



# KNUST-AISWaM TRAINING WORKSHOP



Theme: “Sanitation and Waste Management in Our Assemblies  
Challenges to service delivery and opportunities for improvement”

## Overcoming bottlenecks for incremental and accelerated progress in services

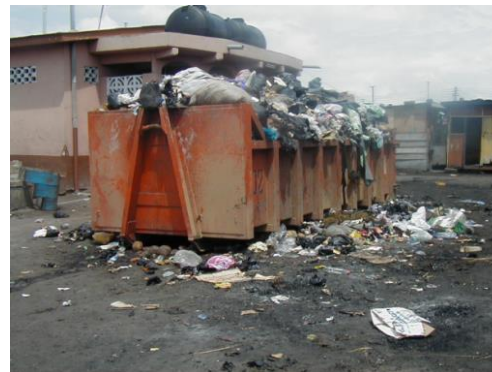
**Lukman Salifu,  
CEO WasteCare Associates**



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# Background (1) MSW Management practices:

- Generation
- Collection (primary and secondary) & Transport
- Final Treatment/disposal



# *Where does the uncollected waste go?...*



# Key bottlenecks in improving MSWM...

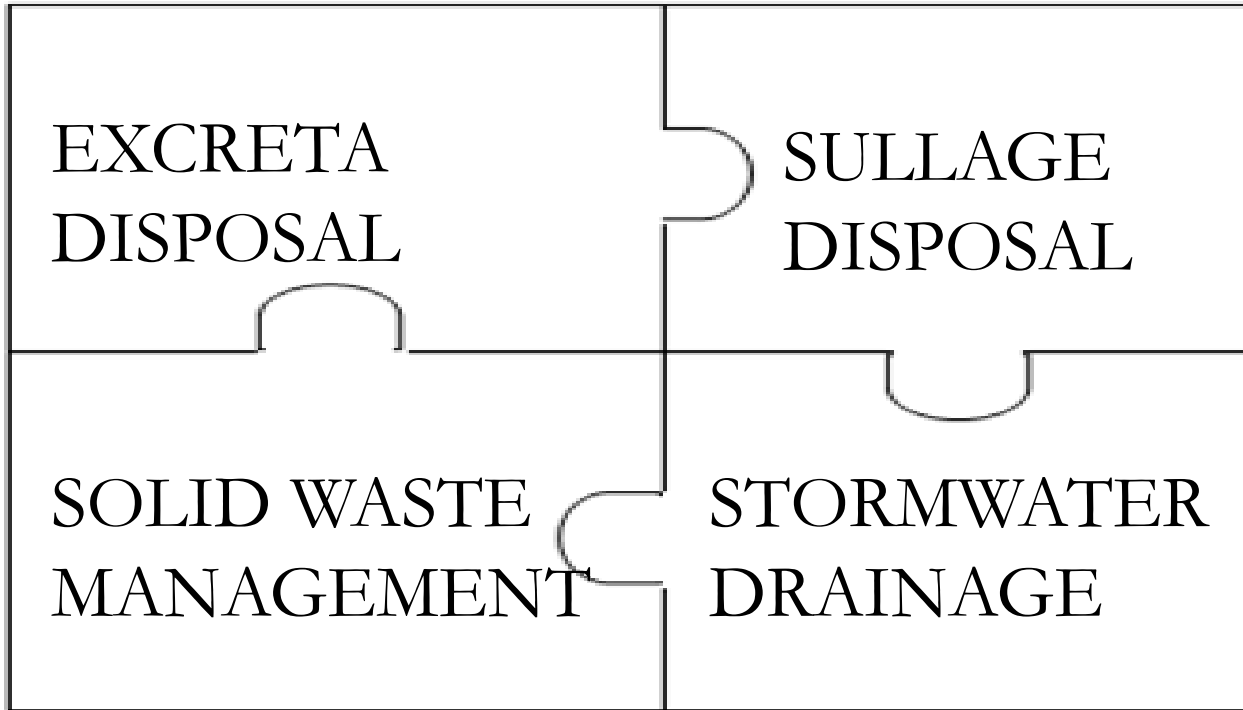
- Final Disposal Site(s)
- Haulage Distance (increasing round-trip time)
- Indiscriminate Littering
- Use of drains as refuse conveying channels
- Flooding





# Linkages of cause and effect....

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# No more space in built up GAMA for refuse disposal...



Malam No.1



Mallam No.2



Oblogo No 1



Sarbah, Weija



Mallam No.1



Mallam No.2



Oblogo No. 1



Sarbah, Weija



Abokobi

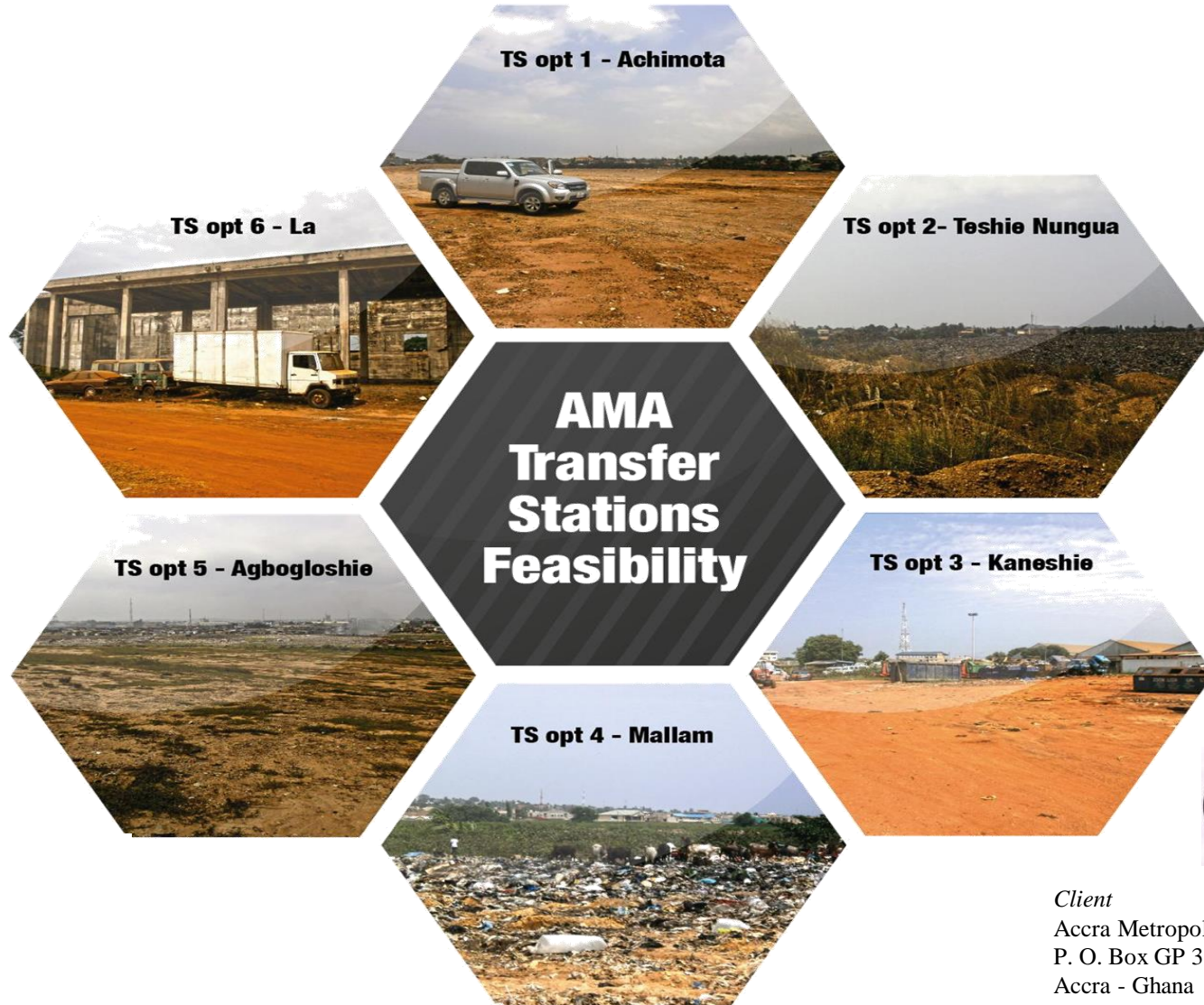
**Now...**



Tema Landfill



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# Needs Assessment

- **Direct haulage** of waste generated in the Accra Metropolitan Area is **uneconomical** for travel distance in excess of **17.7 km** and **25.9 km** for the **skip trucks** and **compaction trucks** respectively.

## Ranking of Proposed Locations

- 1 *Achimota*
- 2 *Agbobloshie*
- 3 *Mallam*
- 4 *Teshie-Nungua*
- 5 *La*
- 6 *Kaneshie*



1 - ACHIMOTA



2 - AGBOBLOSHIE



3 - MALLAM



4 - TESHIE





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# Poor O&M management due to poor budgeting for routine owning and running costs ...

CITY/LOCATION OF SYSTEM	TYPE OF FACILITY	YEAR
<b>Accra</b>		
<i>Accra Central Sewerage System, Palladium</i>	<ul style="list-style-type: none"> <li>• Con./Sewer Outfall (Sea)</li> </ul>	1973
	<ul style="list-style-type: none"> <li>• UASB-Trickling Filter/Secondary Clarifier/Sludge Beds</li> </ul>	2000





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# What are the usual reasons for breakdown of facilities and services?

CITY/LOCATION

TYPE OF

YEAR

MAN

## Reasons for breakdown:

- Frequent power cuts
- Low institutional capacities
  - Poor maintenance
- Low budgets & slow cash flow
  - Etc. etc.

1/2/2009 1:39



# more action and not words... fertile grounds for PPP !

WASTECARE the inhuman portage of nightsoil as livelihood still continues though totally banned by 2010!! no clear cut action since 1999



Friday, July 18, 2008

## Supreme Court bans use of pan latrines

By Stephen K. Effah

**THE Supreme Court has banned the use of pan latrines in the Accra metropolis, and directed the Accra Metropolitan Assembly (AMA) to phase them out within five years.**

Consequently, it has requested the AMA to construct 1,500 water closet and KVIP public places of convenience in the metropolis within the period, effective July 8, as well as arrange subsidies for those who will convert their pan latrines.

The five-member panel, presided over by Justice Sophia Akuffo, further asked the AMA to publicise the abolition of pan latrines in the metropolis, and prosecute those who fail to convert theirs to water closet or KVIP within the five-year period.

The orders by the highest court on Wednesday, followed the success of a writ brought against the AMA by an Accra-based legal practitioner, Nana Adjei Ampofo, challenging the Assembly's constitutional right to engage people to carry human excreta from pan latrines.

Adopting a settlement agreed upon by the AMA and Nana Ampofo, the court urged the assembly to enforce the prosecution of those who fail to convert their pan latrines in the metropolis.

Further, the court asked the AMA to stop granting permits to building plans "that do not have adequate provision for WC or KVIP," and directed the assembly to prosecute anyone who engages people to carry human waste after the period.

After reading the terms of the settlement, Jus-

...tice Akuffo congratulated Nana Ampofo for embarking on such an initiative and for winning the case, adding "history will be very grateful to you".

Nana Ampofo, in February this year, commenced action on the matter, arguing that the act or practice of the AMA in engaging the services of some Ghanaians to carry faeces or toilet in pans on their heads is an affront to their dignity.

He thus prayed the court to restrain the AMA to abolish the practice, since in his view, it is not only cruel and inhuman, but degrading to the carriers as human beings.

According to Nana Ampofo, the practice is inconsistent with, and contravenes Article 15 of the national Constitution which states, among other things, that the dignity of all persons shall be inviolable, and that no person shall whether or not he is arrested, restricted or detained, be subjected to torture or other cruel, inhuman or degrading treatments or punishment.

...torists are not allowed to use the bridge between 9 a.m. to 12:noon daily so that the contractors will get ample time to work on the cracked portions.

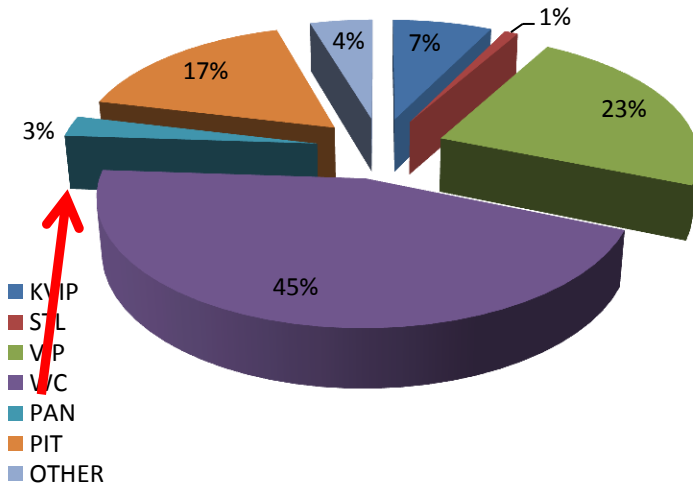
He noted that even though it is stated that the bridge would be closed to traffic for three hours daily, this may sometimes go beyond the stipulated time depending on the nature of work that being done.

Vehicles were seen parked on both sides of the bridge while passengers were seen walking across the bridge to the opposite side to board vehicles to continue their journey.

The cracks were detected last month by fishermen who later informed the GHA through the operators of the toll both on the bridge.

The Adomi bridge was commissioned by Dr Kwame Nkrumah, Ghana's First President on January 25, 1957.

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Out of estimated 20,000 country-wide, Accra alone has 4,000 pan-latrines ...



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# New Paradigm...Sustainable MINT Management

Social

Environmental

Economic

Governance





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# Sustainable MINT Management...

**Outputs:**  
Recycled products,  
Renewable energy and  
Compost

**Alternative Waste  
Technology**



**Farm**

**Closed Loop  
Solid Waste  
Management  
Cycle**



**Market**



**Household/Office**



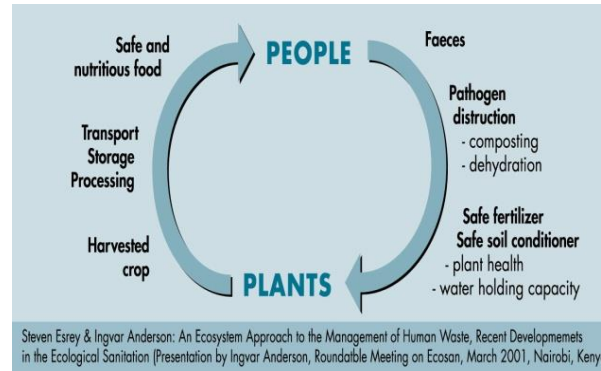
**Buy-Back centre/Transfer  
Station/MRF Facility**

**Landfill**

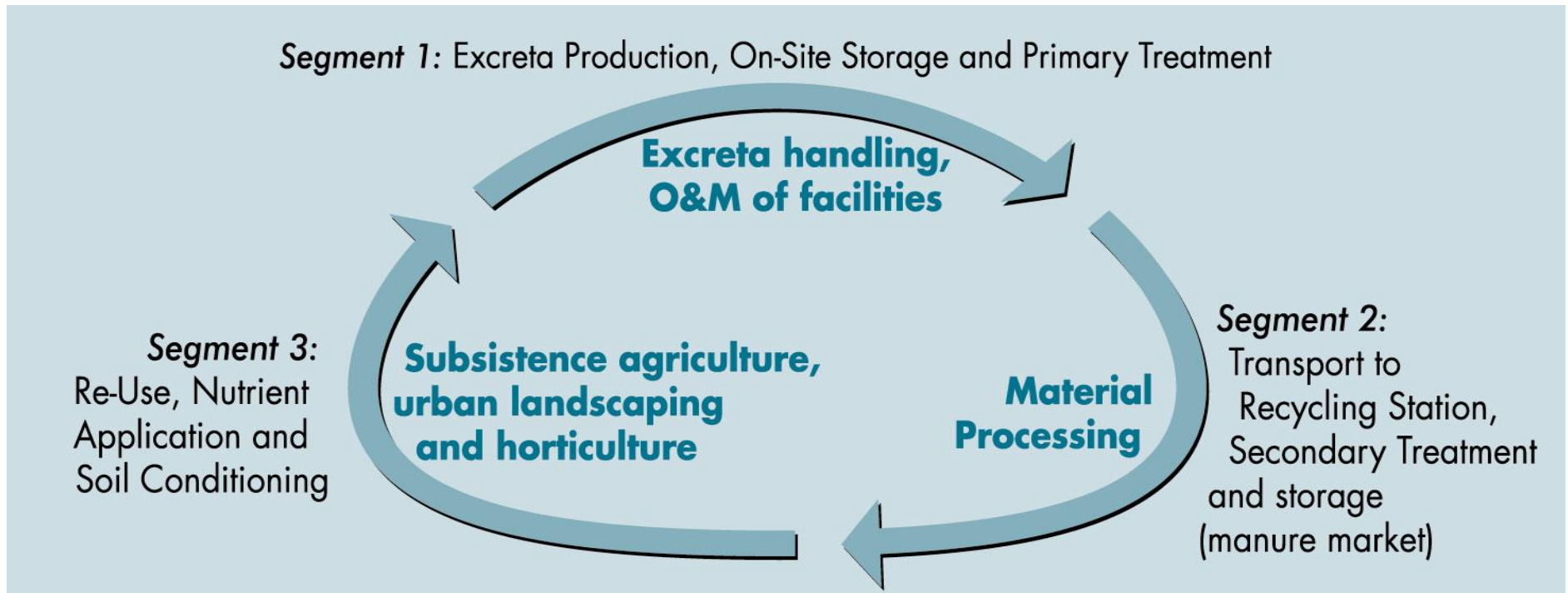


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# “Closing-the-Loop” - Defining Activities & Searching for demand drivers



Source: LY Salifu, 2001





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# MAF = MDG Acceleration Framework...



## FOUR STEPS TO ACCELERATION

**1** Identify, codify the **interventions required** to meet the MDG targets

ELEMENT



**2** Help identify and prioritize MDG bottlenecks

ELEMENT



**3** Identify **solutions** to form an MDG **Acceleration Compact** that aligns and focuses stakeholders and resources on accelerating MDG progress

ELEMENT



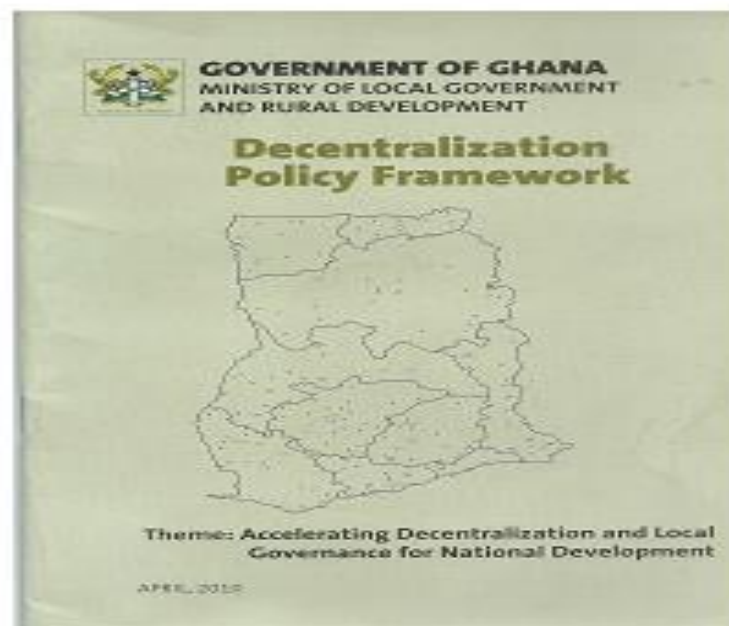
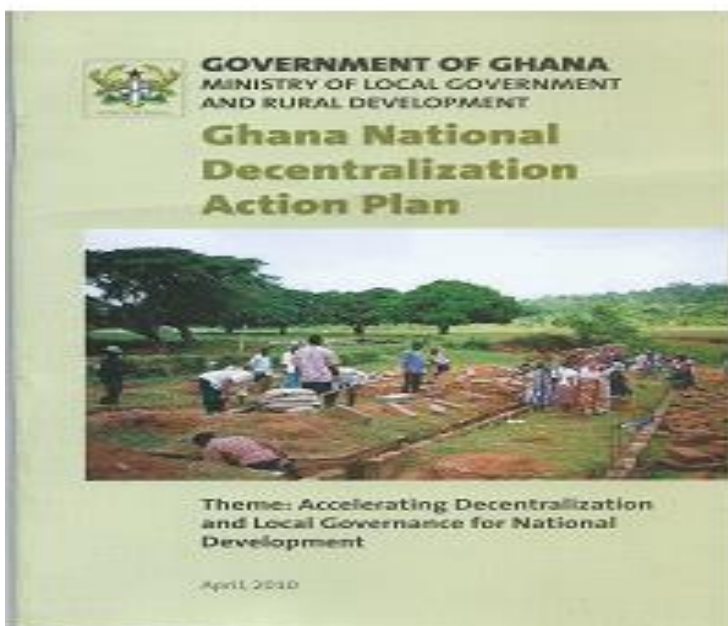
**4** Implement and **Monitor** the MDG Acceleration Compact to ensure required impact

ELEMENT



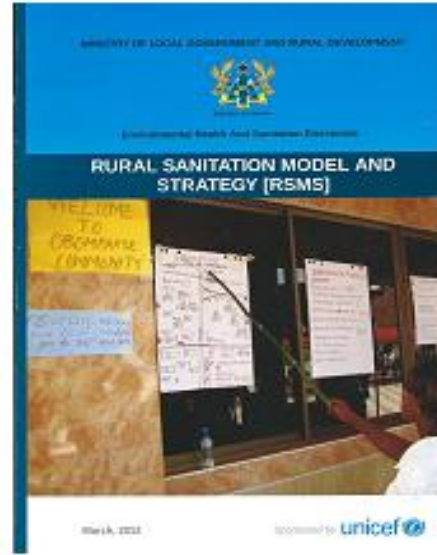
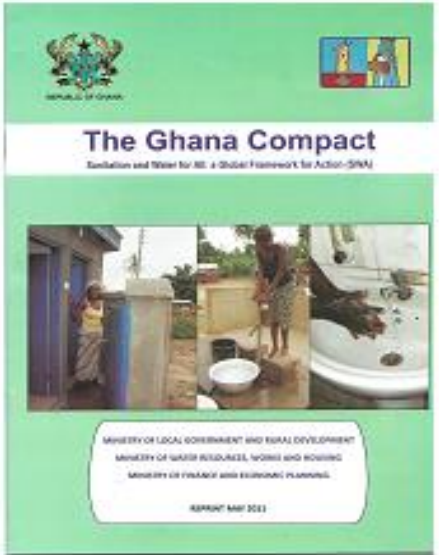
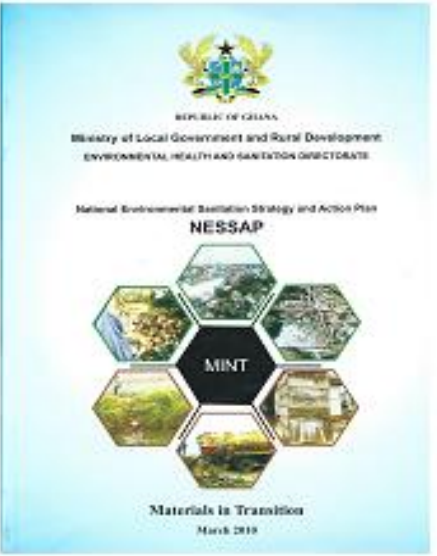
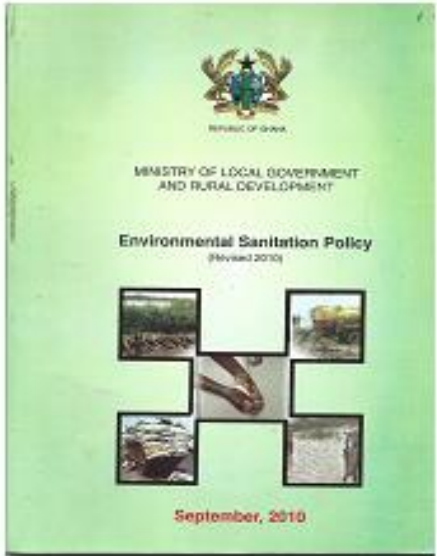


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KNUST-AISWAM National Sanitation Forum; 24 July, 2014. KNUST- AISWaM Conference Hall, Nmai Dzorn, Accra

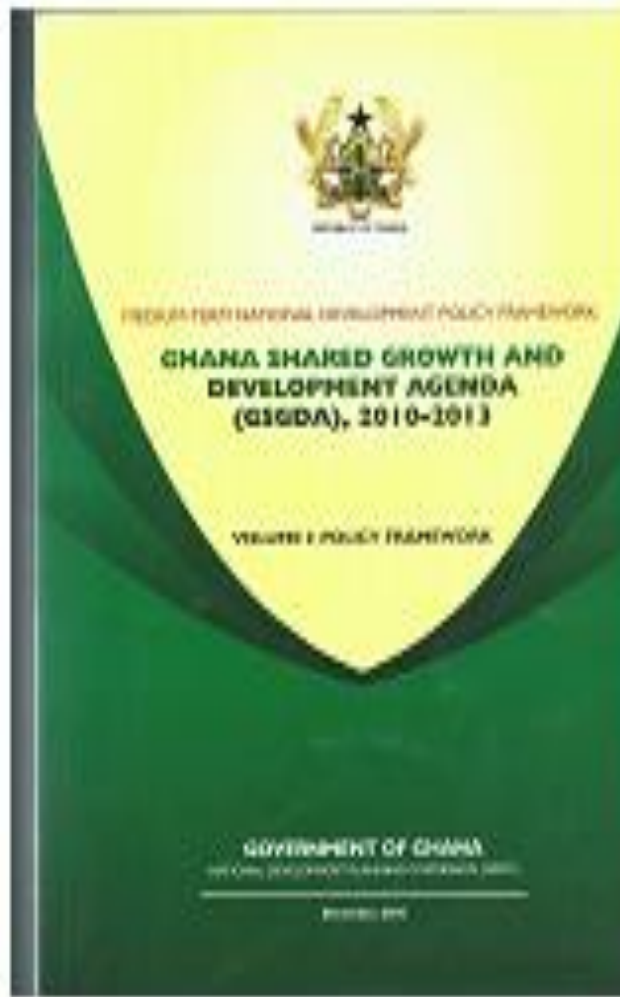




**KNUST–AISWAM National Sanitation Forum; 24 July, 2014. KNUST- AISWaM Conference Hall, Nmai Dzorn, Accra**



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KNUST–AISWAM National Sanitation Forum; 24 July, 2014. KNUST- AISWaM Conference Hall, Nmai Dzorn, Accra



# Defining interventions...Basic Sanitation

STEP 1



Documents reviewed

2 Key Interventions Defined....

3 Indicative Interventions out of many in NESSAP.

- Decentralisation Policy Framework
- Ghana National Decentralisation Action Plan
- The Environmental Sanitation Policy (Revised, 2010);
- The National Environmental Sanitation Strategy and Action Plan (NESSAP);
- The Strategic Environmental Sanitation Investment Plan (SESIP);
- Rural Sanitation Implementation Model and CLTS Scaling-up Strategy
- The Ghana Shared Growth and Development Agenda, GSGDA (2010 – 2013)

2 key intervention areas from NESSAP responsive to the GSGDA objectives

- Increasing Access to Improved Household Sanitation Facilities**
- **Provision of Treatment, Re-Use, Recovery and Disposal Facilities**

3 Indicative interventions with demonstrated large-scale copying

- Scaling-up of CLTS country-wide
- Implementation of decentralised treatment /disposal systems incorporating harvesting/re-use of By-products (e.g. biogas)
- Micro-finance credit scheme for household latrine construction

Table: First-Stage Assessment of Spatial-Location of Interventions

ITEM	Intervention	Focus	Criteria for Assessment					Global/National Events Import										
			Relevance		Scalability		VFM	Impact		Sustainability		Job Creation	Climate Change	Election 2012				
1	Scaling Up CLTS	Urban		Yellow				Red			Red			Red			Red	
		Rural	Green			Green			Yellow		Green				Red			Red
2	MFCS for Household Latrine Construction	Urban	Green			Green			Green			Yellow		Green				Red
		Rural	Green				Yellow			Yellow			Red		Yellow			
3	Decentralised ADT Systems	Urban	Green			Green			Green			Yellow		Green				Yellow
		Rural		Yellow				Red			Red			Red			Yellow	
		VFM	value for money converges 3 sub-criteria of economy, efficiency and effectiveness															
	Legend	Green	Positive impact															
		Yellow	Neutral/Uncertain impact															
		Red	Low impact															

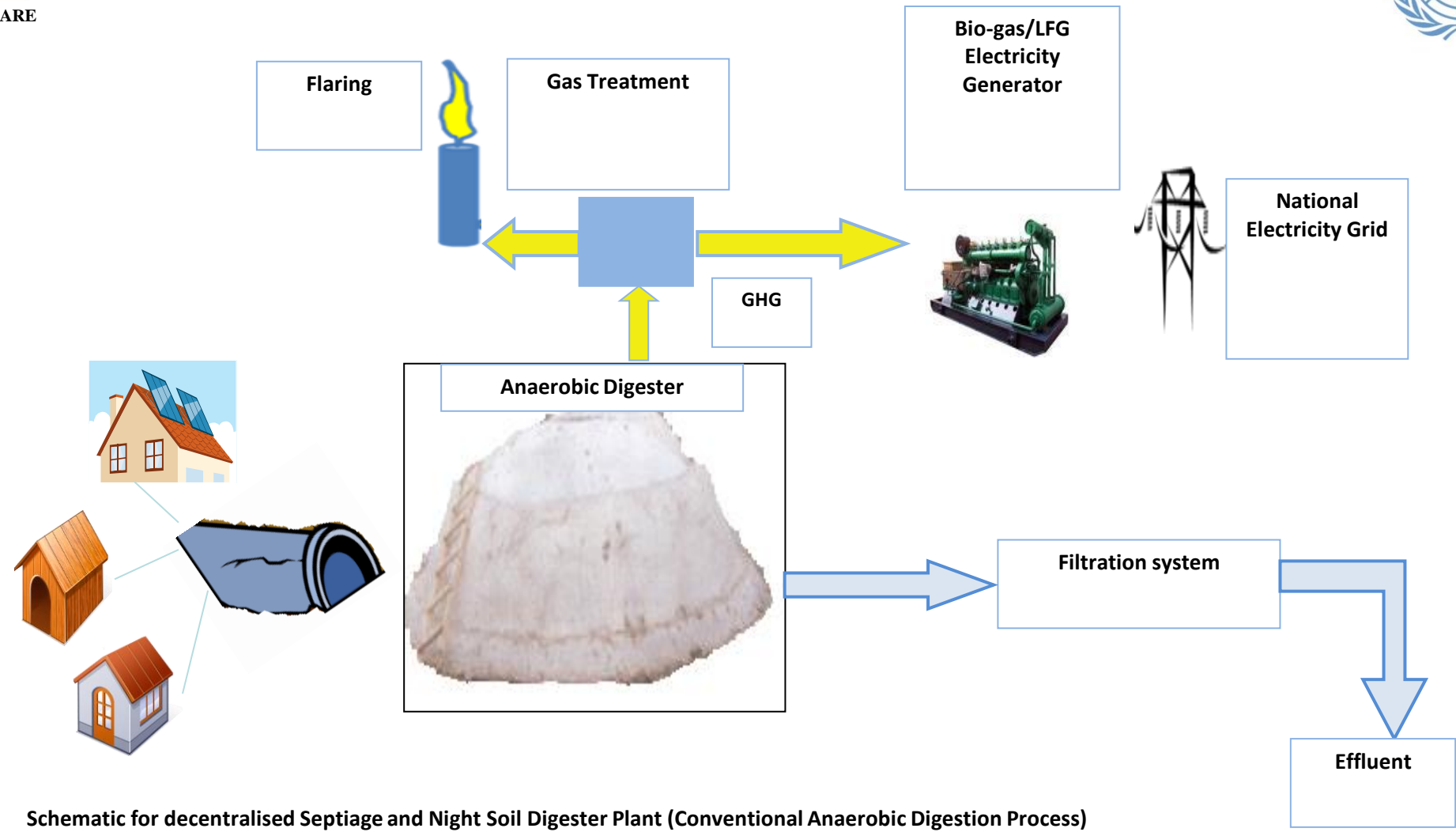


# Summary Matrix Key Priority & Indicative Interventions – **basic Sanitation**



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MDG	MDG Indicator	#	Key Intervention areas <b>(Programmes in NESSAP or derived from policy)</b>	#	Indicative Interventions <b>(long list of interventions)</b> 2011-2015
<b>Priority Area: Sustainable practices for improved sanitation and environmental sustainability</b>					
Goal 7: Ensure environmental sustainability  Target 7c: reduce by half the proportion of people without sustainable access to safe drinking water and basic sanitation	<b>Indicator 7.9: proportion of population using improved sanitation facility</b>	1	<b>Increasing access to improved household sanitation facilities</b>	1	Scaling-up of CLTS country-wide
				2	Targeted Micro-finance credit scheme for household latrine construction
		2	<b>Provision of treatment, re-use, recovery and disposal facilities</b>	3	Decentralised treatment/disposal systems incorporating harvesting/re-use of biogas



Schematic for decentralised Septiagen and Night Soil Digester Plant (Conventional Anaerobic Digestion Process)



# What are the bottlenecks slowing implementation of identified interventions ?

## STEP 2

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Priority Interventions Area(s)	Prioritized Bottlenecks	Bottleneck Category
Scaling-up of CLTS country-wide	(Resource allocation) Low prioritization of basic sanitation in budgets	Budget and financing
	(Resource mobilization) Limited donor support	
	Lack of actionable road map for scaling-up CLTS at District level	Policy and Planning
	Lack of adequate and effective monitoring	
	Inadequate coordination and alignment among sector actors at district level	
	(Institutional capacity) Inadequate capacity of the lead institution to coordinate CLTS	
	Lack of trained facilitators	Service delivery (supply)
Lack of technical support to HH to build improved facilities		



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# What are the bottlenecks slowing implementation of identified interventions ?

<b>Priority Interventions Area(s)</b>	<b>Prioritized Bottlenecks</b>	<b>Bottleneck Category</b>
Decentralised treatment/disposal systems incorporating harvesting/re-use of biogas	Inexistence of land in some areas Limited capacity to utilize PPP framework Lack of awareness of private sector about business opportunities in this type of technology	Service delivery (supply)
	Lack of awareness of HH about the usefulness of Digesters	Service utilization (demand)





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# What are the bottlenecks slowing implementation of identified interventions ?

Priority Interventions Area(s)	Prioritized Bottlenecks	Bottleneck Category	
Targeted Micro-finance credit scheme for household latrine construction	Pending commitment of the GoG to set-up a revolving Funds for basic sanitation	Policy and Planning	
	Lack of agreement between the GoG and the MFIs to operationalise Revolving Fund		
	Lack of operationalization framework of Revolving Fund		
	No monitoring system within GoG for Microfinance scheme		
	(Resource Mobilization) incl. potential financial gap		<i>Budget and financing</i>
	Low recovery rate		<i>Service delivery (supply)</i>
	High cost of credit (financial affordability)	Service utilization (demand)	



MDG Indicators	Priority Interventions Area(s)	Prioritized Bottlenecks	Prioritized Acceleration Solution (based on impact/feasibility)	Solution Financing (US\$)
<b>Indicator 7.9: proportion of population using an improved sanitation facility</b>	Scaling-up of CLTS country-wide	(Resource allocation) Low prioritization of basic sanitation in budgets	Evidence based advocacy for greater prioritization	1,308,000
		(Resource mobilization) Limited donor support	Develop and implement a resource mobilization strategy for sanitation	99,300
		Lack of actionable road map for scaling-up CLTS at District level	Design and implement the Roadmap for CLTS scaling up at district level	526,500



# Identifying and evaluating acceleration solutions...

MDG Indicators	Priority Interventions Area(s)	Prioritized Bottlenecks	Prioritized Acceleration Solution	Solution Financing (US\$)	Potential Partners
	Decentralised treatment/disposal systems incorporating harvesting/re-use of biogas	Non-existence of land in some areas	Make an inventory of existing sanitary sites	78,300	MMDA
		Limited capacity to utilize PPP framework	Develop & implement a comprehensive capacity building strategy on PPP	1,926,000	MoFEP/M LGRD
		Lack of awareness of private sector about business opportunities in this type of technology	Develop and implement an effective communication strategy directed towards the private sector	69,200	GOG/DP
			Train private sector in design and installation of biogas facilities		MLGRD/MEST
		Lack of awareness of HH about the usefulness of Digesters	Implement 'awareness-raising' campaign directed to HHs	25,000	MMDA/M LGRD/ME ST/MoI- ISD

MDG Indicators	Priority Interventions Area(s)	Prioritized Bottlenecks	Prioritized Acceleration Solution	Solution Financing (US\$)	Potential Partners
	Targeted Micro-finance credit scheme for household latrine construction	Pending commitment of the GoG to set-up a revolving Funds for basic sanitation	Facilitate inter-ministerial consensus to speed up approval of the SESIP	36,200	MoFEP/ML GRD
		Lack of agreement between the GoG and the MFIs to operationalize the Revolving Funds	Develop a comprehensive institutional framework, including agreement & monitoring system, for implementing the revolving fund	57,600	BoG/ARB Apex Bank/GHA MFIN
		Lack of operationalization framework of the Revolving Funds (Resource Mobilization) incl. potential financial gap	Develop and implement resource mobilization strategies	(cost as part of Investment Forum under xx)	MoFEP/ML GRD/RNE /CIDA



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# Who does what and brings what ...compact !!!



Priority MDG Target	Prioritized interventions	Prioritized bottlenecks	Acceleration solution	Solution Financing	Responsible partner(s)
<b>Indicator 7.9:</b> proportion of population using improved sanitation facility	<b>Scaling-up of CLTS country-wide</b>	Lack of actionable road map for scaling-up CLTS at District level	Design and implement the Roadmap for CLTS scaling up at district level	GH¢25 million per annum	MLGRD, UNICEF
		(Resource allocation) Low prioritization of basic sanitation in budgets	Evidence based advocacy for greater prioritization		MLGRD, CSO, MOFEP, ISODEC
	<b>Decentralised treatment/disposal systems incorporating harvesting/re-use of biogas</b>	Inexistence of land in some areas	Make an inventory of existing sanitary sites	installation of (DETERRR) systems	MLGRD, MMDAs
		Limited capacity to utilize PPP framework	Develop & implement a comprehensive capacity building strategy on PPP	GH¢7.25 million for 50 facilities	MoFEP, Private Sector, LGSS, UNDP



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Focus on **partnerships**, objectives and deliverables for Steps 1 - 4:



Priority MDG Target	Prioritized interventions	Prioritized bottlenecks	Acceleration solution	Solution Financing	Responsible partner(s)
<b>Indicator 7.9: proportion of population using an improved sanitation facility</b>	Targeted Micro-finance scheme for household latrine construction	Pending commitment of the GoG to set-up a revolving Funds for basic sanitation	Facilitate inter-ministerial consensus to speed up approval of the SESIP	GH31 million per annum to revolving fund for facilities	MoFEP/MLGRD, UNICEF
		Lack of agreement between GoG and the MFIs to operationalise Revolving Funds	Develop a comprehensive institutional framework, including agreement & monitoring system, for implementing the revolving fund		MLGRD, MoFEP, ARP Apex Bank, Private Sector, WB
		Lack of operationalisation framework of the Revolving Funds			
		No monitoring system within GoG for the Microfinance scheme			



<b>Focus area of Environmental Sanitation Policy (Revised, 2010)</b>	<b>Broad policy objective</b>	<b>Policy measure/action</b>	<b>Sample derived actions</b>
<b>Levels of Service</b>	To support adequate treatment and final disposal of all wastes	Ensure acquisition of appropriate sites for treatment and disposal facilities using participatory principles including SEA;	Locate sites for development of new Transfer Stations with material recovery facilities (MRFs) for municipality Develop stand-alone MRFs/buy-back centres locate, select and develop new landfill sites for municipality
	To respond effectively to increasing waste volumes and changing waste streams due to growing economy and varying life-styles	Provide services and facilities for primary separation of solid wastes at household, community and public levels	Implement strategy for source-separation of MINT streams e.g. provision of labelled bins vrs branded sacks (e.g. for BoF, glass, plastics, paper)



**Focus area of  
WASTECARE  
Environmental Sanitation  
Policy  
(Revised,  
2010)**

**Broad policy  
objective**

**Policy measure/action**

**Sample derived actions**

**Information,  
Education  
and  
Communication**

To raise awareness on the increasing waste levels associated with growing economy and related lifestyle changes

Promote benefits of alternative uses of wastes through Reduction, Re-use, Recycling and Recovery

Implement advocacy programme e.g. TV/road shows on specific projects on re-use, recycling and recovery

To enable effective community participation in the siting of environmental sanitation facilities


Promote use of biodegradable materials and minimise use of plastics

Implement vigorous campaign for labelled/branded sacks and bin liners

Develop participatory tools for identification and selection of sites in accordance with strategic environmental assessment (SEA) principles

Support advocacy on involvement of communities in the selection of sites for transfer stations and final disposal



 <p>Focus area of ESP (Revised, 2010)</p>	Broad policy objective	Policy measure/action	Sample derived actions
<p><b>Sustainable financing and cost recovery</b></p>	<p>To ensure sustainable financing of environmental sanitation services</p>	<p>Apply direct cost recovery from all users as far as possible covering all operating and capital costs, for services such as liquid and solid waste collection, issuance of permits etc</p>	<p>Implement Pay-As-You-Dump in selected collection zones for communal containers; to supplement franchised house-to-house collection schemes</p> <p>(for e.g. some residents of Atonsu and Abosbo communities in Kumasi, pay <b>0.50 GHp</b> per dump)</p>
		<p>MMDAs shall set tariffs with full participation of private sector service providers and users</p>	
	<p>To develop a strategy and financing plan with clear allocation of resources (and costs) for households, communities, MMDAs and central government</p>	<p>Identify and implement options for generating sustainable revenue to support environmental sanitation such as levies on producers and importers of pollutants especially plastics etc</p>	<p>Review funds generation potential of tax on plastic material; Imported WEEE (end-of-life payments)</p>
		<p>MMDAs shall identify additional sources of revenue for sustaining environmental sanitation including rates, fees, water-surtax etc.</p>	<p>Implement new fiscal regime for raising revenue for waste management services including branded sacks for separated waste</p>
	<p>Develop and implement a Strategic Environmental Sanitation Investment Plan (SESIP)</p>	<p>MLGRD to champion passage of SESIP without delay to prompt/augment donor/private sector investments</p>	



**Activity**

**Priority Interventions**

**Prioritized Bottlenecks**

**Prioritized Acceleration Solution**

**Solution Financing (GHC)**

**Potential Partners**

**Level of Service**

Locate sites for development of new Transfer Stations with material recovery facilities (MRFs) for municipality

Develop stand-alone MRFs/buy-back centres

locate, select and develop new landfill sites for municipality

Implement strategy for source-separation of MINT streams e.g. provision of labelled bins vrs branded sacks (e.g. for BoF, glass, plastics, paper)



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Activity	Priority Interventions	Prioritized Bottlenecks	Prioritized Acceleration Solution	Solution Financing (GHC)	Potential Partners
<b>Information, Education and Communication</b>					
Implement advocacy programme e.g. TV/road shows on specific projects on re-use, recycling and recovery					
Implement vigorous campaign for labelled/branded sacks and bin liners					
Support advocacy on involvement of communities in the selection of sites for transfer stations and final disposal					



**Activity**

**Priority Interventions**

**Prioritized Bottlenecks**

**Prioritized Acceleration Solution**

**Solution Financing (GHC)**

**Potential Partners**

**Sustainable financing and cost recovery**

Implement Pay-As-You-Dump in selected collection zones for communal containers; to supplement franchised house-to-house collection schemes

Review funds generation potential of tax on plastic material; Imported WEEE (end-of-life payments)

Implement new fiscal regime for raising revenue for waste management services including branded sacks for separated waste

MLGRD to champion passage of SESIP without delay to prompt/augment donor /private sector investments



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<b>Activity</b>	<b>Priority Interventions</b>	<b>Prioritized Bottlenecks</b>	<b>Prioritized Acceleration Solution</b>	<b>Solution Financing (GHC)</b>	<b>Potential Partners</b>



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“Civilized man could embark on no task nobler than sanitary reform”

Boston Board of Health, 1869

*Thank you for your kind attention*