriate to take an individual approach and allow CBEs to strengthen their business and to possibly expand at their own pace and along the pathway most suitable given their respective strengths, weaknesses, opportunities, or challenges. In this regard, communities also differ along a number of factors: socio-economic status, education level, ability and willingness to pay, topography, housing density, and accessibility. Furthermore, policy options should be explored carefully (for example, through pilot projects) so their feasibility can be tested and changes can be made as required.

## INTRODUCTION: CITY-COMMUNITY PARTNERSHIPS AS BUILDING BLOCKS FOR SUCCESS

### CBEs are Effective Vehicles for Service Delivery, Because of their Support from City Governments and Communities

**The CBE model has proven successful for providing primary solid waste collection (PSWC) services.** CBEs have enabled door-to-door PSWC services to be provided in a situation where the municipality could not otherwise afford to provide it. For example, in Paynesville, the only collection service provided by the municipality is collection from three holding points, where residents can dump their rubbish and have it collected by the PCC three times per week. The field research identified a general opinion from MCC and Liberian government employees that, despite challenges, the CBE model for primary collections is working. In particular, the IMPAC project demonstrated that even the poor can pay for service (Doryen meeting September 26, 2016).<sup>24</sup> Prior to the introduction of this model, no system of primary collection existed and communities were very dirty (Stubblefield meeting September 29, 2016). Slowly, but surely, people have become used to “intelligent living,” that is, they are proud to pay for their waste to be taken away and are willing to continue to do so (Doyah meeting September 26, 2016).

**CBEs are also a potential model for providing other basic services.** CBEs operating on a market basis have proven effective, particularly, but not exclusively, in primary solid waste collections. Market forces have propelled CBEs to go out of business or merge with more successful ones, which has helped to build the best, albeit imperfect, primary waste collection system that Liberia has enjoyed in recent times. Experience also shows that public toilets are managed better when operated privately (using CBEs or similar) rather than when they are turned over to the community. Mr. Hill, the Environmental Inspector for the PCC, reports that in Paynesville, approximately 75 percent of the private toilets, but only 5 percent of community-run toilets, are in good condition (Meeting September 29, 2016). When asked what should be done to improve the management of community toilets, Mr. Hill responded that the community leaders should not be involved in the management; instead the toilets should be run as a commercial business. Others, such as Weeks, Smith,

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Public-private Partnerships are “a good model to address financial resource gaps in municipal budget for basic municipal services delivery.”

Monrovia City Corporation

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and Okao, echoed this view during the field mission. In fact, both UNICEF and Oxfam have ceased the practice of turning over latrines to the community with “symbolic management” and now only hand over to CBEs who run it as a business. In the case of Oxfam-built facilities (latrines and water points), the WASH Committee who reports to the MCC holds the CBEs accountable (Okao meeting September 30, 2016). WASH committees are already established at community level and are responsible for community sensitization on hygiene practices (Okao meeting September 30, 2016).

### CBEs Empower Communities, and Communities Empower CBEs: Within the Larger City-Community Partnership Framework

**It is important to use the workforce from the local community for building both successful communities and CBEs.** Local employment provides community households with the opportunity to earn an income, while keeping the money in the community. In addition, community workers build trust and create a sense of community ownership. Lastly, hiring local laborers, instead of bringing in people from outside the community, respects the tribal situation. In this regard, Mayor Mvogo cited another important example of how using local workers could increase project acceptance: local workers in Brewerville built housing for the West Point people who lost their homes after the sea erosion; in turn, the people from West Point were welcomed, as they brought the jobs for building the new houses (Meeting September 27, 2016).

**The employment of local people directly supports socioeconomic development.** Even with technological support, such as tricycles, providing PSWC services remains a labor-intensive service, and therefore provides a significant number of jobs. Importantly, many of these jobs went to workers who were unskilled or from vulnerable groups (women, old people, youth, or mentally disabled) who would otherwise have limited employment

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<sup>24</sup> ILO and World Bank projects preceding the IMPAC project were established in more affluent communities.

opportunities. In 2015, there were a total of 26 CBEs in Monrovia “providing jobs to 700 waste collectors who previously had no [or no regular] income. Income earned by these 700 collectors support up to 7,000 household members” (Monrovia City Corporation 2015b, p. 5). The CBE model has already been recognized as “an example of an innovative pro-poor approach to community economic development that is scalable and replicable in Liberia” (Monrovia City Corporation 2015b, p. 5). It is, therefore, possible to link CBEs to the Agenda for Transformation (AfT) and use them to promote inclusive growth, particularly for the urban poor and other vulnerable groups (Deputy Minister for Urban Affairs, Mr. Neufville Sr. meeting September 26, 2016).

**The role of women in the IMPAC project, and conversely the role of the IMPAC project in the lives of women, was generally recognized as being positive.** Anecdotal evidence collected from stakeholders interviewed during the field mission suggests that when women earn an income and contribute financially to the household, they play a greater role in family decision-making regarding expenditure (for example see page 51 Meet Mrs. Martha Ponpon, General Manager of United Group of CBEs, West Point.) Having women more active in family decision-making does not appear to contribute to domestic conflict. In addition, such mechanisms as the revolving fund, which allow workers to make substantial one-off investments, is believed to be particularly important in enabling single mothers to provide for their children. From the perspective of some CBE managers, female waste collectors are held in high regard and are considered hard workers, always punctual, and more dedicated because they need to feed their children.

**Further, mobilized and empowered community leadership plays a critical role in making city-community partnerships work.** Mr. Tarplah (Meeting September 28, 2016) argues that IMPAC CMTs are unique in that they not only mediate waste-related conflicts, but also other community and household issues, thanks to the training received in negotiation and conflict management.<sup>25</sup> The community respects CMTs and actively seek out their assistance. Moreover, local governments recognize the important role that CMTs play, although greater support is required from local governments, because of lack of resources, rather than opposition to the CMTs’ work. It might be said that because of limited resources that CMTs play such a crucial role in linking CBEs, the community, and local governments. Moreover, capable community leaders

that are truly accountable to their constituencies provide an entry point for leveraging other development interventions. As noted by one of its peer educators, “some of them [NGOs] are not real, they just get funds, but they don’t do anything. (...) [In contrast] YMCA is successful because the organization works through local leadership” (Josiah meeting September 27, 2016). In this regard, not only the federation of CMTs, but also other federation models of communities, such as those promoted by YMCA/SDI and NAPETUL/StreetNet International/WIEGO, may serve as a reference for further exploration (Herrle, Ley, and Fokdal 2015).

**Lastly, government, particularly local government, plays a critical role in making the partnership work.** Thus, local governments needs to be empowered to work effectively work with communities in general, as well as with CBEs and CMTs. The need for capacity development encompasses multiple areas: monitoring and training of CBEs; negotiation and mediation of contracts and conflicts; issuance of effective legal frameworks, including up-to-date city ordinances, metropolitan governance across multiple local governments, cross-sector collaboration between departments; and revenue sharing between different tiers of government (compare with service-related land value/property taxes) (see sections on resource mobilization and building on CMT model).

**The motivation for working in the waste management sector is frequently greater than just having a job or running a business.** CBE managers want not only to help keep the community clean, but also give people jobs and help these people put food on the table. Despite the low-status associated with waste collection, waste collectors understand the importance of the job. According to James Patmore (Meeting September 28, 2016) at the Environmental Sanitation CBE: “You cannot live in an environment that is very dirty. Somebody has to do this job. It’s an important job. We want to make the community better. We don’t get paid much, but we love the job. If we don’t love it, we don’t do it.”

## Health and Environment

**Health outcomes have improved since the introduction of IMPAC,** as anecdotal evidence suggests. Mr. Tarplah, CMT Coordinator and nurse, states that in Gardnersville, diarrhea used to be a major problem, but since the introduction of IMPAC it has almost stopped and no longer appears in the health survey. He attributes this to the decrease in

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<sup>25</sup> In contrast, new CMTs set up for management of toilet facilities did not receive such training and are reportedly not consulted on other issues (Tarplah meeting September 28, 2016). However, alternative explanations exist: for example, the special role IMPAC CMTs play may be because they were the first in the community, so they have established relationships and credibility. Or any potentially more comprehensive role of other CMTs is not yet fully understood.

the number of flies in IMPAC communities (Meeting September 28, 2016).<sup>26</sup> The United Group of CBEs similarly claimed that one year after IMPAC was introduced there was a decrease in dysentery and cholera. A number of people also commented on the reduction in the number of mosquitoes because water is less polluted from illegally dumped waste. This is unlikely to impact the number of malaria cases, however, as malaria-carrying mosquitoes prefer clean water. It is possible that a reduction in illegally dumped waste improves drainage, thereby reducing stagnant water. IMPAC has also helped improve air quality: many people used to burn rubbish (including feces) during the dry season, polluting the air with smoke (Tarplah meeting September 28, 2016), which earlier contributed to respiratory diseases.

**CBEs have already proved instrumental during a public health emergency response.**

As described in Part II, the efforts of IMPAC project partners during the Ebola crisis have helped to strengthen the public health system, presumably not only over the short term, but also the long-term. Capacity building of the workforce has certainly taken place: a capable workforce able to respond on-demand to emergencies is a strong asset to the public health system. Oxfam has recognized the important role CBEs played during the Ebola crisis and the potential to build on this further by using them to reduce the prevalence of other diseases in the community (Okao meeting September 30, 2016). Keep the environment clean helps prevent the spread of many diseases and CBEs work with PSWC services and management of latrines contributes to these efforts. In particular, Ms. Okao (meeting September 30, 2016) from Oxfam believes that if CBEs are strengthened they can play an important role in supporting behavior change in the community, such as using clean water for cooking and drinking, which will positively affect the health of the community and the CBE's business.

## STRENGTHENING CBES

Recognizing the success of CBEs, the NSWMP has been drafted and is currently waiting sign-off. However, which body will take ownership of the policy is yet to be resolved between the MCC and the Ministry of Internal Affairs. Mr. Krah has suggested that the policy will address some of the issues discussed below. For example, the policy

formulation process showed that the Ministry of Internal Affairs recognizes CBEs, with the ministry championing the formulation of the policy, which acknowledges the public-private partnership model in solid waste management. This in turn links to the draft Local Government Act (LGA), which gives local governments' responsibility for SWM (Krah Meeting September 23, 2016).

## Improving CBE's Access to Finance

**Limited access to capital is a significant obstacle for CBEs in their ongoing operations in PSWC, as well as for future expansion.**

Without access to formal lending channels, CBEs currently rely on informal channels, which for many is cost prohibitive and therefore limits their growth and sustainability (Monrovia City Corporation 2015c). Access to credit has been integral to the success of the OCEANS CBE. This CBE made use of personal connections to obtain microcredit with good loan terms (period and interest) and then invested in the expansion of the company. In fact, the CBE used the loans to pay its workers their first two months of salary following expansion into Paynesville (Kendamah meeting September 29, 2016). In addition to financing salaries, CBEs also require access to credit on favorable terms for investing in equipment. There are a number of ways access to credit could be improved:

- i. **One-off grant.** This is probably the easiest short-term option; however, it may encourage CBEs to rely on external support and does not contribute to strengthening the CBEs' sustainability.<sup>27</sup>
- ii. **Revolving seed funding.** This option requires repayment, albeit possibly with favorable conditions. It could be coupled with one-on-one assistance in financial management to help ensure the loan is repaid and to build experience.
- iii. **Regular microenterprise/small and medium enterprise credit.** This option requires CBEs to prove themselves creditworthy to the financial market. Official recognition of CBEs would be beneficial and, if borrowing with banks, may even be required. In contrast, if the CBE is borrowing microenterprise loans with microfinance institutions, this will probably not be required. CBEs will need to prove a sustainable business model, especially with this model: see below.

<sup>26</sup> Author asked to obtain a copy of the health survey, but have not received it.

<sup>27</sup> At the same time, channels for accessing grants need to be improved. For example, it was reported that UNOPS processes are very formal and often slow, killing project momentum. To be credible with the community, processing needs to be smooth and timely, with a simpler way for the community to access funds and be accountable for them.

## MEET MRS. MARTHA PONPON, GENERAL MANAGER OF UNITED GROUP OF CBES, WEST POINT

When Ebola hit Monrovia in 2014, Mrs. Martha Ponpon (who asked to be called “Martha”), was employing 12 workers who were collecting waste from around 540 households in West Point, Monrovia’s largest slum.

Because of the high density and narrow laneways in the township, waste collectors used wheelbarrows to collect waste from individual households subscribing to the service. In each area, two waste collectors would then transfer the waste from their wheelbarrows to a tricycle. The tricycle operator would then take the waste to the skip bucket where it would be collected by a secondary waste collector’s truck.

### The arrival of Ebola

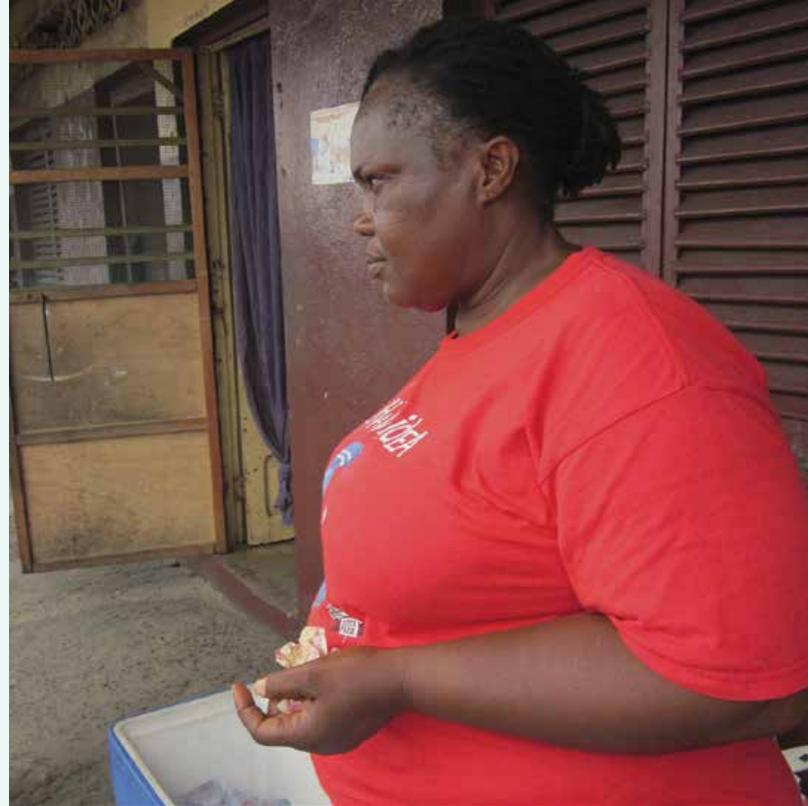
“I noticed when Ebola first reached West Point and I was able to inform the township commissioner,” Martha recalls. “Because of garbage collection, I was always in the community, in between houses. I knew information and saw symptoms first hand, even of people who were hiding.”

As the outbreak worsened, Martha and her workers continued to keep an eye out for the main signs and symptoms of Ebola, such as vomiting, fever and diarrhea, as they went on their daily waste collection rounds. They reported suspected new infections and deaths from Ebola to the Ebola Treatment Unit (ETU) and the ETU’s field workers. This work was done in secret, as the community did not like the idea of reporting, and families often resisted having their loved ones taken away.

### Training and protection

According to Martha, she received training by the MCC “after the situation had become intense.” As with other CBE managers, Martha was invited to attend a training-of-trainers course at City Hall, where she learnt about the proper prevention measures she and her waste collectors should be following, and awareness messages they should be spreading in the community regarding waste disposal.

Following the training, Martha could educate her workers on the extra precautions needed in handling potentially contaminated household waste. In addition, she provided them with the required protective clothing including boots, gloves, nose-masks, and long-sleeved shirts. Some of the clothing had been provided through the MCC, but quantities were insufficient so that the CBE needed to purchase supplement equipment, especially such consumables as gloves. In addition, following the training Martha understood the importance of skin not coming into contact with contaminated material so that long-sleeved shirts were



Mrs. Martha Ponpon selling water



Narrow laneways of West Point

purchased through Martha’s own initiative. Long-sleeves were widely recommended during Ebola to avoid skin contact. While the shirts were presumably made from regular cotton and thus unlikely to offer 100 percent protection, they were much better than having bare arms where the skin comes into direct contact. Martha explains, “Normally the waste collectors don’t like wearing gloves, but during Ebola, thanks to the training they understood the importance of doing so.”

Likewise, households were told the importance of not touching material that might be contaminated, particularly clothing worn by an infected person, which may be dirtied with vomit or other body fluids. They were instructed to take a plastic bag, put it over their hand, pick up the clothing inside the plastic bag, and then tie the bag in a knot. Waste collectors were, in turn, told that they should not open plastic bags, nor pick up clothing, if it was loose. During the Ebola crisis, all waste was sprayed with disinfectant when transferring from the wheelbarrow to the tricycle. Furthermore, the bags used to collect the waste in the tricycle were replaced daily (instead of exchanging torn or damaged bags periodically).



Skip bucket just before the entrance to West Point.

## Continuing invaluable public services at the time of quarantine

In August, all West Point Township was placed under quarantine for almost two weeks, following the looting of the local Ebola Treatment Unit (ETU). Martha understood the importance of carrying on primary solid waste collection (PSWC) during this period: "Due to my personal connections to soldiers enforcing the quarantine, I was allowed to deliver the collected household waste to the skip bucket located just at the entrance to West Point just outside the quarantined area."

The quarantine resulted in many people losing access to their income sources, such as vending in the city's largest market area, which is located adjacent to West Point. Therefore, the

United Group of CBEs decided to "provide the primary waste collection service for free to the community to protect the health of the community and keep our clients. People had no way to pay." This meant that staff also agreed to work free of charge during this period of social and economic hardship. According to Martha, "The loss of salary was made easier because food was donated during the quarantine."

## Challenges faced today

More recently, Martha's CBE has faced yet another challenge: sea erosion has been an increasing threat to the West Point community and, earlier this year, many homes were swept away. Thus, the CBE lost many of its clients: in addition to the reduction in the number of households because of displacement, others have started dumping their waste into the ocean to reclaim or stabilize the land. Martha estimates that sea erosion, cost her approximately 60 percent of her client base, resulting in her laying off three staff members. Martha's husband Andy explains, "This has been hard for the CBE leadership, as we are motivated not only by keeping our community clean, but also by providing local jobs, helping someone to put food on the table."

## Additional benefits from being a CBE worker

As evidence of their commitment to improve livelihoods through PSWC, the CBE established a revolving fund prior to Ebola. Every month, each of the 12 workers contributed LRD 1,500 (\$17) from their salary (between LRD 3,500 and 6,000) into the fund, and one person at a time took the full sum. This amount of LRD 16,500 (\$183) is quite substantial, as the rotating savings scheme transferred approximately five monthly salaries to one of the CBE workers every month. It helped staff to make significant investments in their home or side business.

Martha and Andy recount numerous stories of locals, who through their employment with the CBE have been able to significantly improve their situation. According to Andy, "One lady had to move with her children to a friend's place after her husband left her. She then got a job as a waste collector with our CBE, starting on a monthly salary of LRD 3,500 (\$39). As she was such a hard worker—committed, never missing a working day even when it was raining, and recruiting clients when she was out collecting—we quickly increased her salary to LRD 4,500 (\$50). Within six months, she could rent and furnish her own place. Hearing of her success, her husband returned and asked to be taken back!" Another female worker, Martha recalls, "was able to start a small street vending business, which she is able to work on after she has completed her PSWC duties in the morning."

## The future

Martha has realized that to be sustainable in the long term, the CBE needs to expand its activities. The CBE is currently doing some collection and re-selling of recyclables as part of the EU Water Project, which is proving to be quite profitable. Interviews with an MCC technical expert suggest, that this re-selling may increase the CBEs net income by approximately 20 percent, while providing a valuable environmental service.



Attempting to reclaim land from the sea using rubbish.



Andy pointing out one of the recycling bins at a small business.

**The National CBE Association may be empowered as a financial intermediary.**

Financial institutions could provide finance to individual CBEs through the National CBE Association, which will in turn “handle the issues of the individual member entities by acting as their peer solidarity and monitoring mechanism” (Monrovia City Corporation 2015c). Using social collateral is a common practice in microcredit. The Association has the best knowledge for judging which CBE should be funded for which project. At the same time, the Association would also be able to decide upon appropriate penalties or debt relief mechanisms, if any individual CBE fell into arrears or defaults. For example, the Association may be empowered to exercise these functions through a capital grant so that it can “serve as a guaranty fund with a local bank for credit enhancement of individual CBEs wishing to acquire loans from banking and micro finance institutions for cost of waste collection equipment acquisition and replacement.” (Monrovia City Corporation 2015c). If so, the model would require the setting up of a transparent and accountable system. Community-based labor movements can easily get destroyed or captured, if concessional external resources are made available (Nohn 2012). Therefore, a technical service provider may support the system and its development to serve as a complement to CBEs, responsible for monitoring funds and making sure they are used in accordance with regulations. The provider may either be MCC (as under IMPAC) or another organization, similar to the tandems of one federation and one support NGO in the SDI model (Tandon, Bandyopadhyay, Nazneen, and Nohn 2010).

**CBEs need a viable business model with a reliable revenue stream first, regardless of which option is considered.** Improving payment rates and expanding subscriptions is required to have a reliable revenue stream. These issues are discussed in the following subsection.

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“I hope government will have the courage to establish a regulation and eventually a law for everyone to [subscribe to and] pay [for PSWC].”

Eugene Caine, Ministry of Public Works

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## Resource Mobilization for Effective Service Delivery

**Improving payment rates is important, because waste collection is an expensive business.** Therefore, as stakeholder groups mentioned during the field mission, an appropriate mechanism to enforce payment needs to be identified for the long-term sustainability of the service. Various strategies to increase payment rates were discussed with CBEs, including a CBE that has successfully registered as an SME, during the field research:

- i. **Strengthening CMTs** to mediate conflicts, *inter alia* requiring training on negotiation and mediation, a sustainable funding model to cover their expenditures and, possibly, training in financial intermediation and book keeping; see “Improving Participatory Municipal Governance” below.
- ii. **Community meetings** would provide households with an opportunity to explain why they are not paying and CBEs with an opportunity to educate them on the importance of on-time payment. During meetings, the community may also decide that a household is defaulting on its payment obligation for “good reason,” such as an emergency. Moreover, this discussion highlights the need for some solidarity mechanism, particularly in case of compulsory payments.<sup>28</sup>

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<sup>28</sup> Similarly, shaming was discussed as an option. Its acceptability varies among CBEs. While it was generally agreed that this tactic would result in payment, it was feared that because of the resulting stigma it may act as a disincentive to join the program. In case of compulsory subscriptions, shaming should be used only, if at all, after careful consideration has been given to the reasons why a household does not pay. Poor households should not be further stigmatized, if they simply have no way to pay their dues because of their level of poverty or vulnerability.

- iii. **Assistance from local governments** (for example, Township Commissioner or City Corporation Department Head) may be useful when negotiation efforts through CMTs are not successful. Imposing a fee for late payment may be considered as an option of last resort, if deemed socially appropriate.<sup>29</sup> This was not possible under the IMPAC project and it would most likely require an ordinance to enforce this. Multiple stakeholders, particularly YMCA/SDI and StreetNet International, expressed their concern that any compulsory measures need to be socially inclusive: for example, if households are unable to pay due to poverty, they should not be fined.

**As long as subscription remains voluntary and seemingly free “alternatives” remain available, 100 percent coverage will not be achieved.** Thus, there is widespread support for compulsory services: nobody should be able to opt out of a critical service, the lack of which has severe adverse effects (negative externalities) on society. CBEs claim that they have been advocating for compulsory subscription for years (for example, Ammons meeting September 29, 2016). During the field mission, it was mentioned that some work on drafting a code stipulating that payments are mandatory had already been undertaken; however, progress on this is unclear.

*CBEs specifically want that payments be made compulsory, even if fees are kept minimal. This is because “it takes money to make garbage. Thus, people need to pay. If you use money to make waste, you must have money to pay for the waste.” Nana believes that awareness-raising activities are only successful in the short term, and that when they stop, participation declines again. Therefore, a legal system is important not only because it will ensure that existing clients pay, but also because it will make it compulsory for all households to subscribe.*

Nana Ammons, General Manager of Public Allies CBE

**Compulsory subscription to PSWC services may be considered to enhance long-term financial sustainability.** Having compulsory subscription takes the waste management system one step further, beyond the monitoring of (voluntary) subscriptions to improve payment rates, as discussed above. Financial sustainability and universal coverage may be argued to be one (albeit not sufficient) condition for building a truly effective waste management system. While the positive impact of improved payment rates is obvious, universal subscription and coverage is similarly important because the potential to reduce per unit cost through agglomeration economies. For example, more customers would reduce per-unit overhead cost, thus producing economies of scale. Servicing more clients within the same neighborhood would reduce service length per household served, thus resulting in economies of density, such as decreases in gasoline and salaries per household. Arguably, lower per-unit costs are also critical to incorporating recycling and composting successfully. However, compulsory subscriptions still need to guarantee (i) the quality of the service and (ii) social inclusion.

**In addition, pay-as-you-go models appear not to be effective in sustaining desired behavior change.** Oxfam has found that such models—which are by default voluntary—provides an incentive to use the service less frequently to save money (for example, open defecation instead of use of sanitation facilities or consumption of alternative water sources, rather than clean drinking water). Such behavior may not only expose the individual to additional risk, it may also impose negative externalities on communities and society at large (for example, if a sick person seeks to avoid payment for frequent toilet use during diarrhea). In contrast, when the community is involved in determining a monthly fee that is payable by every household, behavior change was found to be more positive and management had a stronger sense of responsibility to the community.

**Resource mobilization may either occur directly (top-down) or through communities (bottom-up).** Moreover, the payment collection method is an important factor that needs to be considered as part of the decision to make

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<sup>29</sup> It is believed that this method would be successful (as in Paynesville) as Liberians don't like to get fined, understanding correctly that it is better to pay for a service than to waste money on a fine. It would be necessary to define a strict sequence of events, for example: (i) first warning and extended period to pay; (ii) small fine; (iii) and finally larger fine. The fine could be set as a fixed percentage of the subscription fee or as a multiple of the fee. Decisions would also need to be made regarding who enforces and collects the fee for delinquent payment. As an alternative to government, communities (for example, led by CMTs) could be empowered to do this. It would also be necessary to determine who receives the penalty: the CBE, local authority, or MCC?

subscription compulsory. As a lack of clarity about the best approach persists, it would be prudent if the institutional framework leaves room for different mechanisms to be explored, possibly simultaneously and tailored to the specificities of different communities, including the option to expand the role of CMTs and to empower them fiscally (see section on improving participatory municipal governance).<sup>30</sup> Successful approaches may be replicated.

- i. **Revenues could be collected top down to minimize collection costs.** This may happen through a surcharge on other taxes or service fees, such as the sewerage tax, property tax, or mobile phone charges (Mulbah September 23, 2016). Attaching fees to the billing for another service is also proposed in the draft NSWMP (Republic of Liberia 2015). However, there is no tax or charge that everyone everywhere pays. The system is very fragmented and locally specific (Flomo meeting September 28, 2016). In addition, there are concerns that government lacks the capacity to effectively collect taxes (Caine meeting September 28, 2016): for example, if payments are directly to the Ministry of Finance, there are concerns that the money will not make its way back to the MCC and CBEs for waste collection (Cole meeting September 29, 2016). Lastly, any piggybacking on other revenue streams (in the form of a fixed multiplier, for example, percentage surcharge on property taxes) would hardly produce the advantage of a place-based levy, based on the scope and level of service provision.
- ii. **In contrast, lessons learnt from the success of CBEs and the respective city-community partnerships show the merits of collecting revenues bottom-up through communities, directly linked to local service provision.** Considering the principle of subsidiarity, communities (possibly with leadership and facilitation by CMTs) may collect the revenues and pass on a share, thereof, similar to the current CBE model paying a contractual fee of 5 percent of projected revenues to the MCC. However, many CBEs would prefer to collect and pass on the fee to MCC themselves, as is the current situation, thereby retaining the highest level of control over fees. However, they would

still need support from CMTs and local governments for enforcement. Alternatively, the government could collect this payment (see section on building on CMT model).

**Lastly, social inclusion in case of compulsory subscriptions also needs to be guaranteed.**

This question has generated much debate (for example, SDI feedback on the draft final report). If service subscription and, implicitly, fee payments are made compulsory, this may lead to exclusion or stigmatization of the poorest households within one community or of entire poor communities that are less attractive to serve. This would contradict the purpose of the IMPAC project, which was designed to bring PSWC, an essential service, to the urban poor. In this regard, some considerations for socioeconomic inclusion are highlighted:

- i. **The current draft NSWMP supports the move to universal coverage,** by including as a policy goal, that SWM services should be affordable and accessible to all (Republic of Liberia 2015). The draft policy recognizes the importance of obtaining the right balance between implementing appropriate cost recovery mechanisms for the financial stability of SWM entities and ensuring that tariffs are affordable. Specifically, the draft policy advocates that tariffs should be determined based on ability to pay for service and the amount of waste removed (Republic of Liberia 2015).
- ii. **Vrins (2013a) suggested standard fees based on household expenditure classification.** Such a mechanism applied at the individual household level prices the same service within one community differently for households of different economic status. As slums and other substandard areas are heterogeneous, the approach effectively cross-subsidizes service provision within each community (as well as possibly between more affluent and poorer communities, depending on how fees are redistributed). This approach would be a prudent measure, because it is a type of solidarity mechanism and such institutions as the YMCA, SDI, and StreetNet International highlighted the need for such a social approach. Moreover, the measure internalizes the potential negative externalities that would arise from the exclusion of the poorest households,

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<sup>30</sup> Another consideration concerns the payment mechanism: it would be possible to write a law to make a tax compulsory, but not payment to a private company.

Table 3: Calculated Monthly Fee Amount per Household Living Expenditure Category

Category	Monthly expenditures for living (LRD)	Monthly fee amount (LRD)
Higher living expenditures category (5)	More than 50,000	750
Medium-higher living expenditures category (4)	From 30,000 to 50,000	300
Medium-lower living expenditures category (3)	From 10,000 to 30,000	120
Low living expenditures category (2)	From 5,000 to 10,000	80
Minimum living expenditures category (1)	From 0 to 5,000	40

(Source: Monrovia City Corporation 2014, p. 18)

assuming that their lack of access to PSWC would increase the amount of waste littered in the neighborhood, which would increase the health risk to all community members, including those with subscriptions and paying respective fees. The costs associated with ill health provide an economic justification beyond solidarity. A Household Expenditures Survey was already conducted in late 2013/early 2014 to establish household categories based on socioeconomic level. This was then used to calculate fixed-fee payments per category, where the monthly financial contribution is set at no more than 2.5 percent of monthly living expenditure (Monrovia City Corporation 2014). Based on the results of the survey, five categories were determined (Table 3). The fee structure allows for even lower monthly fees than are usually available under the current model, where fees are frequently negotiated individually between households and the CBE. Despite this, because of higher fees for more affluent households coupled with the target of 100 percent subscription, it was calculated that CBE revenue would still increase overall (Monrovia City Corporation 2014).

- iii. Communities should be involved in working out the details of compulsory subscription, in particular regarding options for including safety nets and linkages to savings groups to ensure that the poorest of the poor are not further disadvantaged or excluded.

- iv. Lastly, as illustrated earlier in this report, differentiated pricing tactics are practiced by CBEs in an effort to maximize coverage and fee collections, as well as to promote solidarity. These practices provide a great starting point for designing, testing, and upscaling effective and fair, community-based pricing and monitoring mechanisms.

**The service quality of compulsory subscriptions needs to be guaranteed.** This is an issue because once all households are obligated to pay a fee, the incentive for the provider to deliver an adequate service may deteriorate. Thus, if fees become compulsory, it will be imperative to monitor service quality more closely. In addition, the system should promote competition between CBEs so that communities have options to contract another CBE if the quality is poor or the same service is offered at a lower price. “Otherwise this is the worst form of a monopoly because people are forced to pay irrespective of the quality of the service provided.” One option might be to enable households at the block or community level to determine periodically whether to renew the service agreement with the current CBE or to purchase the service from a different, possibly more competent and more economical CBE (Caine meeting September 28, 2016). Again, this raises questions about further developing the technical and managerial capacity of CBEs, as well as CMTs, communities, and local governments monitoring them.

## MEET MRS. NANA AMMONS, GENERAL MANAGER OF PUBLIC ALLIES CBE

### Day-to-day operations

In the beginning, Mrs. Nana Ammons (who asks to be called “Nana”) recalls that the CBE used to collect garbage every day. Now the CBE has reduced the frequency to three or four times per week because it was too cost-intensive to collect waste every day, but this has not had a detrimental effect.

As Nana explains: “The community is cleaner than before. We have sensitized our customers on how to package waste properly so that it can be stored for two days, and where to put it so that rain does not bother it.”

Nana is grateful to the Bill & Melinda Gates Foundation for initiating the IMPAC project, stating that: “It is because of his money that Liberia is cleaner and that Liberians have a sense of cleanliness. Before that, the city was very dirty, to tell you the truth. People are now empowered. The unskilled now have an income to take to their families.”



Ms. Nana Ammons

### Fee Payments

All households in Public Allies’ catchment area pay the same fee per week—LRD 50 (\$0.55)—however in some areas there is a pre-paid system where households pay monthly in advance. Small businesses pay LRD 300 (\$3.29) per month. This higher fee helps the CBE cover some of their operational costs.

As with other CBEs, Nana reports that it is often difficult to collect payment on time from customers. As there is no legal mechanism to enforce payment, the CBE must try and convince their clients to pay. “This is one of the reasons,” says Nana, “Why we introduced the prepayment system.” However, the prepayment system cannot be implemented everywhere. In poor communities, particularly those in swamp areas, the people don’t have the money to be able to pay for a whole month in advance. In fact, says Nana, “They can hardly pay on a weekly basis.”

Because of the difficulties associated with fee collection, Nana believes that a legal system needs to be put in place. She states that: “CBEs have been advocating this for many years. If the law would be in place it would be better for the communities, for the CBEs, even for the system.” According to Nana, what CBEs specifically want is that payments be made compulsory, even if fees are kept minimal. This is because “it takes money to make garbage. Thus, people need to pay. If you use money to make waste, you must have money to pay for the waste.” Nana believes that awareness-raising activities are only successful in the short term, and that when they stop, participation declines again. Therefore, a legal system is important not only because it will ensure that existing clients pay, but also because it will make it compulsory for all households to subscribe.

### During Ebola

During the Ebola outbreak, Nana reports that the major change was that collectors took more precautions when collecting waste: making sure they always wore protective gear such as gloves, boots, and masks; never opening garbage bags; and frequently washing their hands. Demonstrating the success of the precaution measures, Nana proudly states: “Nobody got sick. Nobody got injured. Nobody died.”

### The future

Nana has plans to grow her CBE into a small and medium enterprise. Even though “being a CBE in Liberia is very tough [and] sometimes you want to give it up” Nana continues her work because “you see how many people depend on you. Then I feel I can’t give up.” She has some hesitations about expanding into recycling at the present time, primarily regarding returns on investment and access to finance to purchase additional motorized equipment. However, she is optimistic about the future.

**In summary, it is highly recommended to consider strategies for making subscriptions compulsory in a socially inclusive way, which will produce a win-win situation for all stakeholders.**

- i. Communities will benefit from having a cleaner environment:** a range of health and environmental benefits result from proper waste management. Currently, even those households who subscribe do not benefit fully if their neighbors continue to dispose of waste inappropriately. Although all households will be required to financially contribute to the service, they will also benefit financially (for example, through less days off of work due to diarrheal disease)<sup>31</sup>—and differentiated pricing should ensure access by all households, including the poorest of the poor, while universal subscription may bring down unit-cost, thus permitting lower overall fees.
- ii. CBEs will benefit from improved business forecasting:** compulsory subscription not only means that CBEs' monthly income will be higher, but it will also be relatively stable, thus enabling them to make business plans that are more likely to be realized. This is especially important for supporting CBEs to make investments in their business, whether this is in terms of upskilling of staff or purchasing of equipment. Moreover, a sustainable revenue model is a precondition for access to capital funding.
- iii. CMTs will spend less time trying to convince households of the importance of proper waste management:** although CMTs will still need to follow up on late payments, this task will be made easier once appropriate mechanisms and procedures are in place to make payment mandatory. This will then enable CMTs to spend more time on other tasks, such as monitoring the performance of CBEs, to facilitate discussions around the differentiated pricing of fees, which are oriented in expenditure classes. These are not necessarily apparent and critical so that communities agree on who pays what.

- iv. Lastly, local governments will enjoy two advantages simultaneously:** they will have greater financial resources and will need to provide less support, particularly, in terms of community awareness). This situation would allow local governments to target assistance more specifically to business development, expansion, and sustainability as well as addressing other waste management issues, such as recycling, composting, and SSWC (including expansion in the number, distribution, and servicing of skip buckets).

## CBEs Supporting Themselves

**Successful self-training may create a peer-learning process, possibly under the auspices of the National Association of CBEs.**

Some CBEs, such as OCEANS CBE, are training themselves. Mr. Kendamah (Meeting September 29, 2016), the Operations Manager for the OCEANS CBE, stated that he still refers to notes and listens to cassette tapes from the IMPAC training. He ensures that supervisors are updated when management receives new training and produces brochures to pass on the knowledge. He invests in himself and his staff, sending them to training, for example, in procurement and finance. Quarterly workshops with the waste collectors are held to provide updates, discuss issues, and have refresher training, generally with a city representative, who the CBE pays to attend (Kendamah meeting September 29, 2016).<sup>32</sup> The same CBE has already taken expansion into its own hands. Despite having been established under ILO, the OCEANS CBE had access to the same training as IMPAC CBEs. Mr. Kendamah believes that all CBEs were equipped with the knowledge required for growing their business, but where some CBEs go wrong is failing to separate personal and business expenses (Meeting September 29, 2016).

## Support Required from Local Government

**The level of support required from the MCC depends to a large degree on the existing (technical) capacity and financial robustness of individual CBEs.** The latter in turn depends on whether mechanisms to increase payment rates are implemented, as discussed in the previous

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<sup>31</sup> A full economic analysis would be required to determine the exact financial benefits accruing to Liberian households from improved waste management.

<sup>32</sup> Note that Kendamah has a university degree in management—not finance, as he's quick to point out—but still higher level of education than many others.

section. It is, however, misleading to assume that payment issues are resolved, once the system is compulsory. Households, particularly poor and vulnerable ones, will frequently face situations that may reasonably cause them to fall into arrears or even default on payment completely. Example of this is when the main income earner gets sick, stripping the household of income, while potentially escalating expenditures. Thus, revenue mobilization will continue to be an issue requiring investment of time and resources, especially if delegated to communities, with the opportunity to deal with poverty and vulnerability on a case-by-case basis.

**Increasing public awareness of issues related to solid waste management is essential to create and support behavior change.** Public awareness is also crucial to the financial viability and sustainability of CBEs, with or without compulsory subscriptions. The willingness of community members to pay for the disposal of their solid waste would be low without an understanding of the negative externalities arising from improper waste disposal. Under the IMPAC project, the MCC's Community Services Department and the IMPAC Communications Section organized a range of awareness campaigns and activities, which were considered crucial to the voluntary participation of community members (Vrins 2013a). However, since the end of the IMPAC project most of these activities have ceased and the Community Services Department needs to be empowered (through training and increased finances) to be able to deliver effective awareness measures itself (Weah meeting September 29, 2016) or provide support when the measures are carried out by others (for example, CMTs). It is necessary for the MCC to ensure that these activities take place, as most CBEs do not have the capacity to deliver awareness campaigns at the required scale and frequency as occurred under IMPAC.

**Local governments need to better respond to issues raised by communities.** During the field mission, CBEs and CMTs expressed dissatisfaction that meetings with the MCC did not produce results. MCC should promptly deal with issues raised. By the time a CBE or CMT brings an issue to MCC, the CMT has already tried to resolve it, thus further delays by the MCC make the resolution process unnecessarily long. This may suggest an alternative solution: LAs may collaborate with CMTs more strongly in the field to solve issues before there is a need to escalate to the MCC (Krah meeting September 29, 2016). This, however, raises questions about the empowerment of CMTs, as discussed below. In addition, the forum platform to

be developed under the LCP is expected to improve the engagement of local governments and their responsiveness and accountability to communities (SDI comments on the draft report, email November 18, 2016; StreetNet International, interview November 30, 2016).

**Many CBEs also continue to need capacity development.** Previous training in record and financial management (in particular, reporting of revenue) provided to CBEs by the IMPAC team did result in improvements (Weah meeting September 29, 2016). Many stakeholders believe that further training in business management (including leadership and record keeping) is required, with on-the-job in-depth tutoring being an essential component. **Stakeholders were particularly strong in their recommendation that CBEs require strengthening prior to expansion.** Waste collectors at the Environmental Sanitation CBE also stated that they wanted more information about waste disposal, so that they can better educate the community. The community thinks waste workers do not know anything. Thus, CBEs want to have more information at their disposal to be able to convince existing and potential clients of the importance of proper waste management.

**Furthermore, CBEs require additional training on procurement.** This training is important to expand geographically (applying or competing for new service areas), vertically (such as competing for SSWC), and horizontally (for example, Expression of Interest for the operation of septic tanks; FISH Office of Procurement 2016)—along with strengthening the existing system. Any effective system, particularly one with compulsory fees, requires competition between CBEs, which thus need to be prepared to respond to procurement.

**Finally, local governments need to facilitate better integration of PSWC and SSWC.** The adverse effects of the underperforming SSWC system have already been described extensively. Thus, the skip bucket network needs to be expanded to have a higher capacity and timely and comprehensive collection from skip buckets need to be ensured. This situation raises larger questions of metropolitan governance for improved traffic flow, improved geographic distribution of transfer stations and garbage dumps, and sharing of expenditures and revenues across local governments within the metro region. The answers to these issues are far beyond the scope of this report, but it may not be possible to solve the solid waste-related health and environmental crises without addressing these issues.

## REPLICATING AND SCALING THE CBE MODEL

**The success of CBEs suggests that there needs to be geographic, vertical and horizontal expansion.** Multiple reasons exist for the expansion:

- v. Strengthening and improving the financial viability of CBEs.
- vi. Enabling service provision where financial resources are limited.
- vii. Supporting livelihoods of urban poor workers.
- viii. Aiding the building of resilient communities capable to quickly respond in emergency situations.
- ix. Stimulating environmental and health benefits in a wider geographic area. In addition to provision of services related to their core business, CBEs can help improve health outcomes by carrying out health promotion activities, which in turn can help strengthen their business. CBEs running water points, for example, could promote key public health messages, including the importance of consuming clean water. This would be good for their business and, even in a membership model, could allow them to increase their income through negotiating a higher monthly fee (Okao meeting September 30, 2016).

The following sections explore how expansion might occur. Any assessment should be made on a case-by-case basis, rather than taking one-size-fits-all approach.

**Service provision may be expanded through existing or new CBEs.** Existing CBEs may be supported to expand their capacity to manage a larger portfolio successfully. However, it is important to recognize that for some CBEs expansion (geographically or otherwise) may not be within their scope, unless they consolidate their business (comparing with training or mergers). It is more important to ensure that the CBEs manage the provision of PSWC services properly and sustainably, rather than stretching the services beyond their capabilities. Therefore, the need for expanding the scope and level of service delivery may also lead to the establishment of new CBEs that deliver different services or servicing different areas. This alternative may help to increase competition; however, it may lead to fragmentation and inability to enjoy economies of scale.

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“We cannot be static, we must grow. CBEs have to become adults.”

Alphonso Kamara, National Association of CBEs

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**There is a strong argument to focusing on CBEs that have successfully demonstrated their capacity to deliver PSWC, at least in geographic areas where they exist.** The expansion of a CBE’s responsibilities needs to be thought out carefully, as it could become a politically sensitive issue. This is particularly the case if shifting the responsibility for provision of a particular service (for example, street sweeping) from a public body to CBEs leads to a form of privatization.

**Sustainability needs to be a key focus of expansion plans.** If donor-funded projects and grants support expansion activities, then from the beginning there needs to be a sustainable implementation plan and a clear exit strategy (Okao meeting September 30, 2016). While this was the intention of the IMPAC project, a number of CBEs repeatedly called for additional funding and ongoing handholding during the author’s field mission. However, it is likely that this ongoing dependence on donors was exacerbated by the economic crisis inflicted by the Ebola crisis, as well as the issues related to fee payment, subscription, and SSWC.

### Geographic Expansion to Replicate the Success of CBEs in New Areas

**The CBE model should expand service provision to other communities within Greater Monrovia, and into other districts and counties.** Probably, geographic expansion will be more successful (and needed) in larger conurbations, as densities lead to stronger negative externalities in case of insanitary conditions and as urban divisions of labor support specialization. Vrins previously recommended that “the CBE model can and should be replicated, not only in Monrovia City, but in entire Greater Monrovia” (Vrins 2013a, p. 2). Expansion may involve the creation of new CBEs, as well as further consolidation of CBEs, with individual CBEs covering more communities. Such further expansion into Paynesville would be welcomed (in principle). According to Mr. Kpakolo, Director of City Planning at the PCC, this expansion would be useful, because the Monrovia-based CBEs are already involved in the process and do not need extra investments (Meeting September 29, 2016). Mr. Kolubah, Director of PCC’s Waste Management

Department, also supports the idea (Meeting September 29, 2016). UNICEF is also supporting the expansion of PSWC service delivery through the CBE model in communities situated in the Greater Monrovia that are not currently being served (Monrovia City Corporation 2015c).

**Successful examples for geographic expansion exist.** For example, the Organization for Clean Environment and Neighbourhood Services (OCEANS) CBE was established in 2007 by the ILO to operate in Mamba Point in Monrovia. In 2013 it recognized an opportunity to expand its services to Paynesville, as there was no effective waste collection service operating there and Mayor Gibson granted it a three-month trial period in one community. Following successful completion of the trial and responding to very high demand for services, the CBE was granted permission to operate in four communities and at the beginning of 2016, permission was increased to six. Although workers from Monrovia were used during the trial period, all waste collectors are now local. The CBEs also operates in Broadville (after taking over a non-IMPAC CBE), Virginia, and St Paul. The Operations Manager, Mr. Kendamah, has further plans for expansion, because he has recognized market potential (meeting September 29, 2016). A benefit of geographic expansion, which OCEANS CBE has capitalized on, is that affluent areas can be used to cross-subsidize poorer ones.

**Access to capital equipment would support CBEs in covering larger areas.** On numerous occasions during the field mission, CBEs stated their ambition to increase their use of motorized equipment. They want to do this because wheelbarrows get damaged easily and motorized equipment would enable CBEs to cover a wider area with less staff and making fewer individual trips to the skip buckets (Moore meeting September 28, 2016). OCEANS CBE reports that if they had more resources (specifically two more tricycles), they could easily expand further, responding to the very high demand for services in Paynesville. Additional funds could be used for a hire purchase agreement for tilt trucks. This would also be good for the MCC because currently it must pay for the cleaning of waste around the skip buckets, much of which is dumped there because collectors cannot lift the wheelbarrows to empty into the skip. Furthermore, the equipment used to clear this area digs a hole in the ground (Moore meeting September 28, 2016).

**However, a decision to use more motorized equipment would need to be weighed against the potential reduction in job creation.** Some stakeholders have lauded the IMPAC project's

reliance on a labor-intensive technology, which creates more job opportunities. However, others have highlighted the fact that wheelbarrows are heavy and often impractical (particularly regarding emptying into skip buckets) and they are difficult for older people (who are often attracted to the job) to use. Furthermore, many CBEs have noted the difficulties of finding and retaining sufficient numbers of waste collectors, thus suggesting that a reduction in manpower required would not be an issue in terms of job opportunities available in the community. Finally, as the use of motorized equipment is more time efficient, this is likely to enable CBEs to pay higher wages, as already evident in the different income of wheel barrow and tricycle operators. Another possibility is waste collectors having shorter working hours and, thus, investing more time in their own business after they have completed daily collections.

## Vertical Expansion within the Waste Management Value Chain

**Vertical expansion refers to moving into higher-value steps along the waste management value chain.** It is another, strategic way for CBEs to expand their businesses (Mulbah meeting September 23, 2016). To expand into some services areas, CBEs may be able to continue to remain CBEs. In fact, some CBEs are already involved in providing such services. However, for the provision of other services (such as SSWC) it may be necessary to formalize as a micro, small, and medium enterprise in order to be eligible to participate in tenders. Activities or services to be considered include the following:

- i. **Primary Solid Waste Collections from larger establishments,** such as hotels or condominiums (see section on geographic expansion).
- ii. **Secondary Solid Waste Collections (SSWC).** For example, aligning primary and secondary collections, CBEs may engage in the management of skip buckets, bringing waste to transfer stations or landfills. This does require capital investment into trucks.
- iii. **Extraction of recyclables** (for example, paper and plastic) from household waste, ideally facilitated through the effective segregation of dry and wet waste. While segregation at source was not successful under IMPAC, a new attempt under the EU Water Project shows (very) early signs of success.

- iv. **Buying and selling of recyclables** (such as intermediary between households and larger players in the recycling sector). In fact, building up at least one such intermediary may be required to develop the sector.
- v. **Processing of recyclables** (such as production of plastic pellets).
- vi. **Manufacturing from raw material** (such as building furniture from waste).
- vii. **Refurbishing of e-waste** (for example, computers that may be used in education projects).
- viii. **Animal farming with organic material.** For example, a selection of pigs, goats, and chicken may be fed with suitable organic waste. Feces from the animals are then put in the composting.
- ix. **Composting** of organic materials.

**The simplest expansion strategy would be to collect from larger businesses and organizations within the communities they serve.** Currently CBEs are only allowed to collect from households and small businesses. However, there are no properly organized waste collection services (as per the CBE model in poor communities) for larger businesses, offices, embassies, organizations, international NGOs, and condominiums. Instead, as described by Mr. Krah (Meeting September 26, 2016), it is a “free for all.” CBEs may already be collecting from such establishments, albeit they are not officially empowered under their current contracts. There may be opportunities to expand collections into residential estates. Currently the National Housing Authority (NHA) is responsible for collecting waste as part of the rental agreements, however, some CBEs have already been contracted by residents who are dissatisfied with the service provided by the National Housing Authority (Krah meeting September 23, 2016).

**Composting activities are important means to strengthen waste management services.** A number of CBEs are currently engaged in composting activities, with many of them supported (at least initially) by donor projects. Some CBEs have already established their own composting activities. For example, the Environmental Sanitation CBE has set up an NGO to take compost to farmers and teach them how to turn into fertilizer (Kamara meeting September 28, 2016). The small and medium enterprise, Green Cities Inc. is becoming increasingly involved in composting activities and considers it an important

part of their revenue stream (Mulbah meeting September 23, 2016). However, in general, the issue of organic waste is currently not being sufficiently addressed and significant opportunities for CBEs to become more involved in this component of waste management exist.

**Recycling is a potentially important revenue channel for CBEs, with positive benefits for the environment, public budgets, and livelihoods of the urban poor.** For recycling activities to be financially attractive and sustainable, CBEs need to be able to collect sufficient volumes and to sell these to an existing intermediary (or to create one themselves) or process the material in an appropriate way, before selling on the final product. For example, Mayor Mvogo (Meeting September 27, 2016) highlights that some recycling programs have required too much electricity for lighting and water to wash the plastic and, therefore, proven unsustainable. Currently, some CBEs perceive that recycling is difficult and financially not worth doing, especially given the extra work involved (Ammons meeting September 29, 2016). In addition, recycling relies heavily on global raw material prices, which depend on global economic growth and, thus, are volatile. However, there is potential for increasing the lucrativeness of recycling, which is supported by the MCC’s interest in establishing a recycling section at the new landfill (Mayor Mvogo meeting September 27, 2016).

- i. **CBEs may be able to increase their revenues by approximately 10 percent through recycling,** as evidence from CBEs participating in the EU Water Project suggests (Doryen meeting September 26, 2016). Although further studies are needed, it is expected that net income will increase even more, as waste collection costs are reportedly similar with or without recycling. Thus, profits may possibly increase by 20 percent or more, albeit it may be difficult to picture under the current lack of data.
- ii. **CBEs should be granted the contractually guaranteed fee reduction in exchange for providing recycling services.** At present, CBEs are not rewarded with a reduction in their fees, even though there is a clause in their contract to this effect (Garneo meeting September 24, 2016). If this policy would be applied consistently, then this may help to spur growth of the recycling sector. In addition, fiscal concerns provide a strong rationale for the policy: recycling reduces the amount of waste in SSWC and in landfills, which leads to significant public

savings as international experience illustrates. For example, Buenos Aires spends \$28.5 million per year for the support of CBEs but, in turn, saves \$75 million through recycled waste, which does not require secondary collections and dumping in the landfill. Thus, the city has an annual net savings of \$46.5 million (Nohn 2012).<sup>33</sup>

**Measures would need to be put in place to ensure that CBEs do not neglect economically less attractive PSWC services in poor communities.** For example, strategic designation of collection area boundaries, such that each area always includes some marginal and some regular urban areas, could be implemented. CMTs, in their role as mediators, could hold the CBEs accountable for ensuring that services are provided to all households within the collection area as stipulated in the contract between the CBE and MCC. If a CBE was found not to fulfill its obligations, this could lead to termination or failure to renew the contract. This could prove to be a successful way to cross-subsidize CBE operations in poorer areas. The United Group of CBEs in West Point is already pursuing a similar strategy, with households in West Point paying LRD 30/week (\$ 0.33) and those in Crown Hill paying 50/week (\$ 0.56) (Meeting September 24, 2016).

**Expanding into SSWC would also be a logical step for CBEs.** An advantage of having CBEs graduate into secondary solid waste collection is that they could manage their skip buckets directly, rather than relying on an external party, which often has proven unreliable, leading to the backlog and overflow of waste already reported. Setting up this system would make integration between primary and secondary collections easier in other ways: for example, skip buckets or their sites may be modified so that the older men and women who tend to work in primary collections can more easily tip the wheel barrows into skip containers (Moore meeting September 28, 2016). Another benefit of taking waste to the transfer station is that CBEs may be able to avoid or reduce the fee paid to the MCC and instead

get paid for the volume or weight of waste that they deliver (Weeks meeting September 29, 2016). In any case, it is necessary to involve all parties (MCC, PCC, and local authorities) in planning and contracting for improved solid waste management, especially regarding the SSWC component (Weeks meeting September 29, 2016).

**However, as per the current framework CBEs are unable to participate in public tenders, because of legal recognition.** Although the contract with the MCC provides CBEs some recognition, they have not obtained any rights under statutory law (Krah meeting September 23, 2016). However, possibly costs and risks associated with registration are barriers to formalization. CBEs contend that a fast-tracking process for accrediting CBEs as small and medium enterprises should be established. Mr. Cole from the MCC's Planning and Waste Management Department says that work on this has already commenced (FGD September 30, 2016). According to Pratt, such a handholding service already exists. Although the Ministry of Commerce and Industry (MOCI) provides handholding services for micro companies to formally register, the CBEs have not yet taken advantage of this service for unclear reasons. They may possibly fear the time and costs that it takes to register, as well as the risk of facing high costs because of advanced book keeping requirements and taxes imposed upon them once they are formalized (Meeting September 29, 2016).

**Multiple options for launching small and medium enterprises exist:**

- i. An individual CBE may convert to a small and medium enterprise, as Green Cities Inc. did successfully.
- ii. A new small and medium enterprise may be launched under the umbrella of the National Association of CBEs, for example, to set up joint recycling or composting projects to reach economies of scale. However, this raises issues if not all CBEs affiliated with the Association participate.

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<sup>33</sup> (i) The City of Buenos Aires' cost savings through recycling are estimated at the following:  $ARS\ 1,100 \times 800 \text{ tons/day} \times 365 \text{ days} = ARS\ 312.2 \text{ million} = \$75 \text{ million}$ . Details: The City of Buenos Aires produces approximately 5,500 tons of waste per day, of which approximately 4,700 are dumped and 800 are recycled through the waste pickers. The cost of collecting and dumping 1 ton of solid waste is ARS 1,100. The annual cost of collection of the 4,700 tons per day (or 1,715,000 per year) is about ARS 1.8 billion, which is the current contract value for the City's solid waste management (that is under revision). This implies cost of  $ARS\ 1.8 \text{ billion} / 4,700 \text{ tons} / 365 \text{ days} = ARS\ 1,050$  per ton per day. In addition, the City pays about ARS 55 per ton for dumping.

(ii) On the other hand, the City pays ARS 120 million = \$28.5 million per year to support CBE workers.

(iii) The net cost savings are approximately ARS 192 million or \$46.5 million.

Source: Nohn 2012.

- iii. Therefore, multiple CBEs could join forces to form a small and medium enterprise, for example, to provide SSWC services or to establish a joint recycling or composting plant. Each CBE may become a shareholder in the small and medium enterprise, while remaining a CBE providing PSWC services. CBEs are already thinking about this, with some having started a joint venture with the aim to submit a bid for a contract providing SSWC services (Kamara, FGD, September 30, 2016).

**CBEs need capacity development and access to resources to transform into small and medium enterprises.** Mr. Krah (Meeting September 22, 2016) believes that additional training and capacity building would be necessary, in addition to providing collective collateral for loan acquisition and the leveraging of other resources. CBEs regard support for the purchase and maintenance of equipment and improving access to finance (that is, ability to get loans) as a prerequisite. In addition to financial resources, Mr. Mulbah (Meeting September 23, 2016) from Green Cities Inc., which is already recognized as a small and medium enterprise, believes that CBEs need a clear picture of how they want to develop an annual strategy to successfully graduate to becoming a small and medium enterprise.

## HORIZONTAL EXPANSION: ADDING OTHER SERVICES TO THE CBES' PORTFOLIO OF CBES

**Horizontal expansion entails expanding the types of services provided by CBEs beyond waste management.** Thereby, horizontal expansion contrasts with the vertical expansion within the waste management value chain from collections to recycling, composting, and so on. Services could be provided in the following areas: health and sanitation; infrastructure (for example, lighting, street paving, or drainage); rainwater harvesting; vocational training; microfinance. Many of these could occur within the broader context of slum upgrading (UNICEF meeting September 22, 2016). What is important is that the strong

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“CBEs can be used to do a lot of things. They are recognized service providers, so it is easy to add on other services/responsibilities.”

Mike Doryen, Monrovia City Corporation

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community connection is maintained, and the services are relevant to the needs of the community.

**CBEs may deliver a whole range of services along a specific value chain, for example:**

- i. CBE for sanitation: toilets, latrines, sludge removal.
- ii. CBE for street vending and markets: management of permits and fees for supporting infrastructure (storage, water, electricity, market toilets, and so on). This is also relevant in light of the LCP, with StreetNet International aiding the mobilization and organization of vendors and the development of a sector policy.
- iii. CBE for community infrastructure construction, operation, or maintenance: water and sewage networks; storm water drainage; street paving; or lighting.
- iv. CBE for public space management: street sweeping<sup>34</sup>; maintenance of pavements, including fixing pot holes; slashing of grass; fumigation; cleaning parks and playgrounds, as well as grounds of businesses, such as hotels. For example, the Environmental Sanitation CBE already conducts some fumigation activities (both paid and unpaid).

**Alternatively, CBEs could manage interlinked value chains.** It has been proposed to consider solid waste management, drainage and sewerage together, because they are interlinked: for example, waste and sewerage both enter the drainage system (see section on service subscription). Because of this, UNICEF decided to develop a solid waste management system for Monrovia, and even had a committee develop draft municipal waste management bylaws (Yarngo and Weeks meeting September 29, 2016). Similarly, Oxfam is currently working

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<sup>34</sup> The field mission identified a visible need for improved street sweeping and awareness about problems related to littering. The MCC's Department of Planning and Waste Management manages street sweeping services. The Department representative interviewed, however, does not believe that CBEs should expand into this area. However, at least one CBE (OCEANS) previously had a contract for street sweeping, which reportedly operated successfully until its contract was terminated without cause.

with the European Union and MCC, who in turn are working with IMPAC CBEs, on drainage issues in slum communities, including the collection of garbage (Okao meeting September 30, 2016). Such interventions could be undertaken and mainstreamed with a focus on CBEs managing interlinked value chains.

**Horizontal expansion can be achieved either by creating new CBEs or by adding additional sectors to the portfolio of existing CBEs.**

- i. Existing CBEs broadly support the idea of horizontal expansion. Some CBEs already provide services other than PSWC, which can help strengthen their operations. For example, the United Group of CBEs in West Point has started selling water to supplement its income. This is currently subsidizing its waste collection business, which is suffering following the Ebola crisis and sea erosion.<sup>35</sup>
- ii. New CBEs have been established. For example, the CBE model was adopted by the MCC's Fostering Innovative Sanitation and Hygiene (FISH) Project. Once six new toilets have been built and three existing toilets have been renovated, they will be handed over to CBEs to manage (Moore meeting September 28, 2016). CBEs are expected to charge minimum fees to cover operation, cleaning, maintenance and repair of plumbing (flush system), buy sanitation materials, and make some profit. In this case, new CBEs were created because there were concerns regarding the capacity of existing CBEs in the areas where the project was to be implemented (Moore meeting September 28, 2016).<sup>36</sup>

**New strategies need to be aligned with the institutional framework, including governance and finances.** It would be necessary to ensure that plans aligned with the relevant public body, such as the Ministry of Public Works for street paving (Peabody meeting September 26, 2016). Furthermore, it may be necessary to have some fee paid (as per the IMPAC model) to enable more complex maintenance and repairs to be carried out. For example, the CBEs managing the water points established by Oxfam pay a certain percentage to the Liberian Water and Sewerage Corporation (Okao

meeting September 30, 2016). In addition, projects may use the CMT system strategically. For example, the FISH projects employ the CBE model for the management of sanitation facilities and, where a CMT structure is in place, the WASH committee works with them to monitor the management and maintenance of toilets at the block level. In contrast, where there is no CMT structure, the WASH committee operates alone (Flomo meeting September 28, 2016).

## IMPROVING PARTICIPATORY MUNICIPAL GOVERNANCE

**A central factor to the success of the CBE model is its community connection.** Therefore, conscious efforts to maintain this approach are made and ought to continue during expansion. In this regard, it is critical to **ensure that workers are from the local community.** CBE management may be based elsewhere (especially in the case of geographic expansion, but as CBEs professionalize they cannot solely rely on local labor), but employment of local staff for day-to-day operations is highly desirable.

**In addition, the system could be advanced by establishing contracts directly between the CBE and the community,** rather than (only) between the CBE and local government. Not only does it provide a greater incentive for CBEs to remain competitive, but it also increases community ownership of the service. The feasibility of this depends on the type of service being provided and the legal recognition of a community as an entity, as much as of that entity's ability to facilitate collective action (such as payments). Selection of CBEs by the community is already occurring in some instances (such as Oxfam sanitation facilities), and IMPAC CMTs were formed to support the vetting of CBEs.

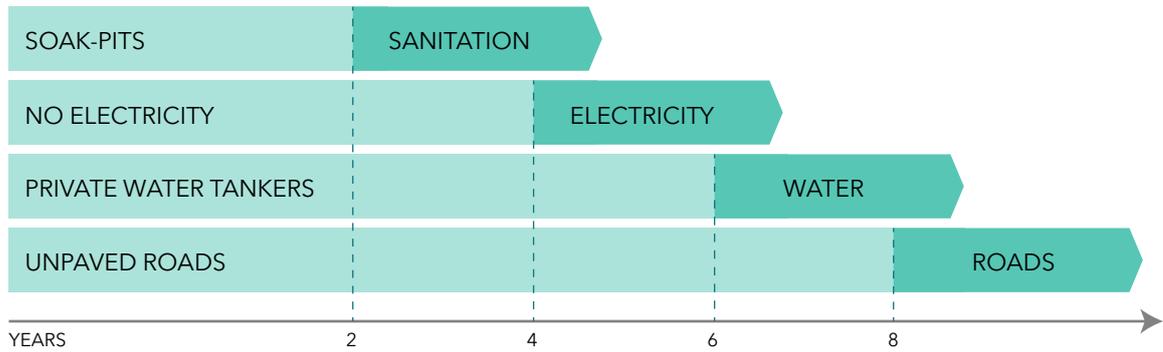
**Community Action Planning (CAP) takes community ownership yet one step further, based on the principle of subsidiarity.** Community Action Planning allows the community to decide how money is spent on priorities identified through a participatory process (Stubblefield meeting September 29, 2016). In other words, communities collectively decide which services

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<sup>35</sup> The CBE reported losing 60 percent of its clients because of sea erosion in 2016. Clients were lost because houses were destroyed and others in area started dumping waste on the shore.

<sup>36</sup> While this report is being produced, FISH has issued a call for expression of interest for CBEs managing septic tanks (FISH Office of Procurement 2016).

Figure 3: Staged Network Provision in Kuda Ki Basti



to pursue (and in which order). For example, the Khuda Ki Basti Programme (KKB) in Pakistan organizes households at the block level for staged service provision—furnishing individual toilets, electricity connection, water taps, and paved roads after two, four, six, and eight years, respectively.<sup>37</sup> (This is not to argue that this is the right order for Liberia, but only to illustrate the basic idea). For a reference on Community Action Planning see, for example, Hamdi and Goether 1997.

**The Community Action Planning model may operate around some sort of a Community Development Fund (CDF).** The Community Development Fund would be sustained through fees for the services that the community decides to procure or membership fees. Furthermore, it can possibly be triggered by or supported and enhanced through small grants (such as those that Cities Alliance wants to deploy) or soft loans. This model may constitute a scalable and replicable model when

applied to relatively more affordable services, rather than capital-intensive housing, because it would likely be able to be sustained without subsidies, provided that communities are empowered institutionally and capacity-wise. Therefore, the model would likely also permit a wholesale lending approach<sup>38</sup> to communities, which may operate largely on market terms.

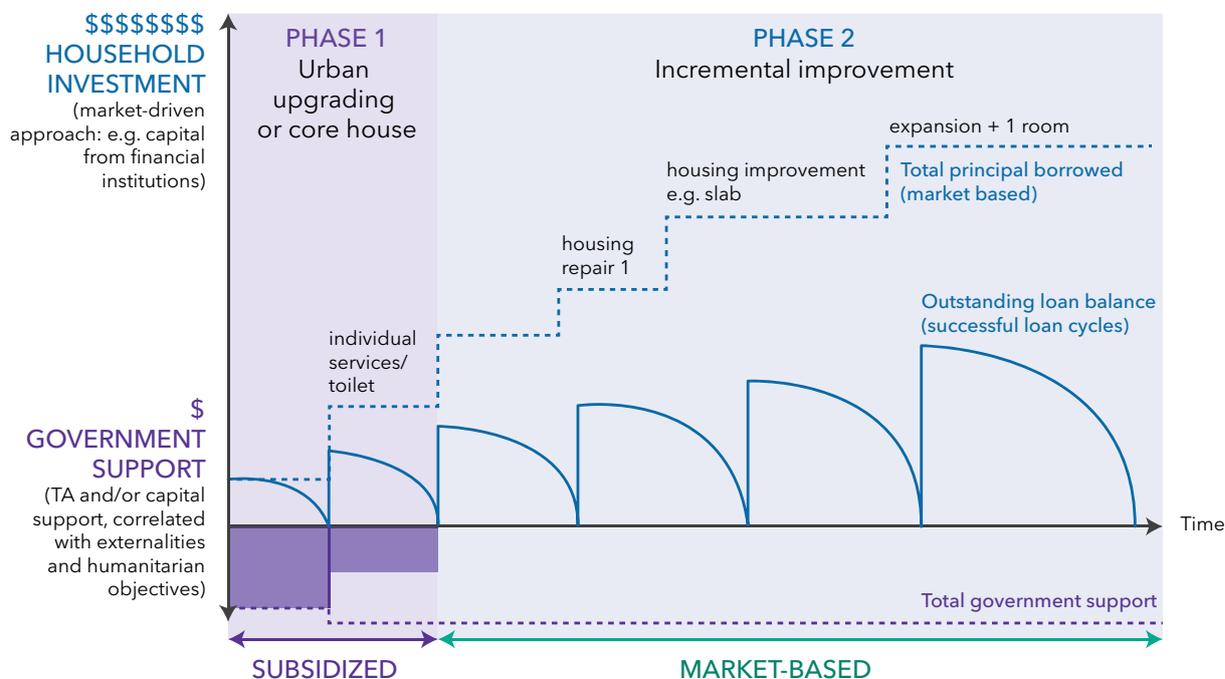
The socioeconomic inclusion of communities through settlement upgrading and the production of new neighborhoods may follow this model, strategically building knowledge and trust, while migrating from subsidy-driven aid to market-based development.

<sup>37</sup> “The Khuda Ki Basti Program (KKB) in Pakistan, rewarded with the Aga Khan Award for Architecture, is an interesting case because it is very low-cost and enjoys high cost recovery so that it has a meaningful scale and has been replicated. By focusing on the enabling habitat rather than the (capital-intensive) housing unit, much in the original spirit of sites and services, the project provides empty lots with tenure security (lease to own financing), access to infrastructure (for example, initially off-grid community water taps) that is gradually upgraded by community clusters [such as providing individual toilets and water taps after two and six years, respectively], access to social amenities (for example, subsidized mobile clinics), and access to the city (for example, subsidized, semiformal transit).” (Nohn and Goethert, forthcoming, based on Tasneem 2011; Asad and Rahman 2004)

<sup>38</sup> For example, see <http://www.affordablehousinginstitute.org/projects/slum-infrastructure-for-metafinance>.

Figure 4: Incrementalism in Housing

Strategy: Migrate from subsidy based aid to market based development. Use subsidies to solve humanitarian crisis, to address externalities, and to enable private investments: e.g. organize communities (CAP) or reduce perceived or real risk (land tenure/basic infrastructure)



Enabling markets and building a client relationship through incrementalism in housing, via migration from subsidy-based aid to market-based development. (Source: Rapid Urbanism)

“The system needs to ensure that the community owns it. Social and political dimensions need to be worked out in the local context.”

Ellen Pratt, Ministry of Industry and Commerce

**Community representation should be recognized institutionally**, in order to be empowered to effectively promote community ownership. This is true for communities contracting the CBE, community action planning, and operating an incremental Community Development Fund.

Possibly the current CMT may be empowered as the leadership of a recognized community association, society, cooperative, or similar to pursue any of the above options deemed appropriate.<sup>39</sup> To be effective, this requires some sort of recognition in national urban policy, ordinances, bylaws, or laws, including provisions on assigned roles and responsibilities and, possibly, a “model constitution.”<sup>40</sup> For example, crucial to making some services work is that membership (and financial contribution) is compulsory for everyone, even for households that may not want or, even, may not need a particular service (for example, households who have their own toilet may not want or need to contribute to community toilets). However, collective action should be based on the social principle of solidarity and the economic principle of externalities: the fact

<sup>39</sup> Apparently, the term Community Based Organization should be avoided, as it has a negative connotation as, reportedly, many CBOs claiming to represent the communities fail to do so in reality.

<sup>40</sup> For some concepts for such a community-based institution, see Nohn, Goethert, and Holz 2016, p. 142-164.

that everyone in the community stands to benefit when communities are cleaner and healthier (for example, even if a family has its own toilet, its children may still die from diarrhea if flies carry the germs from open defecation onto their food).

Specific tasks that the community body would fulfill are further explored in the following final subsection, based on the assumption that CMTs are the natural forerunner of the community institution's leadership.

### Building on the CMT Model

**It is necessary to implement a mechanism to provide ongoing support to CMTs to enable them to carry out the tasks already assigned.** CMTs require not only handholding and training, such as in negotiations and conflict resolution, they also need an expenditure allowance to reimburse for costs associated with transport, communication, meetings, stationery, and maintenance of equipment, such as batteries for megaphones (Saydenuh meeting September 28, 2016 and Tarplah meeting September 28, 2016; see section on city-community partnerships). It is important, however, that CMTs remain voluntary and not be paid a salary; otherwise, they may be perceived as self-interested and consequently lose their invaluable role as a trusted broker.

**CMTs could cover their operating expenditures from a small spread, budgeted into service fees.** This model would have the advantage that it provides a sustainable revenue stream required for ongoing mobilization and awareness campaigns. If so, the system may largely pay for itself, as it would increase collections. CBEs do incur significant costs through fee collections. Under the current model, which is assumed to continue, CMTs operate pro bono (thus there is no labor cost involved), while being remunerated

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"It is necessary to strengthen CMTs. CMTs are important."

Zubahyea Flomo, Monrovia City Corporation

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through social recognition and, occasionally in-kind contributions as gifts in exchange for settling cases. Thus, if such a social model is implemented successfully, CBEs may have both higher revenues because of higher collection rates and lower costs because of CMTs providing the service free of charge (notwithstanding the cover of expenditures).<sup>41</sup>

**CMTs may expand their role horizontally and engage in either managing or overseeing all cash flows related to the provision of multiple services.**<sup>42</sup> This is in line with CBE's horizontal expansion into other services. CMTs may not only become the community-based focal point for service contracting and oversight, but also manage all cash flows between the numerous households and multiple CBE or contract and oversee financial management.<sup>43</sup> For example, if multiple CBEs provide different services in a community (such as waste, water, or toilets), a single service provider should collect a cumulative fee for all services from each household and distribute the aggregated payment for one service to each respective CBE (as well as the local governments, if there is an overhead similar to the 5-percent fee under IMPAC, in order to cover trunk infrastructure and secondary services, such as SSWC). Collecting a cumulative fee would significantly reduce the total number of cash flows and make the delivery of multiple basic services manageable in the first place. Otherwise, if each individual CBE would collect individual service fees from each household, the expected increase in

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<sup>41</sup> To base CMT compensation on their expected expenditures appears to be prudent, instead of a percentage share of fees collected. The latter option may set bad incentives, such as using brute force to collect from vulnerable households in arrear of payments (as is well-known from the microfinance sector), despite the possibility of promoting higher collection rates. Other options for mobilizing the required funds include support through local governments that would, however, need to pay out of their general budgets or out of a sufficiently sized overhead fee that they receive from the CBEs. However, this is similar to the current system, which is not working well.

<sup>42</sup> In addition to contracting and monitoring service provision and facilitating the identification of community preferences, CMTs could expand their role into other areas: work on domestic violence (as many CMTs are doing already), peace-building, human rights advocacy and education, cooperation with the police on their program for community relations (Doyah meeting September 26, 2016).

<sup>43</sup> Different from what was discussed in the FGD, it may be more prudent to deliver this service by a dedicated provider, such as a CBE specializing in microfinance. If so, CMTs would oversee the respective cash flows. What is important, however, is that fees are bundled for multiple services to generate economies of scope and bring down collection costs, and that CMTs may be rewarded a share of fees set to cover their operating expenditures. The question whether to make the CMT or a CBE the provider warrants further discussions about the potential benefits, costs and risks—and pilots may well try out any of the models.

cases around nonpayment would cause the system to collapse. Positive precedence has already been set by merging of business inspections for health, fire, and safety, which are now undertaken together by the same committee on the same day (Krah meeting September 28, 2016).

**After some initial resistance to this proposal, all the stakeholders contacted during the field mission agreed that the idea would at least be worth piloting.**<sup>44</sup> Stakeholders raised concerns primarily about holding CMTs accountable and ensuring that CBEs were paid in full and on time. To increase accountability, it was agreed that this should occur at the block level and that training in proper bookkeeping would be provided. Some CBEs were favorably trying the model in their service areas, while others opposed. Thus, during the focus group discussion it was agreed that the model should be tested in pilot areas where CBEs with a favorable view operate.

**Furthermore, CMTs should be institutionalized and expanded geographically,** as they are essential to the success of the CBE model and the desired expansion throughout Liberia (Saydenuh meeting September 28, 2016). Although CBEs are currently providing PSWC services in Paynesville, CMTs have not been established there yet. If there are problems, the CBE or client comes directly to the PCC. If a client is not paying, they get a warning the first time; second time they get a fine. The associated administrative burden makes upscaling of the model to citywide service provision unlikely. In this context, PCC agrees in principle that the CMT model is needed and that it would be a good thing (Kolubah meeting September 29, 2016).

**Tandems of CMTs and CBEs may be considered as operating as community-driven enterprises, which are potentially similar to member-based organizations of urban poor workers and communities.** Because of the nature of their organization, member-based organizations allow the targeted support of such hybrid value chains (compared with Ashoka) and co-development initiatives (compared with SDI).<sup>45</sup> However, to make this work, two critical issues should be considered:

- i. The CBE model that IMPAC used is only one of many CBE models and, in turn, CBEs are only one of many models of community-driven development. Monrovia has fared

well with the IMPAC CBE model, but Liberia should not exclude other options, particularly if expanding geographically, vertically, or horizontally. On a relative scale, IMPAC CBEs are more capitalistic, being typically owned by a single owner or household, which is possibly why the model has been so successful, effectively using market forces for eliminating nonperforming entities quickly. This approach contrasts to other forms of CBEs, which are owned by the community. It is important to highlight these differences, as the latter community-owned approach may be more useful when thinking about other sectors, such as a potential business cooperative of street vendors operating a market.

- ii. Beyond CBEs, there is the larger set of member-based organizations, such as SDI and WIEGO (including StreetNet International), which the Bill & Melinda Gates Foundation supports and now belong to Cities Alliance's membership. Each member-based organization has its own rituals: specific mobilizing, organizing, collective engagement and negotiation strategies that need to be acknowledged and be considered. In this regard, the CMT structure should be independent from government. Independent grassroots movements should be involved and aid in structuring their terms of reference. Otherwise, there is the risk of external control and token participation (while IMPAC has been successful because of the independent role of CMTs). In addition, the CMT federation structures are possibly not yet sufficiently proven, while the international networks have their own federation strategies. This is not to imply that any other strategies are perfect, but rather that each approach has its own merits. Thus, what is important is that any policy or regulatory changes should open the opportunity for experimenting with the larger set of community-driven federation and participation models.

**Lastly, other interventions may use existing CMTs as an entry gate for to avoid duplication.** This would aid in strengthening the institution as a platform that may serve as an entry point for a diverse set of development interventions and a contact point for many different

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<sup>44</sup> Full details of the pilot still need to be established.

<sup>45</sup> For the current debate on networks of urban poor communities, see Herrle, Ley, and Fokdal 2015. For a review of member-based organizations of urban poor laborers, including waste collectors and recyclers, see Nohn 2012.

government departments and international actors. One possibility would be to build on the current federation model of CMTs in which one block-level chairman and multiple assistants are dedicated to social groups (such as women, youth, and the elderly, as is the present system) and specific services (such as solid waste, sanitation, water, pavement, or microfinance). This model could then be replicated throughout other levels of the CMT federation through election and representation, as is the current practice (Flomo meeting September 28, 2016). In this regard, the CMT system is somewhat similar to the federation model of urban poor groups, such as under SDI and ACHR. At present, CMTs are still limited to managing mainly PSWC projects; however, if the CBE-CMT model expands horizontally, adding additional services to be delivered to communities, then CMTs would become more comprehensive. Further, if CMTs were empowered as an independent federated network, they may become similar to member-based organizations' model. The latter option was discussed in the FGD. Building a successful system, however, requires transparent and accountable mechanisms to ensure performance of community leaders (see section on improving participatory municipal governance).

## STRENGTHENING LOCAL GOVERNMENT, WITH SUPPORT OF NATIONAL GOVERNMENT

### **It is necessary to invest in the MCC's capacity for the MCC to provide support to CBEs.**

Similar to the logic of a train-the-trainers model, the MCC not only needs more money to carry out all required activities, but also to invest in waste management and in staff who are working with CBEs. This is particularly important given that the integration of key components of the IMPAC project into the MCC did not occur as envisaged and resulted in a loss of experience and knowledge (for example, the monitoring and evaluation system). MCC staff members need to be more strongly empowered so that they can carry out planning, inspection, and monitoring and evaluation activities as required.

**Moreover, the draft LGA of 2013 recognizes the need for capacity building of local governments** (Republic of Liberia Governance

Commission 2013). The LGA assigns responsibility for the capacity development of local governments to the minister responsible for local government. In addition, the Liberia Institute of Public Administration will manage training and capacity enhancement activities, including the secondment of civil servants from the central government to provide technical assistance to local governments (Republic of Liberia Governance Commission 2013). Furthermore, the LGA describes a range of own source revenue streams for local governments, which can be derived from local tax bases, activities, fees, charges, fines, and local government assets (Republic of Liberia Governance Commission 2013). Capacity development provided to local governments under the provision of the LGA, as well as (further) development of own source revenue, will help local governments in becoming increasingly able to fulfill their obligations in relation to solid waste management. To support this trajectory additional, external training may leverage any ongoing or planned capacity development.

**The draft NSWMP recognizes the importance of public education and sensitization on health and environmental issues related to waste, as well as opportunities for waste minimization, reuse, and recycling** (Republic of Liberia 2015). The strategies listed in the draft proposal include developing programs to discourage the burning, burying, and dumping of household waste, as well as incorporating solid waste management into the school curriculum (Republic of Liberia 2015). Although local governments are tasked with the responsibility for carrying out regular awareness campaigns and public education activities, the draft policy stipulates that central government agencies have the responsibility to provide adequate budgetary support to local governments and empower them to implement solid waste management programs (Republic of Liberia 2015).

**Any institutional framework could (and should) empower local governments to mobilize the revenues required for effective service delivery.** Options to be considered include a tax, levy, or fee. Because a tax is universal and compulsory, the payment rate is expected to be higher and MCC would be able to more easily enforce it. The term "tax" should be avoided, however, as it is politically loaded in the context of "over-taxation". Instead, a levy or fee – in exchange for service provision – would be deemed acceptable. In this context, a possibility would be to introduce a levy or fee operating on the same principle as a "land value tax," which would be calculated

inter alia based on the level of service delivery,<sup>46</sup> including PSWC (Flomo meeting September 28, 2016). This would have multiple economic and social advantages. This levy or fee could mobilize significant resources to be directly linked to the level and range of service provision, such as solid waste, water, sanitation, roads, street lights, or public transit, thus providing an effective means for expanding the delivery of other, desperately needed services. It could also reduce the market price of land, thus making housing more affordable and accessible, especially for the urban poor lacking access to affordable, long-term finance (Annex 3).

**Similarly, local governments need to be supported to expand their capacity to update and enforce ordinances, such as on illegal dumping and littering.** This is expected to increase subscriptions and payment, as it would reduce the backlog of waste needing to be cleared and currently posing a disincentive. The PCC currently imposes fees for illegal dumping and stakeholders consider this a good option.<sup>47</sup> However, the currently valid waste ordinance from the 1970s and 1980s would need to be revised, updated, and clarified and again be applied and enforced. Local governments may need to be supported with resources and skills to be able to update and eventually also enforce relevant ordinances.

**Furthermore, brainstorming with stakeholders produced a range of options for introducing and enforcing mandatory subscription.** Stakeholders saw some sort of legal mechanism to enforce payment as a good thing (see Moore, Kraah, Tarplah, Ammons, Yarngo, Weah, Mulbah, Doryen, Flomo, Caine, Stubblefield, Smith, and Kamara). A detailed analysis and greater understanding of the legal system would be required, however, before proposing any of the following options:

- i. **A policy** would be the softest tool. It may provide a framework that clearly outlines processes, standards, and responsibilities and entitlements, which would guide agreements, for example, at the community level and allow (social) enforcement of, but it would hardly allow to legally enforce payments and could be challenged in court.

- ii. **An ordinance** by the executive, either by the President of Liberia or a mayor, could make subscription to PSWC services mandatory. In that case, the NSWMP may guide the ordinance, but the ordinance carries legal weight (Flomo meeting September 28, 2016). In Paynesville, similar ordinances already exist, although IMPAC was not implemented there.
- iii. **A statutory law** (or subordinated regulations) would clearly demonstrate the importance of proper waste collection. A (national) law would apply mandatory subscriptions to the whole country, unless the law provides differently, for example, by notifying service areas with compulsory subscriptions through other means, such as subordinated regulations or ordinances, which would support the incremental geographic expansion of PSWC (Kraah meeting September 26, 2016). For example, the government of Liberia is expected to pass the **Local Government Act**, which will assign local governments with the responsibility for waste management, among other basic services (Doryen, meeting September 26, 2016).

**Lastly, independent from the institutional anchor, ensuring service quality and social inclusion by strengthened CBEs is critical.** Government needs to have the regulatory and monitoring and enforcement powers to exercise such tasks. This may imply being accountable and responding to the request of CMTs that report issues with nonperforming CBEs—for example, companies that focus on collecting from more attractive larger establishments, while neglecting poorer areas in the same collection zone; or CBEs that underperform as they take collection of fees for granted under compulsory subscription.

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<sup>46</sup> Among other parameters, such as proximity to centers and subcenters, which typically strongly correlates with service delivery.

<sup>47</sup> On September 18, workers from the PCC went into the community and told households and businesses that if they were not able to show receipts for proof of payment to the CBE for PSWC when they returned, then they would be held responsible for the illegally dumped waste in the area and fined. This resulted in an immediate increase in the number of new customers (Kendamah meeting September 29, 2016).

## CONCLUSION

**Local governments that experience limited financial resources need alternative mechanisms through which essential services can be delivered to the communities they serve.** The IMPAC project has demonstrated that the CBE/CMT approach is an effective partnership model through which poor communities can be capacitated to create economic opportunities that simultaneously result in improvements to their health and environment.

**Community-Based Enterprises (CBEs) succeed as service providers in PSWC because they better understand what communities need and how to operate in challenging environments.** This is inter alia evident in the vibrant ecosystem of CBEs that has been created through the IMPAC project and market forces, putting unsuccessful CBEs out of business, rewarding successful CBEs, and promoting mergers to enjoy economies of scale.

**The strength of the CBE model was demonstrated during the response to the Ebola crisis: “Ebola started to be defeated when the communities took ownership.”** (Deputy Minister Pratt meeting September 29, 2016) With the intrinsic knowledge about communities and the trust enjoyed from community members, CBE workers could both collect invaluable information and transmit scientific knowledge about the disease in an authentic manner that was acceptable to community members, while continuing solid waste collection, a highly critical public service, especially during the health emergency.

**Lessons learnt from IMPAC and from the Ebola response suggest that the CBE model should be expanded** geographically (to new areas), vertically (to higher value activities in the waste management value chain, such as secondary solid waste collections [SSWC], recycling, and composting), and horizontally (to other services, such as sanitation, water, or street paving). CBEs have already started to expand their business operations in all three directions—geographically, vertically and horizontally—with local government embracing the approach and creating new opportunities for this type of partnerships with communities.

**Community Management Teams (CMTs) have been a critical factor to the success of CBEs and may be expanded.** CMTs educate the community about the benefits of service provision (PSWC) and support the settling of cases when clients are not paying or CBEs are not delivering adequate service. CMTs, which operate in honorary capacity, face two critical challenges: funding their expenditures and receiving sufficient training (such as in negotiation and conflict mitigation). However, CMTs provide the opportunity to evolve into a self-governance platform that may manage integrated service delivery and serve as an entry point for other development interventions.

**Local governments warrant support for making city-community partnerships work.** In addition to support by the national government, CMTs can forge partnerships with other organizations, including Cities Alliance and their members, which would be structured around community and capacity development. Specific issues to be addressed include the following: assessment of the viability of vertical expansion of CBEs into recycling, composting and secondary collections; horizontal expansion of the CBE model to other sectors (such as spatial, financial, and organizational modelling of the viability of street vending cooperatives managing markets, vending permits, and fees), strengthening of the CMT role, system, and federation; design and enforcement of new regulatory frameworks, for example, in regard to fee collections and fines for littering; questions around metropolitan governance, including collective service delivery (for example, metropolitan waste management system), and related issues of revenue and expenditure sharing.

**In conclusion, strengthening, and expanding, the CBE-CMT model serves as an entry gate for collaboration with government, international organizations, and international NGOs** to deliver other services in geographic clusters of urban poor households (blocks and communities) with economies of agglomeration, scope, and density. When building such interventions, incremental institutionalization, as pilots get reconfirmed, is recommended.

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# Annexes

## ANNEX 1: FIELD VISIT INTERVIEWS

NB: contacts can be obtained from the author.

Date	Institution	Name	Position
22/09/16	Cities Alliance	Bernadette Leon	Project Manager & Head of Office: Liberia Country Programme: Cities Alliance
22/09/16	UNICEF	See below	–
23/09/16	IMPAC UN-Habitat	Frank Krah	Former IMPAC Programme Coordinator; Currently consultant with MIA/UN-Habitat
23/09/16	Green Cities Inc. (SME)	James Mulbah	CEO
24/09/16	United Group of CBEs (CBE)	Martha Ponpon Andy Ponpon	CBE General Manager
24/09/16	Swary & Dunbar (CBE)	Leroy Benedict Dunbar Margret Dunbar (unavailable, but attended FGD)	CBE Chairman General Manager
26/09/16	Ministry of Internal Affairs	Stephen Y. Neufville, Sr & Roberts S. Bestman, II	Deputy Minister for Urban Affairs & Assistant Minister for Urban Affairs
26/09/16	MCC Planning & Waste Management Department	Abraham B.Y. Garneo	Director General: Services Programme
26/09/16	Ministry of Public Works	Habakkuk Watara Sackor	National WASH Database Manager - National Water, Sanitation and Hygiene Promotion Committee (NWSHPC)
26/09/16	CBEs		
26/09/16	CMT	Noah N. Doyah	CMT Congo Town (works with Alpha Sanitation & City Sanitation)
26/09/16	MCC Planning & Waste Management Department	Agnes Peabody	Supervisor of inspectors for street sweeping
26/09/16	MCC	Mike Doryen	Project Manager, EU Water Project
27/09/16	YMCA (SDI local affiliate)	Edward Gboe Amos Paye Vivien Meipeh Beh Jerry Paye	Nat. General Secretary/CEO Liberia YMCA & Project staff
27/09/16	YMCA community visit, West Point, Liberia	Josiah W. Nmah Gabriel M Fonnoh	Youth Secretary & Peer Educator Peer Educator
27/09/16	West Point LA	William T. Dennis	Deputy Town Commissioner
27/09/16	MCC	Hon. Clara Doe Mvogo	Mayor of Monrovia
28/09/16	Environmental Sanitation CBE	Alphonso Kamara & Team (4 waste collectors & Director for Administration)	CEO (Also President of National CBEs Association)
28/09/16	Clients	Various	Clients x 6 (5 x household, 1 x small-business) served by Environmental Sanitation CBE
28/09/16	CMT	Oliver Saydenuh, Sr	CMT Chairman

Date	Institution	Name	Position
28/09/16	MCC Community Services	Zubahyea Flomo	
28/09/16	Ministry of Public Works	Eugene Caine	Acting Coordinator for the WASH Secretariat
28/09/16	MCC	Yondeh Moore	M & E Consultant A/g FISH Project Manager
28/09/16	CMT	Samuel Kelvin Tarplah	CMT Coordinator
29/09/16	Public Allies CBE	Nana Ammons	General Manager
29/09/16	PCC	Augustine B. Kpakolo	Director of City Planning
29/09/16	PCC	Robert Hill	Environmental Inspector
29/09/16	PCC	David Kolubah	Director, Waste Management Department
29/09/16	Organization for Clean Environment And Neighbourhood Services (OCEANS) CBE	Saah Joe Kendamah	Operations Manager
29/09/16	Ministry of Industry and Commerce	Ellen Pratt	Deputy Minister for Industry/ Inspector General R.L. Formerly Mayor Mvogo's Planning Advisor
29/09/16	MCC Planning & Waste Management Department	Massa Stubblefield & Frederick Cole	Director of Waste Management & staff
29/09/16	Ministry of Public Works	George Yarngo & Beauford Weeks	Assistant Minister for Community Services & Private consultant with MPW
29/09/16	IMPAC	Cynthia G. Weah	(Prev) Monitoring and Evaluation Officer for IMPAC
30/09/16	UNICEF	James Conrad Massaquoi & Christian T Smith	WASH, labor-intensive slum upgrading and vocational training for youth
30/09/16	Oxfam	Jackie Okao	Policy, Campaigns and Advocacy Manager, Acting Head of Programmes

## ANNEX 2: PARTICIPANTS IN FOCUS GROUP DISCUSSION

Name	Organization
Frederick Cole	MCC: CBE & SME Supervisor
Augustus R. Yarbah	Alpha Sanitation Services
Momo J. Peters	Environmental Sanitation
Cyril D. Major	MCC/EUWF Project: Recycling Consultant
Alphonso B. Kamara	Environmental Services Enterprise Inc.
Christopher Koko Doe	Continental Waste Group
S. Kamara	Continental Waste Group
Frank A. Krah	UN-Habitat/MIA: National Consultant
Andy K. Ponpon	United Group of CBEs
Saah Joe Kendamah	OCEANS CBE
Margret Dunbar	Swary & Dunbar
Oliver Saydenuh	CMT Chairman
Zubahyea Flomo	MCC: Director Community Services Dept.
Bernadette Leon	Cities Alliance Liberia

## ANNEX 3: TAX LAND VALUE TO PROMOTE EFFICIENCY AND EQUITY

Extract from (Nohn, Holz, and Kamiya 2016)

Land value taxes are not only efficient but also equitable, pro-poor instruments. There are several reasons why this is true:

- i. Land value taxes are a preferred source of public revenue, as there is no dead-weight loss of the tax. Land value, and not improvements, should be taxed to maximize social welfare. Economists tend to prefer land value taxes to property taxes. Firstly, because nobody can run away from land value taxes as whoever owns the land needs to pay. In contrast, people can avoid property taxes by not undertaking an investment project or by underreporting its value or by bribing the valuator. Secondly, land value taxes are relatively simpler and economical to assess or estimate, because they can be based solely on zonal values (such as distance to Central Business District (CBD) and subcenters or level of local service provision), possibly adjusted for location (such as street width and infrastructures). Therefore, land value taxes are relatively more transparent and accountable, unlike property tax based on individually surveyed and valued properties, which provides many opportunities for informal arrangements. That said, a property tax is still better than no tax on the land, because a portion of the property tax is still based on land value.
- ii. **Land value tax reduces the market price of land, but does not change its social**

**value.** The reason is that social welfare value corresponds to the private land value, plus the net present value of the tax (Figure 5); thus, the tax merely captures and shifts a share of land value to the public sector.

- iii. **Land value tax can mobilize public revenues of a significant scale.** As the tax base is large (the cumulative land value of all urban lands) and as land is considered an inelastic good, with the tax fully born by the landowner without any dead-weight loss, even a moderate tax of few percentage points will lead to significant (potential) tax revenues. For example, in Australia it is 100 percent of local tax revenues.
- iv. **Land value taxes are an ideal own-source revenue,** as land taxes typically relate to services delivered locally. Adequate decentralization frameworks align increased responsibilities for service delivery with increased opportunities for own-source revenues.
- v. **Land value taxes promote investment, stimulating job creation, tax base growth, and environmental gains.** For the same reason, land value taxes may aid in reducing speculation, however, only among landholders short of cash. The reason is that landowners need to pay the tax according to the land market value, which is based on the potential highest value use of the land. Thus, landowners not investing in their land, such as keeping it vacant or underdeveloped for speculation, will still need to pay the same value as if the land was fully developed. Thus, landowners may opt for developing the land to obtain revenue from it, which would lead to economic growth. This logic is disputed, as more powerful speculators (with sufficient

Figure 5: The Positive Impact of Land Value Taxes in Reducing the Market Price of Land

Social Welfare (Private land value + NPV of tax)	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00	....	\$ 100.00
Land tax rate	0%	1%	2%	3%	4%	....	6%
Market price of land (Private land value after taxation)	\$ 100.00	\$ 85.71	\$ 75.00	\$ 66.67	\$ 60.00	....	\$ 50.00
Annual land tax = public revenue	\$ 0.00	\$ 0.86	\$ 1.50	\$ 2.00	\$ 2.40	....	\$ 3.00
NPV of land tax = credit surrogate	\$ 00.00	\$ 14.29	\$ 25.00	\$ 33.33	\$ 40.00	....	\$ 50.00

Land value taxes capture a share of land values, thus reducing market prices of land in exchange for mobilizing public revenues, while never changing the social value of land. Assumptions:  $p = LV / (d/(d+t))$ ;  $p$  = private land price,  $LV$  = social land value,  $d$  = discount rate = 6.00%,  $t$  = tax rate. Social land value = market value before taxes. There are no externalities or market failures. Land supply is fixed (Rapid Urbanism 2016).

## Text Box 1: An Explanation: Why Land Value Tax Reduces Land Values.

### Consider the default scenario without land value taxation. . .

- You earn a profit of \$6 per year if buying the land.
- Your discount rate is 6 percent, as the best alternative investment with similar risk (for example, in the stock market) pays a dividend of 6 percent.
- Thus, \$100 will be the land price, as you would be willing to offer up to  $\$6/6$  percent = \$100.

### Now imagine the alternative scenario with land value taxation. . .

- The government introduces a tax of 1 percent per year.
- Thus, you need to pay \$1 every year.
- That means, if you buy the land your annual profit will reduce by \$1:
- It will only be  $\$6 - \$1 = \$5$ .
- Thus, you will only be willing to offer  $\$5/6$  percent = 83.33.
- The land price has fallen by 16.67 percent, due to a tax rate of 1 percent.

*NB: In fact, the above calculation is only an approximation. As the land price falls to \$ 85.71, the annual tax would be lower than \$1. Thus, one needs to iteratively calculate the real price reduction and tax. For our example, the land price would fall to \$85.71 and the annual tax would be \$0.86 (see Figure 5)*

liquidity) may just keep the land, as long as the expected appreciation exceeds the tax to be paid.

- vi. **Land value taxes double as credit surrogate for poor homebuyers excluded from access to affordable capital.** Most low- and middle-income laborers in developing and emerging economies do not qualify for traditional lending, such as mortgages, because of informal employment and other reasons. As such, they need to rely on other funding sources, including microfinance, kinship networks among family and friends, or informal financial intermediation, such as money lenders. Because housing is a capital-intensive good, such sources tend to be too limited in size or too expensive due to high interest rates to afford entry in the formal market, so that households are forced to develop informally. In this regard, the fact that land value taxes reduce market prices in exchange for a tax payment is a strong asset. Text Box 2 illustrates the improved affordability through land value taxes with two alternative scenarios. The logic is that the

regular (for example, monthly) tax payments finance a share of the total land value as a than a loan does, but more affordably. Two main factors cause the improved affordability:

- a) Land value taxes model a perpetual loan without ever repaying the outstanding principal.
- b) Land value taxes use a lower implied interest rate: For example, the figure below uses a real discount rate of 6 percent. Thus, as long as the inflation is below 14 percent, the **land value tax** does not exceed the interest rate of 20 percent in the example. Note that in many cases, unsubsidized interest rates are even higher.

**Land value tax should be implemented gradually and steadily, with minimal exemptions**, so that markets can adjust to relatively lower prices (that is, prices grow more slowly). In contrast, rapid introduction of land value taxes may cause deflation, with adverse effects on the economy (for example, mortgage defaults because of devalued collateral). This arguably also helps the urban poor more than exemptions through progressive taxation.<sup>48</sup>

<sup>48</sup> It is important to introduce the tax gradually to soften markets, also because land value taxes, even progressive ones, may be a burden to poor households that already hold land when the tax is introduced. These households paid the full market value when purchasing their land, unable to benefit from the land value taxes reduction in prices, and are eventually required to pay the tax in addition to the original purchase cost. (However, this argument may not apply, or to a much lesser degree, to households that *informally* purchased their land, as these households typically anyhow paid much lower prices than in the formal market while they may benefit from reduced formalization cost, for example, if fees are calculated based on market prices that reduce with land value taxes.)

Figure 6: Land Taxation Options

	Land Tax on \$100,000	Improvement Tax on \$300,000	Property Tax on \$400,000
Traditional property tax 1.00% on both land & on improvements	\$ 1,000	\$ 3,000	<b>\$ 4,000</b>
Two-rate property tax 2.50% on land & 0.50% on improvements	\$ 2,500	\$ 1,500	<b>\$ 4,000</b>
Pure land value tax 4.00% on land & 0% on improvements	\$ 4,000	\$ 0	<b>\$ 4,000</b>

Differences between land, improvement and property taxes in traditional, two-rate, and pure land value taxes (Dye and England 2010).

**In contrast, taxation of land transactions should be avoided.** Such charges may be considered a poor approach, as tax evasion tends to fuel informal markets, produces poor data on the market, and disproportionately harms the poor. In sum, they contribute to creating many market inefficiencies from which cities not only in developing and emerging countries suffer. The ground rule of economics and taxation is to tax inelastic goods (such as land value) and do not tax

elastic goods (such as transactions). Thus, as an alternative to taxing transactions, an administrative fee can be charged to cover registration-related expenses; at the same time the land value tax can be increased slightly to offset the reduction in revenues. For example: assuming an average transaction interval of 20 years, to offset a waiver of a transaction tax of 10 percent of the land value, the land value tax rate could be increased by only 0.5 percent.

#### Text Box 2: Land Value Taxes Double as Surrogate for Affordable Credit

Consider a household that needs to finance \$100 with its own savings of \$50 plus other funds: either a microfinance loan at an effective interest rate of 20 percent or land value taxes. Now consider two alternative scenarios.

**Scenario 1: No land value tax—annual payments of \$16.72.**

- Consider an untaxed land parcel with a market price of \$100.
- With a down payment of \$50, the loan amount is \$50.
- At an interest rate of 20 percent, the interest due at the end of year 1 is \$10.
- In addition, the household needs to return the outstanding principle: \$6.72.
- Thus, the total payment at the end of year 1 is \$16.72.

**Scenario 2: Land value tax of 4 percent result in annual payments of \$5.74.**

- In contrast, consider that the land parcel is taxed at 4 percent.
- As Figure 5 shows, the market price of the land is reduced to \$60.
- With the down payment of \$50, the loan amount is only \$60-\$50=\$10.
- At the interest rate of 20 percent, the interest due is only \$2.
- In addition, the returned principle is only \$1.34.
- Thus, the total loan payment is \$3.34, compared to \$ 16.72.
- However, the household is also obligated to pay an annual tax of \$2.40 (Figure 10).
- Thus, the total payment at the end of year 1 is \$5.74, which is only 30 percent of the annual cost of scenario 1 and thus significantly more affordable.

*NB: the calculation assumes interest calculation on a declining balance and equal payments.*

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