GREATER ACCRA RESILIENT AND INTEGRATED DEVELOPMENT (GARID) PROJECT

MINISTRY OF SANITATION AND WATER RESOURCES

RESULTS BASED FINANCING CONCEPT DOCUMENT

JUNE 2021

EXECUTIVE SUMMARY

Overview of GARID Project

The Greater Accra Resilient and Integrated Development (GARID) Project is assisted by the World Bank. The Government of Ghana is implementing this project aimed at supporting critical investments to cope with increased urbanization pressures, and disaster and climate change impacts in Greater Accra Region. The project is being implemented by the Ministry of Works and Housing (MWH), the Ministry of Sanitation and Water Resources (MSWR) and the Ministry of Local Government, Decentralisation and Rural Development (MLGDRD), across 17 Metropolitan and Municipal Assemblies (MMAs) in the Greater Accra Metropolitan Area (GAMA) which fall within the Odaw river catchment. The Project is expected to be implemented within a six-year duration (2019 – 2025). The project has therefore been structured under four main projects:

- Component 1: Climate Resilient Drainage and Flood Mitigation Activities
- Component 2: Solid Waste Management Capacity Improvements
- Component 3: Participatory Upgrading of Targeted Flood Prone LICs & Local Government Support
- Component 4: Project Coordination and Management

The development objective of the Project is to improve flood risk management and Solid Waste Management (SWM) within the Odaw River Catchment of the Greater Accra Region; and to improve access to basic infrastructure and services in selected communities within the Odaw River Basin. Component 2 has been designed to reduce the amount of solid waste flowing into the primary Odaw River or Drain. Prime emphasis has been laid on the reduction of the municipal solid waste that ends up in the ocean, thus, reducing the level of marine litter and the overall environmental protection of the Odaw Basin. To effectively achieve this objective, the Project proposed the adoption of a result-based community incentive mechanism as a catalyst to improving the management of Municipal Solid Waste (MSW) in communities within the Odaw River Catchment. This report is therefore the Results Based Financing (RBF) Scheme for the Solid Waste Management improvement in municipalities within the Odaw River Catchment.

Context of Results Based Financing Mechanism

Progress made so far under this Component include the conduct of comprehensive assessments and situational analysis of the MSWM system of the 17 municipalities within the Odaw River Catchment, and the development of the Solid Waste Management Improvement Plan (SWMIP). The key issues and needs along the MSWM value chain gleaned from the assessments which formed the basis for the proposals in the SWMIP and the RBF Scheme are presented as follows:

- Inadequate services by Formal Service Providers (FSPs) especially in low-income communities (LICs)
- Potential of Informal Service Providers (ISP) to support MSW Collection in low-income areas

- High incidence of littering, and inadequate data, monitoring and reporting on solid waste collection.
- Service user inclusivity in Solid Waste Planning and Monitoring. Service user engagement, participatory decision making, monitoring and feedback is not widespread in most MMAs
- Recycling sector largely informal, but Informal Waste Pickers (IWP) have the potential to support delivery of recyclables to waste recovery facilities.
- Inadequate number of Composting and Anaerobic Digestion Plants but the source-separation of waste, offers a viable opportunity for recovery and processing of organic waste.

The Results Based Financing Mechanism

Results-based financing mechanisms (RBF) is a relatively new lending instrument designed to support government programs to help achieve the required behavioural and institutional changes necessary for delivering sustainable and improved services including Municipal Solid Waste Management. RBF is considered as a response to calls globally for governments and development partners to deliver measurable results, as better results are fundamental to fiscal sustainability, poverty reduction, and inclusive or transition to green growth. Thus, RBF provides opportunities to enhance the achievement of development results. Essentially the RBF approach to MSWM seeks to link disbursements directly to the achievement of program results (Mumssen, et al. 2010). Generally, RBF programmes have a primary goal of delivering and sustaining results, thus improving the effectiveness and efficiency of public sector programs, promoting institutional development, and enhancing development effectiveness.

Strategic Objectives of the RBF

Based on the existing weakness and the challenges that the 17 target Municipalities of the GARID project face regarding SWM and service delivery, RBF approaches can help ensure that available Project funds are used more efficiently and transparently to increase the impact and sustainability of investments under the project. Three strategic objectives have been identified from the SWMIP and designed into RBF schemes as follows:

- *Objective 1:* Improving primary waste collection in low-income communities within the Odaw catchment.
- *Objective 2:* Improving cleanliness of communities in MMAs within the Odaw basin.
- *Objective 3:* Improving source separation and management of bring-back centres in communities within the Odaw basin (Households, Schools, & other Institutions).

The rationale for selecting these 3 RBF driven intervention areas for consideration is due to their collective potential to impact and strengthen the whole MSWM value chain, and because of their impact on infrastructure aspects, inclusivity and gender issues, capacity building, cost recovery and financial sustainability, and behaviour change for improved MSWM. The selected objectives also respond to the key issues listed in the National strategy. The table below presents a snapshot of the RBF schemes proposed towards implementing the solid waste management improvement plan.

Summary of the proposed Result Based Financing Scheme

RBF Objective	Key Results	RBF Instruments	Contracting	Payment Arrangement	Sustainability/ Cost Recovery
Objective 1: Improving primary waste collection in low-income communities within the Odaw catchment	Five key results areas were considered under this objective: • Output 1: Informal Service Providers integrated into the MSWM system by MMAs • Output 2: Improved waste collection coverage • Output 3: Improved waste capture • Output 4: Improved quality of waste collection services	Under this component the following RBF instruments will be used: • Output-based disbursement • Mix of subsidies/ incentives • Performance-based contracts	Three main agreements will be signed among actors: • PIU-MSWR, and the MLGRD will sign an MOU with the target MMAs. • PIU-MSWR and MMAs will sign a 'management service agreement' with a service provider to provide technical backstopping for ISPs. • The MMAs and the Service Provider will also sign an MOU with the ISP Cooperatives to guide their operations.	The following triggers have been set for each of the output areas: • Output1: PMU receives activity report from the Independent Verification Agents (IVAs) on the activities on integrating ISPs. • Output 2: PMU receives report from the IVA about MMA completing key activities. • Output 3: MMA receives reports from the IVA on monthly basis on waste capture in LICs. • Output 4: IVAs report on the quality of services.	• Representatives of the community should be included in the institutional framework established for implementing the RBF.
Objective 2: Improving Cleanliness of Communities in MMAs within the Odaw Basin	Two broad results areas are considered: • Output 1: All the streets, drains, public spaces, and open spaces under the jurisdiction of all participating MMAs are clean (are without litter) • Output 2: The cleanliness of streets, drains, public and open spaces under the jurisdiction of MMAs is maintained throughout the year.	Two RBF instruments will be considered: • An output-based disbursement for MMA Officials (environmental Health Officers (EHOs)) based on their performance in delivering output. • Prize-based challenge - MMAs will be provide funding in the form of an award.	Two main agreements will be prepared and signed: • A tripartite performance-based agreement will be signed among the GARID PMU, MLGRD, and MMAs. MMAs will also be required to sign a subsidiary "performance agreement" with its officials. • A memorandum of understanding will be signed among the GARID PMU, MLGRD, MSWR, and participating MMAs on the "cleanest MMA Award".	The following triggers have been set for each of the output areas: • Output 1: IVA's report on Performance of MMAs confirming achievement of the set targets (in at least 5 of the listed result areas) • Output 2: An Aggregated Results and Report (to be compiled by an award committee) showing the winners for the following categories of the Awardees: Cleanest MMA, Most Improved and Most Innovative MMA	• MLGDRD and MSWR will take-up the total cost of the award scheme from 2026. • Participating MMAs are required to increase their allocations and disbursement for MSWM related supervision, monitoring and law enforcement activities.

Objective 3: Improving Source Separation and Management of Bring-Back Centres within the Odaw Basin (Households, Schools, and other Institutions)	• All households in target communities have 'fit for purpose' storage receptacles for source separation. • All households in target communities sensitised on the appropriate source separation practices. • All households in target communities practise source separation. • Increased volumes of segregated recyclables bought by bring-back centres.	The proposed RBF instruments to be used for the RBF is as follows: • Output -based transfers for MMAs • Output-based transfers for the bring-back centres • Incentives for households	The contractual arrangements are as follows: • PMU will sign a contract with MMAs to distribute 'fit for purpose' receptacles to households in target communities for source separation. • A tripartite contract between the PMU, MMAs and bring-back centres to trigger the RBF based on the performance of the bring-back centre.	The key results and their triggers are as follows: • Output 1: PMU receives activity report on the distribution of 'fit for purpose' receptacles in the target communities. • Output 2: PMU receives report from IVAs confirming all households in targeted communities have been sensitized. • Output 3: Monitoring reports from IVA showing households that received the 'fit for purpose' receptacles and are practicing source separation. • Output 4: IVAs report on volumes of recyclables bought by bring-back centres, and the value of recyclables at bring-back centres.	• The bring-back centres should be professionally run as a profit-making venture. • Monitoring of bring-back centres should be incorporated into the routine inspection activities of EHSU • Make bring-back centres first point of sale or drop off for recyclables.

Institutional Arrangements and Stakeholder Roles

The implementation of the RBF Scheme will be handled within the institutional framework defined for the implementation of the Component 2 of the GARID Project. Institutional arrangements should be adequate in serving both the SWMIP and the RBF Scheme. The National Level Coordination Team will be responsible for ensuring the mainstreaming of the management of the RBF implementation into the broader picture of SWMIP. The National Level Coordination Team comprises:

- Project Implementation Unit (PIU) to be set-up within the Ministry to provide oversight and general coordination of implementation of the strategy.
- Project Management Unit (PMU) which is constituted as a technical body to support the Ministry in the implementation of the strategy.

Phasing of RBF support and selection of Beneficiary Communities

The RBF scheme is designed as a special input to strengthen the process of achieving remarkable improvements in MSWM in the entire Odaw river catchment. Given that RBF in solid waste management in Ghana is new, it is proposed that the RBF Scheme for "*improving primary waste collection*" should be implemented in the three communities (Aloboshie, Akweteyman, Nima and Old Fadama), while four MMAs are selected to implement the RBF Scheme for "improving cleanliness of target communities" as the first phase (2021 - 2023) for the roll-out of the RBF Scheme. Based on progress, lessons learnt and resource availability, additional MMAs and communities can be enrolled. The RBF Scheme on "improving source separation and management of bring-back-centres" will be introduced in the second phases (2024 – 2026) of the other schemes.

Implementation of the RBF Concept Document

The RBF document is considered a guiding document that will facilitate the implementation of the proposed RBF schemes. However, the MSWR may decide to make further adjustments to some aspects to make them more aligned to GARID project implementation strategy, while maintaining critical considerations under an RBF (payment of incentives to service providers based on achievement of agreed results, appropriate verification of performance before payments, etc.). Before implementing the RBF Schemes, sector dialogue involving a wider scope of stakeholders from the National and MMA levels, and proposed service providers is recommended to disseminate the RBF proposal and receive feedback on the following, among others:

- Definition of the RBF scheme, objectives, strategic relevance, and rationale.
- Proposed results to be achieved under each scheme and the design of the RBF.
- Phasing of implementation and the selection of participating communities.
- Framework for Verification and M&E
- Required capacity building and Technical Assistance Support
- Institutional arrangements for implementation.
- Proposed expenditures, nature of activities and implementation arrangements.
- The risks to achieving the RBF Program's objectives and results.

Summary of Financial Projection of the RBF

The table below presents the summary of the total cost of the proposed RBF scheme, based on the different RBF components.

Total costs based on RBF objectives and technical assistance and capacity building

No.	Results/Output	Total Budget ($)	Total Budget (GHC)
1.	**Improving primary collection in low-income communities**		
1.1	Informal Service Providers integrated	240,000.00	1,392,000.00
1.2	Improved waste coverage	55,000.00	319,000.00
1.3	Improved waste capture	184,493.79	1,070,063.98
1.4	Improved quality of waste collection services	57,500.00	333,500.00
	Sub-total	***536,993.79***	***3,114,563.98***
2.	**Improving cleanliness of communities in MMAs within the Odaw Basin**		
2.1	Payment to MMAs (for Monitoring, Supervision and Law Enforcement)	271,020.00	1,571,916.00
2.2	Payment to MAs (for Winning one of the Cleanest City Awards)	1,000,000.00	5,800,000.00
	Sub-total	***1,271,020.00***	***7,371,916.00***
3.	**Improving source separation and management of bring-back centres in communities within the Odaw Basin**		
3.1	Fit-for-purpose storage receptacles distributed	474,694.78	2,753,229.72
3.2	Households sensitised on source separation by EHSU	30,000.00	174,000.00
3.3	Source separation practised by households	30,000.00	174,000.00
3.4	Increased volumes of clean segregated recyclables bought by bring-back Centres	289,831.89	1,681,024.96
	Sub-total	***824,526.67***	***4,782,254.69***
4.	**Technical Assistance and Capacity Building**		
4.1	Initial Engagement on RBF (2 Days) (USD)	3,200.00	18,560.00
4.2	Training on RBF Action Plan (1 Day) (USD)	1,600.00	9,280.00
4.3	Engagement of IVA (5 IVAs) (USD)	300,000.00	1,740,000.00
4.4	Engagement of Coaches (5 Coaches) (USD)	450,000.00	2,610,000.00
4.5	Training for MMA Staff on WS (1 day) (USD)	6,800.00	39,440.00
	Sub-total	***761,600.00***	***4,417,280.00***
	Total	**3,394,140.46**	**19,686,014.67**

DETAILED RBF CONCEPT TABLE

Results Areas	Objectively Verifiable Indicator (OVI)	RBF Instrument	Current Status	End Targets	Time line	Frequency	Means of Verification (MOV)	Actors	
								Implementation	Verification
OBJECTIVE 1: Improving Primary Waste Collection in Low-Income Communities Within the Odaw Catchment									
Informal Service Providers integrated into the MSWM system by MMAs	• Number of ISPs identified and registered • Number of ISPs trained and assigned to defined service zones • Number of ISPs licensed to operate in service zones	Output based disbursement	_	95%	2021 - 2022	Based on Activity	○ User Surveys ○ ESICApp Reports ○ Service Provider logbooks ○ Project Activity reports	MSWR, MMAs, ISPs.	IVA
Improved Waste Collection coverage (to 90%)	• Proportion of Households with collection services • Percentage of Households and institutions signed up to services • MSW service user database established	Output based disbursement	71%	90%	2021 - 2022	By the end of the 1st Year	○ User surveys ○ ESICApp Reports ○ Service Provider logbooks ○ Data base on users in place	MSWR, MMAs, FSPs, SPs & Community	IVA
Improved Waste Capture increased (to 90%)	• Percentage of households/institutions signed up to collection service who are served during a collection event • Volume of waste collected from households/ institutions • Percentage of households/institutions whose waste is collected and transported appropriately	• Output based disbursement • Performance based contract	73%	90%	2021 - 2023	Monthly	○ User surveys/ scorecards ○ Service Provider logbooks ○ ESICApp report ○ Spot checks	MMAs, FSPs & Community	IVA
Improved Quality of Waste Collection Services	• Number of times waste is collected for households/ institutions • Volume of waste received at transfer stations/ disposal points • Volumes of recyclables collected from households to bring-back centres • Number of ISPs with properly covered waste during transportation • Number of waste collectors in required safety wears	Output based Disbursement	N/A		2022 - 2023	Quarterly	○ User surveys/ scorecards ○ Service Provider logbooks ○ ESICApp report ○ Spot checks ○ Records from Bring-back Centres	MMAs	IVA
OBJECTIVE 2: Improving Cleanliness of Communities in MMAs Within the Odaw Basin									
All the streets, drains, public spaces, and open spaces under the jurisdiction of all participating MMAs are clean (are without litter)	• All major streets in the MMA are clean (are without litter) • All drains in the MMA are clean (are without litter) • All open spaces and refuse points are clean (are without litter) • All public spaces (Markets and Lorry Parks) clean (are without litter) • Solid Waste Management related offenders are arraigned before a law court, prosecuted, and fined	Output based disbursement	_	100%	2022	Quarterly	○ Spot Checks ○ Drone Photographs ○ Citizen Report ○ ESICapp Report	MMAs, SPs & community	IVA
The cleanliness of streets, drains, public and open spaces under the jurisdiction of MMAs is maintained throughout the year.	• All major streets in the MMA are clean (are without litter) • All drains in the MMA are clean (are without litter) • All open spaces and refuse points are clean (are without litter) • All public spaces (Markets and Lorry Parks) clean (are without litter)	Output based disbursement	_	100%	2024 - 2026	Quarterly	○ Spot Checks ○ Drone Photographs ○ Citizen Report ○ ESICapp Report	MMAs, SPs & Community	IVA
All open spaces and refuse points are clean (are without litter)	• Number of Open Spaces found with Litter	Output based disbursement	_	100%	2024 - 2026	Quarterly	○ Spot Checks ○ Drone Photographs ○ Citizen Report ○ ESICapp Report	MMAs, SPs & Community	IVA
All public spaces - Markets and Lorry Parks clean (are without litter)	• Number of Markets/Lorry Parks Clean (without litter and well-managed refuse points) or Dirty (with litter and poorly managed refuse points) • Number of Refuse Sites/Skip Container Sites with Litter (overflowing refuse)	Output based disbursement	_	100%	2024 - 2026	Quarterly	○ Spot Checks ○ Drone Photographs ○ Citizen Report	MMAs, SPs, Managers of public places	IVA
Solid Waste Management Byelaws are being enforced	• Number of SW related offences taken to court • Number of Offenders punished • Number of Offenders cautioned	Output based disbursement	_	100%	2024 - 2026	Quarterly	○ Court Records	MMAs, SPs, Community	IVA
IGF disbursement for Supervision, Monitoring and Enforcement Activities related to MSWM	• Proportion of IGF used for SWM Governance related activities	Output based disbursement	_	100%	2024 - 2026	Quarterly	○ Financial Statement of MMAs	MMAs	IVA
Critical areas (streets, selected drains, public spaces, and open spaces within communities) inspected by EHOs/EHAs and Waste Management Officers at least twice every month	• Number of times critical areas (streets, selected drains, public spaces, and open spaces within communities) were visited by EHOs/EHAs in a month	Output based disbursement	_	100%	2024 - 2026	Quarterly	○ Spot Checks ○ Inspection Reports (ESICapp Report)	MMAs, SPs	IVA

Results Areas	Objectively Verifiable Indicator (OVI)	RBF Instrument	Current Status	End Targets	Time line	Frequency	Means of Verification (MOV)	Actors	
								Implementation	Verification
MMAs have the cleanest Streets, Drains, Public Spaces and Open Spaces throughout the year.	• Cleanest MMA (the MMA with the highest scores) • Most Improved MMA – (the MMA with the highest improvement in scores – using the previous year as baseline) • Most Innovative MMA (an MMA that implemented an intervention – either by making use of new technology or devised a new MSWM management approach or community mobilisation approach that significantly contributed towards the achievement of the goals.	Prize-based challenge	_	100%	2022	Annually	○ Aggregated quarterly assessment reports for each MMA (Submitted by IVAs).	MLGRD, MSWR MMAs,	Award Committee,
OBJECTIVE 3: Improving Source Separation and Management of Bring-Back Centres in communities within the Odaw Basin									
All households in target communities each have "fit for purpose" storage receptacles for source separation	• Number of households that have been provided with 'fit for purpose' storage receptacles for source separation • Number of household agreement forms for source separation signed by households in target communities	• Incentives.	_	100%	2024	After formal report is submitted on distribution of receptacles.	• Activity report • Spot checks • ESICApp reports • Household Agreement forms	MSWR, PMU MMAs	IVA
EHSU sensitise households on source separation	• Number of households who are educated and supervised (monthly) • Number of agreed sensitisation programmes implemented	Output based disbursement	_	_	2024 - 2026	Quarterly	• Activity report • Spot checks • ESICApp reports	MMA & Community	IVA
All households in target communities practice source separation	• Number of household agreement forms for source separation signed by households in target communities • Number of households practicing source separation	Output based disbursement	_	100%	2024 - 2026	Quarterly	• Monitoring reports • Spot checks • ESICApp report	MMA, SPs & community	IVA
Increased volumes of clean segregated recyclables bought by designated bring-back centres	• Volumes of recyclables handled at the bring-back centres	Output based disbursement	_		2024 - 2026	Quarterly	• Records at Bring-back Centres	MSWR, Waste Pickers, Private sector, Recycling Companies & Community	IVA

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AbCMA	Ablekuma Central Municipal Assembly
AbNMA	Ablekuma North Municipal Assembly
AbWMA	Ablekuma West Municipal Assembly
ACMA	Ayawaso Central Municipal Assembly
AdMA	Adentan Municipal Assembly
AEMA	Ayawaso East Municipal Assembly
AMA	Accra Metropolitan Assembly
ANMA	Ayawaso North Municipal Assembly
AWMA	Ayawaso West Municipal Assembly
CES	Climate, Environmental and Social
CSS	Climate Safeguards System
ESS	Environmental and Social Safeguards
ESIA	Environmental and Social Impact Assessment
ESICApp	Expanded Sanitary Inspections Compliance Application
EHA	Environmental Health Assistant
EHO	Environmental Health Officer
EHSU	Environmental Health and Sanitation Unit
EPA	Environmental Protection Agency
DLI	Disbursement Loan Indicators
FSP	Formal Service Provider
GCMA	Ga Central Municipal Assembly
GAMA	Greater Accra Metropolitan Area
GARID	Greater Accra Resilient Integrated Development
GEMA	Ga East Municipal Assembly
GNMA	Ga North Municipal Assembly
GoG	Government of Ghana
GWMA	Ga West Municipal Assembly
IGF	Internally Generated Fund
KoKMA	Korley Klottey Municipal Assembly
ISP	Informal Service Provider
ISWM	Integrated Solid Waste Management
ITVA	Independent Technical Verification Officer
IVA	Independent Verification Agent
IWP	Informal Waste Pickers
LaDMA	La Dadekotopon Municipal Assembly
LIC	Low-Income Communities
LaNMMA	La Nkwantanang-Madina Municipal Assembly
MEHO	Municipal Environmental Health Officer
M&E	Monitoring and Evaluation
MEL	Monitoring, Evaluation and Learning
MLGRD	Ministry of Local Government and Rural Development
MMA	Metropolitan and Municipal Assemblies
MOV	Means of Verification
MSWM	Municipal Solid Waste Management
MSW	Municipal Solid Waste

MSWR	Ministry of Sanitation and Water Resources
MWH	Ministry of Works and Housing
MoU	Memorandum of Understanding
OHLG	Office of Head of Local Government Service
ONMA	Okaikwei North Municipal Assembly
OVI	Objectively Verifiable Indicators
PAP	Project Affected Persons
PIU	Project Implementation Unit
PMU	Project Management Unit
PPE	Personal Protective Clothing
RAB	Resettlement Action Plan
RBF	Result-Based Financing
SP	Service Provider
SWM	Solid Waste Management
TA	Technical Assistance
ToR	Terms of Reference
TREND	Training Research and Networking for Development

1.0 INTRODUCTION

1.1 Overview of the GARID Project

The Government of Ghana has secured funds from the World Bank for assistance in financing the Greater Accra Resilient and Integrated Development (GARID) Project. The Project is being implemented by the Ministry of Works and Housing (MWH), the Ministry of Sanitation and Water Resources (MSWR) and the Ministry of Local Government and Rural Development (MLGRD), within 17 Metropolitan and Municipal Assemblies (MMAs) in the Greater Accra Metropolitan Area (GAMA) which fall within the Odaw River Catchment.

The GARID Project is being implemented within a six-year duration (2019 – 2025). The Project has four (4) main components, as shown below.

Component 1:	*Component 2:*	*Component 3:*	*Component 4:*
• ***Climate Resilient Drainage and Flood Mitigation Activities***	• ***Solid Waste Management Capacity Improvements***	• ***Participatory Upgrading of Targeted Flood Prone LICs & Local Government Support***	• ***Project Coordination and Management***

Figure 1: Components of GARID Project

The development objective of the Project is to improve flood risk management and Solid Waste Management (SWM) within the Odaw River Catchment of the Greater Accra Region, and to improve access to basic infrastructure and services in selected communities within the Odaw River Basin. To effectively achieve the project objective, the Project will adopt a result-based community incentive mechanism to improve the management of Municipal Solid Waste (MSW) in communities within the Odaw River Catchment.

This Report is an Output under the Component 2 of the GARID Project which focuses on Solid Waste Management capacity improvements in the 17 municipalities of the Odaw River Catchment. Specifically, Component 2 has been designed to reduce the amount of solid waste flowing into the primary Odaw River or Drain. Prime emphasis has been laid on the reduction of the municipal solid waste that ends up in the ocean, thus, reducing the level of marine litter and the overall environmental protection of the Odaw Basin.

The scope of interventions under Component 2 (as stated in the Project Appraisal Document) include:

- *Community-based SWM interventions in targeted low-income communities*
- *Implementation of a major outreach program to sensitize and improve public behaviour on SWM and, litter management.*
- *Provision of SWM infrastructure including construction of waste transfer stations, capping of old dumpsites, and improvements at final waste disposal sites.*

The Component two of the GARID Project is hosted by the Ministry of Sanitation and Water Resources (MWSR).

1.2 Context to this Report/TOR for the Assignment

In 2020, the Ministry of Sanitation and Water Resources (MSWR) engaged a Consortium - Training, Research and Networking for Development (TREND) and URBA Consulting - to provide technical support to the implementation of Component two of the Project.

The TOR for the assignment involved three main tasks:

- *Assessment of the Solid waste management services*
- *Option analysis, Stakeholder engagements and Development of a strategic Investment Plan for municipal waste management/ Litter management strategy which will form the basis for service improvements in the Odaw catchment.*
- *Development of proposals for a Results-Based Financing mechanism to support delivery of proposed solid waste management improvement plan/ litter management interventions in the Odaw River catchment.*

Geographically, the assignment covers 17 Metropolitan and Municipal Assemblies (MMAs) in the Greater Accra Metropolitan Area (GAMA). The focus of the study is on low-income communities within these MMAs which fall within the catchment of the Odaw Basin.

The boundary of the Odaw catchment is shown in Figure 1 below. The list of the 17 beneficiary MMAs have been listed in Box 1.

Box 1: Beneficiary MMAs under the GARID Project

1. Accra Metropolitan Assembly (AMA)
2. Ablekuma Central Municipal Assembly (AbCMA)
3. Ablekuma North Municipal Assembly (AbNMA)
4. Ablekuma West Municipal Assembly (AbWMA)
5. Ayawaso Central Municipal Assembly (ACMA)
6. Ayawaso East Municipal Assembly (AEMA)
7. Ayawaso North Municipal Assembly (ANMA)
8. Ayawaso West Municipal Assembly (AWMA)
9. Korle Klottey Municipal Assembly (KoKMA)
10. Adentan Municipal Assembly (AdMA)
11. Ga Central Municipal Assembly (GCMA)
12. Ga East Municipal Assembly (GEMA)
13. Ga North Municipal Assembly (GNMA)
14. Ga West Municipal Assembly (GWMA)
15. La Dadekotopon Municipal Assembly (LaDMA)
16. La Nkwantanang-Madina Municipal Assembly (LaNMMA)
17. Okaikwei North Municipal Assembly (ONMA)

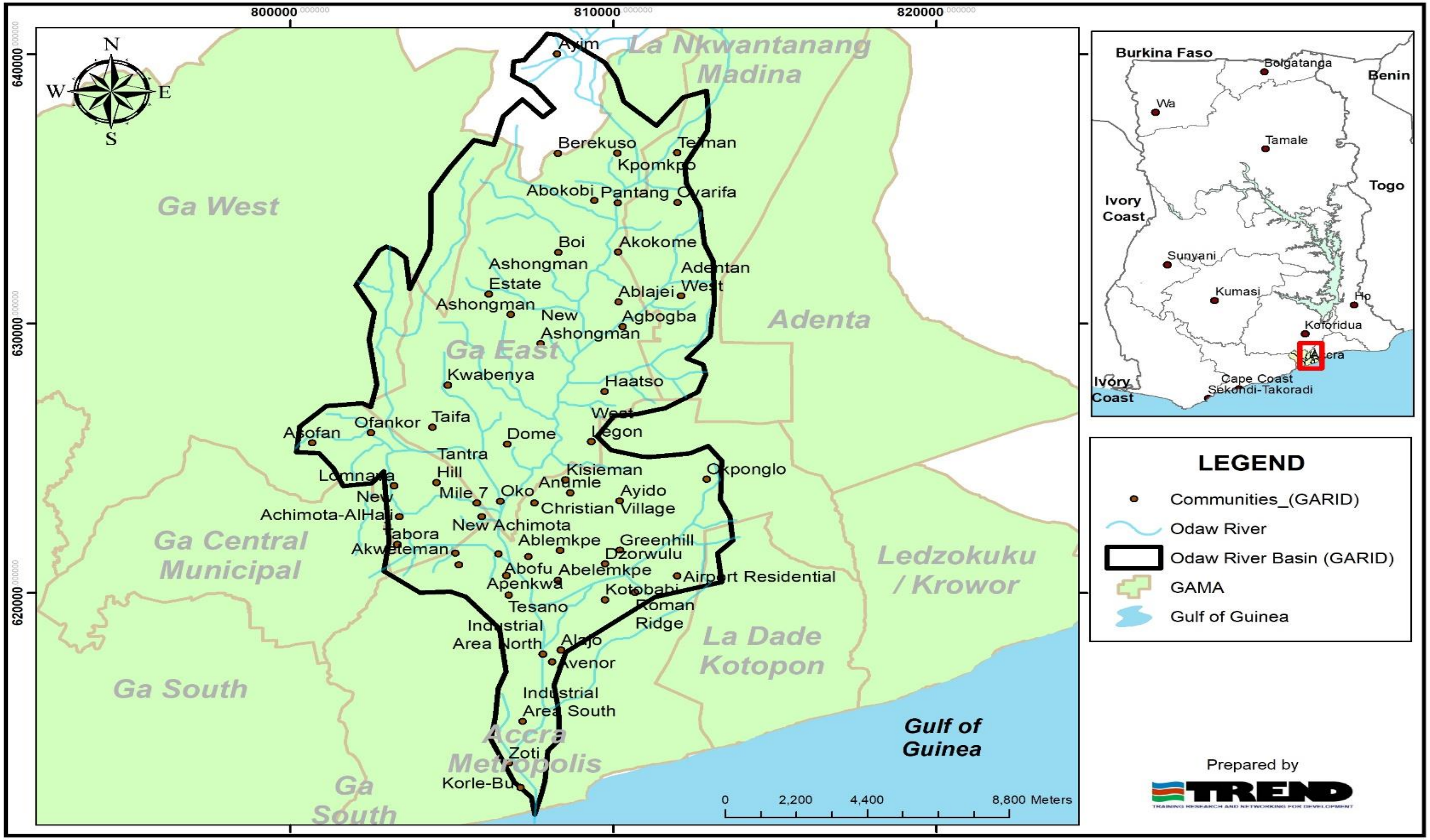

Figure 2: Map of Project Area Source, TREND-URBA Consortium, 2020

1.3 Assessment of the Solid Waste Management Services

As part of the process for developing the Strategic Improvement Plan, a comprehensive assessment was conducted on the Municipal Solid Waste Management System within the Odaw Catchment. The assessments involved:

- ***Literature Review:*** review of all available scholar works on SWM in Ghana and similar developing country context to provide a theoretical and conceptual foundation.
- ***Waste Characterization:*** systematic collection and analyses of the MSW to ascertain the waste quantities and compositions, and the mapping of all refuse points.
- ***Litter Management:*** description of the existing infrastructure and hydrological system within the Catchment, including the analysis of the problem of waste management.
- ***Community Surveys:*** Surveys on peoples' behaviour in waste storage, discharge, and preferences; Demand and Willingness to Pay; Knowledge, Attitude and Practice of segregation at source; Analysis of the reasons for litter in the Basin; and Litter enforcement.
- ***Equipment and Facility Inventory:*** capturing all the equipment and facilities available and used for solid waste management activities in the 17 MMAs.
- ***Recycling Systems:*** existing (inorganic) recycling activities within the Solid Waste sector analysed to provide understanding about the flow of materials within GAMA.
- ***Sustainable Financing Mechanisms:*** analysis of the financing mechanisms for municipal solid waste management and alternative financing arrangements within the sector.

In addition to the above list, a situational analysis of the Municipal Solid Waste Management (MSWM) system of the 17 municipalities within the Odaw River Catchment was conducted. This study examined both the physical components (collection, disposal, treatment, and recycling) and the governance aspects (inclusivity, financial sustainability, national policy framework, and local institutions) required to deliver a self-correcting and sustainable MSWM. Based on the assessment of the entire MSWM system, the key issues and needs along the Solid Waste Management value chain were analysed. The outcomes formed the basis of the proposals made in the Strategic Improvement Plan and this Results-Based Financing Strategy. The key issues and needs identified in the analysis have been summarised as follows:

- <u>*Mixed waste at point of generation:*</u>
  The Odaw Catchment has an estimated total household of 832,478 with waste generation rate of 0.70 kg/cap/day. The daily and annual tonnage of waste generated within the catchment stands at 2,914.39 and 1,063,753.30 tonnes, respectively. Waste composition consists of Organics (food and green wastes) 51.59%, Plastic 16.69%, Paper 3.62%, glass 1.97%, Metals & Aluminium 1.80 %, mixed loose solid waste 9.43%, and Inert (other inorganic) 14.90%. Most households mix all their waste during storage. Mixed waste reduces value of recyclables generated at the household level. Households rarely practice source separation.

- *Inadequate services by Formal Service Providers (FSPs)*

  In all the 17 municipalities, Communities have been zoned and assigned to Formal Service Providers (FSPs) to collect solid waste. The frequency of collection by FSPs which is typically weekly is inadequate and FSPs are not always able to follow. The weekly collection is also not suitable for low-income community dwellers who do not have adequate capacity to store waste for three or more days. These are the major causes of accumulation of waste and littering in especially the low-income communities. The frequency of MSW collection does not meet the expectations of users within the catchment.

- *Key Role of Informal Service Providers (ISP) in MSW Collection in Low-Income Areas:*

  Due to the poor waste management services, informal service providers have evolved and spread their operations, especially to areas where there are either evidence of poor performance by the FSPs, or unserved by FSPs. ISPs are recognised but not formally integrated into the MSWM System and do not have concessions in the MMAs. However, ISPs collect more than 50% of the total MSW collected in all the 17 MMAs within the Odaw River catchment.

- *High incidence of littering:*

  The absence of oversight on the activities of the ISPs contribute to a high incidence of illegal refuse points within MMAs. Also, poor servicing of communal containers and litter bins result in overflowing of communal containers leading to littering in drains. About 75% of communal container sites are characterised by high incidence of littering, mostly because of low frequency of collection of litter bins placed at terminals, markets, and other public places.

- *Inadequate data on Solid Waste Collection:*

  MMAs do not have a management information system for MSWM, and the absence of reliable data for effective planning makes it difficult for MMAs to monitor and modernise waste collection.

- *Limited-service user inclusivity in Solid Waste Planning and Monitoring:*

  Service user engagement, participatory decision making, monitoring and feedback is not widespread in most MMAs. Thus, the limited user inclusive initiatives may indirectly contribute to littering, illegal dumping, and refusal to pay user charges. Users are not considered active participants in the municipal solid waste management system.

- *High involvement of informal sector in waste recycling:*

  The recycling sector is dominated by informal service providers. The actors can increase their capacity and employ more workers, but they are constrained with space and finances. Also, they are in competition with most foreign formal recycling companies. An estimated 64 No intermediate buyers, recyclers, processors, and innovators purchase most of the reclaimed material (plastics, metals, papers) from Informal Waste Pickers (IWPs).

- *Potential role of Informal Waste Pickers (IWP) in recycling*
  IWPs are the main drivers of MSW recycling within the catchment. IWPs and ISPs recover 22.5% of all MSW disposed annually within the Greater Accra Metropolitan Area (GAMA) as recyclable materials. However, the IWPs can recycle only about 18% of these materials. Thus, the IWPs contribute to an estimated MSW recycling rate of 18%, generating more than US$ 22million annually through their operations. However, IWPs are currently unorganized.

- *Inadequate number of Composting and Anaerobic Digestion Plants:*
  The assessment revealed that more than 50% of MSW is organic waste. However, there is currently limited potential market for source separated materials, especially biodegradables. Also, the inadequate number of treatment plants limits the potential for any incentive to segregate waste at source. There are only 4 privately owned composting and anaerobic digestion plants within GAMA.

- *Lack of fully controlled disposal facility for solid waste:*
  About 95% of all MSW collected is sent to landfill sites because waste separation at source is not practised as matter of policy. Landfill sites are poorly managed, and currently there is no evidence of environmental monitoring and verification at the landfill sites. For instance, Gas collection systems at the Kpone landfill are underutilised or not in use. The unavailability of land for the construction of landfills for the disposal of MSW in the catchment area contributes to high transportation and collection cost of MSW.

1.4 Expected Deliverables Under the Assignment

Detailed reports on the various assessments and stakeholder reviews conducted under the Assignment have already been finalised and delivered to the Project as interim reports. Further to these interim reports, the two key Outputs expected under the Assignment are:

- *Solid Waste Management Improvement Plan (SWMIP) which will form the basis for service improvements in the Odaw Catchment.*
- *Proposals for a Results-Based Financing Mechanism to support delivery of Proposed solid waste/ litter management interventions in the Odaw River Catchment.*

Based on the findings from the assessments and stakeholder engagements, a Solid Waste Management Improvement Plan (SWMIP) has been prepared to guide solid waste improvements in the 17 municipalities within the Odaw river catchment.

1.5 Overview of this Report/ Content Structure

This report is the second key output under the Assignment (the Results-based Financing Strategy). This report is meant to guide the MSWR on the priorities and strategies for incorporating results-based financing to stimulate change – both on the demand and supply side of services delivery- to facilitate effective, sustainable, and cost-effective delivery of improved services. The proposed RBF schemes could incentivise selected actors in the implementation of the SWMIP to address critical challenges in the Municipal Solid Waste Management (MSWM) value chain. With the dearth of information on RBF interventions in Ghana the report largely reflects the knowledge gleaned from various experiences at the global level and adapted to the local Ghanaian context, based evidence from the various assessments. It should be considered at this stage as a Concept Document that should be subject to thorough stakeholder reviews at all levels (both at the Sector Ministry level and within Municipalities) to prioritise the planned interventions and scrutinise the proposed strategies before finalisation.

The RBF framework has been packaged in five different sections. In addition to this introductory section, the remaining sections focus on the following:

- *Section Two*: broadly provides the context of the RBF by presenting the overview of the RBF approach and the strategic objectives of this RBF.
- *Section Three*: presents the specific RBF objectives highlighting under each the expected results and indicators, incentive to be provided, key actors, key risks and assumptions and estimated cost for implementing the RBF.
- *Section Four:* focuses on the broader implementation strategies and institutional arrangements. This includes verification processes, monitoring and learning, and capacity building aspects.
- *Sections Five*: deals with the summary of financial requirements for the implementation of the RBF.

2.0 FRAMEWORK FOR PROPOSED RBF INTERVENTIONS

2.1 Results Based Financing Context and Rationale

Results-based financing mechanisms (RBF) is a relatively new lending instrument designed to support government programs to help achieve the required behavioural and institutional changes necessary for delivering sustainable and improved services including Municipal Solid Waste Management. RBF is considered as a response to calls globally for governments and development partners to deliver measurable results, as better results are fundamental to fiscal sustainability, poverty reduction, and inclusive or transition to green growth. Thus, RBF provides opportunities to enhance the achievement of development results.

Essentially the RBF approach to MSWM seeks to link disbursements directly to the achievement of program results (Mumssen, et al. 2010). Some of the essential elements can be summarised as follows:

- Payments for solid waste management services are conditioned to the achievement and verification of pre-agreed targets. Payments are based on, for example, quality of services delivered, rather than on evidence of expenses incurred.

- Under RBF schemes, service providers are reimbursed after achieving set outputs or outcomes. Agreed financial payments or in-kind rewards are made to the service providers on condition that pre-agreed targets or predetermined performance goals are achieved after they have been duly verified using laid down and acceptable procedures. The scheme can also be designed to financially reward progress in agreed incremental steps.

- In essence, the achievement of results is directly financed, not the inputs by an implementing entity to achieve the results. The lack of results can lead to either reduced, delayed, or no payments to those responsible for delivering the results.

- RBF agreements generally focus on the achievement of outputs/outcomes and the set of indicators to assess the level of achievement of the pre-agreed targets. It allows service providers or the recipients of incentive to have the freedom to take decisions on the appropriate activities and methods to be adopted to achieve the pre-agreed output/outcomes.

- The emphasis on delivery of results as basis for payment implies that risk of undertaking interventions to achieve the desired service improvements is shared between the partners (the donor/funder and the service provider). This contributes remarkably to effective use of donor contributions.

- Generally, RBF agreements with private sector or non-state actors as implementers focus on outputs (where the results are in their hand and are causally linked to their inputs), while those with governments (usually referred to as Output-Based Aid) are based on outcomes.

Generally, RBF programmes have a primary goal of delivering and sustaining results, thus improving the effectiveness and efficiency of public sector programs, promoting institutional development, and enhancing development effectiveness. Mechanisms through which RBF may lead to improved results include:

- *Increased transparency – by explicitly linking subsidies to targets.*
- *Increased accountability of service providers – as funds are disbursed only upon reaching agreed targets.*
- *Greater private sector participation*
- *Greater opportunities for service provider to be innovative and efficient – given autonomy provided to service providers.*
- *Improvements in monitoring systems used.*

Additionally, the pursuit of enhanced institutional development is driving the growing use of RBF among development partners. Development effectiveness hinges both on the availability of resources and public institutions to develop and implement policies and manage public resources. Hence RBF emphasizes the importance of public institutions in achieving and sustaining development results by supporting the development of sound institutions and delivering development results, which are two essential and complementary elements of sustainable development. Figure 3 below provides a simple contrast of a traditional input-based investment approach to an RBF based approach:

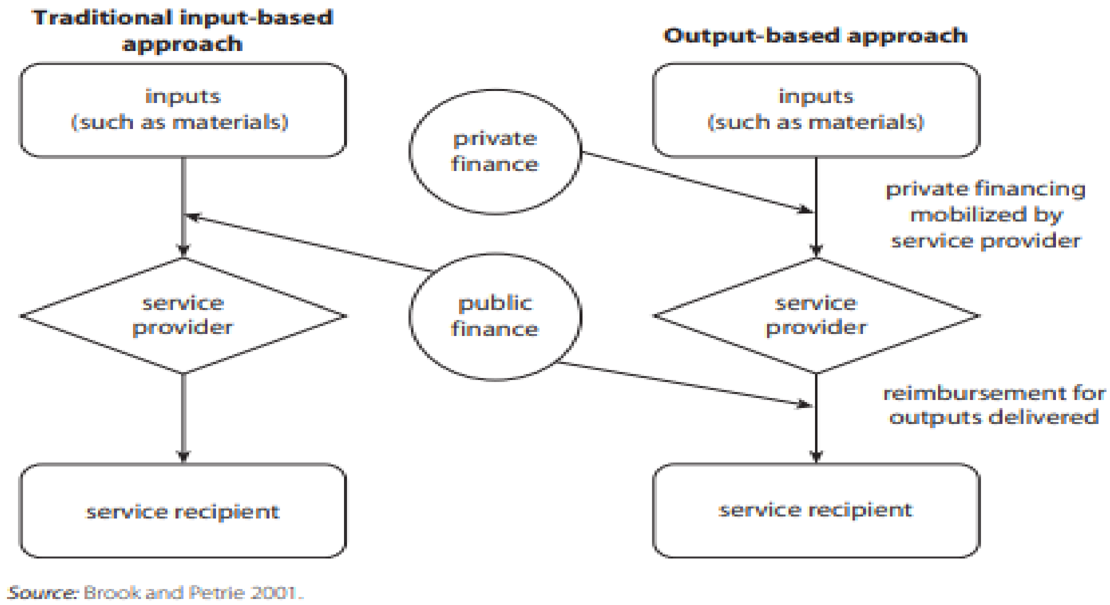

Figure 3: Traditional Input versus RBF Approach

As a concept, RBF is still evolving globally. Within the MSWM space in Ghana, there is little evidence of experience with RBF. However, global experiences suggest that results-based financing (RBF) could be an innovative way governments and policy makers to leverage innovative instruments and partnerships to create sustainable solutions to SWM problems.

Given the dearth of documented experience with RBF in MSWM in Ghana, the RBF package and the proposed designs in this report draw on documented lessons from projects from other developing countries and other sectors. Literature review on the subject of RBF leads to the following key conclusions:

Box 2: Lessons on Key Characteristics of RBF Programmes

- **RBF is a versatile tool that ensures increased transparency.**
  RBF can be applied to address a wide range of sectoral issues, including MSWM and issues related to access, quality, and system inefficiencies. Compared to traditional input-based projects, RBF shifts performance risk to service providers by ensuring payment after results delivery. (Fritsche, et al. 2014)

- **RBF can effectively support pro-poor programmes.**
  Through a wide range of targeting mechanisms, RBF is particularly well suited for designs that deliver improved infrastructure and social infrastructure that target the vulnerable. The focus on subsidies for access is inherently pro-poor, targeting underserved low-income communities, and vulnerable segments of the populations (including vulnerable children, disadvantaged women and the disabled).

- **Government support and buy-in for the project is key to success.**
  Government support is important to determining the projects sustainability. Active engagement with government at the relevant decision-making level is a key determinant for the success of several RBF education projects.

- **Challenges with Scalability and Financial Sustainability**
  The experience is that few RBF projects have scaled and sustained financially. Thus, it is important that projects are designed with future scaling and sustainability in mind and to ensure that potential pathways to scale are identified from project inception.

- **RBF is not applicable to solving all development problems.**
  Not all project challenges can be effectively tackled by the RDF approach. Some challenges such as lack of planning and strategies, lack of institutional capacity and weak legal and regulatory frameworks which contribute to the poor performance of the solid waste management cannot be effectively addressed by the RBF approach. The approach is more effective when applied in tandem with other interventions relating to infrastructure development, policy reform and technical assistance.

2.2 Strategic RBF Objectives Under the GARID

While most past traditional SWM investments have provided direct investments for equipment, facilities and infrastructural improvements, there is increasing recognition that these traditional approaches to investment alone are not enough as they have not always led to the intended results. Complementary investments are needed to encourage new attitudes and behaviours along the entire SWM value chain – in a manner that encourage city-wide coverage, waste minimisation, waste separation and recycling, and avoidance of littering.

The outcomes of various assessment carried out under the GARID Assignment confirm clearly that sustainable financing is a major obstacle for all 17 Municipalities as they seek to improve solid waste management. All 17 Municipalities seem to be caught in a vicious cycle involving:

- *Weak cost recovery and inability to generate the necessary fee collection.*
- *Lack of willingness to pay for poor service until services improve*
- *Need for innovative financing mechanisms to increase cost recovery levels – to support improvement in service delivery – especially in low-income areas.*

Based on the findings from the assessments and stakeholder engagements, a Solid Waste Management Improvement Plan (SWMIP) has been prepared to guide solid waste management improvements in the 17 municipalities within the Odaw River Catchment.

The TOR of the GARID assignment clearly stated the intention of the Project to apply RBF as one of the preferred financing instruments and specifically requested the elaboration of a proposed RBF-driven strategy implementing the proposed scope of recommended actions for SWM improvements. Given the existing weakness and the challenges that the 17 target Municipalities of the GARID Project face regarding SWM and service delivery, RBF approaches can help ensure that available Project-funds are used more efficiently and transparently to increase the impact and sustainability of investments under the Project.

Three strategic objectives (improving primary waste collection, improving cleanliness of target communities, and improving source separation and management) have been identified from the proposals in the SWMIP and designed into RBF schemes. The decision to select the proposed interventions for RBF were based on consideration of the following factors:

- *The Objectives of the Proposed Interventions*
  The three proposed RBF-driven schemes elaborated in this report are in line with the overall objectives of the SWMIP. The proposed RBF schemes are not designed to be implemented as standalone interventions. They are anchored on the overall objectives of the SWMIP and the 3 proposed RBF driven schemes have selected from the list of interventions in the overall SWMIP.

- *Consideration of Risks to the Achievement of results*
  The major risks identified in relation to adoption of RBF approach for the three proposed areas were analysed against the current institutional capacity to deliver on the results. Also, the benefits and costs of an RBF approach were compared to alternative ways of providing the resources for project interventions (such as traditional project finance). The three key RBF areas selected were deemed to be suitable because potential benefits exceed the perceived costs - in terms of additional benefits to be derived (compared to adoption of a traditional project finance approach).

Thus, the rationale for selecting these 3 RBF driven intervention areas for consideration is due to their collective potential to impact and strengthen the whole MSWM value chain to effectively function, and to deliver improved services along the entire chain. The implementation of the selected RBF objectives will impact on infrastructure aspects, inclusivity and gender issues, capacity building, cost recovery and financial sustainability, and behaviour change for improved MSWM.

The details of each strategic RBF intervention are presented under the next chapter. The table below provides a snapshot of information on each of the strategic objectives.

Table 1: Overview of the Strategic Objectives for the RBF Scheme

Strategic Objective	Top-Level Strategic Outputs/Outcomes
Objective 1: ***Improving Primary Waste Collection in Selected Low-Income Communities Within the Odaw Catchment***	• *Informal Service Providers integrated into the MSWM system by MMAs.* • *Improved Waste Collection coverage (to 90%)* • *Improved Waste Capture increased (to 90%)* • *Improved Quality of Waste Collection Services*
Objective 2: ***Improving Cleanliness of Target Communities in MMAs Within the Odaw Basin***	• *All major streets in the municipality are clean (are without litter)* • *All drains in the MMA are Clean (are without litter)* • *All open spaces and refuse points are clean (are without litter)* • *All public spaces (Markets and Lorry Parks) clean (are without litter)* • *Solid Waste Management Byelaws are being enforced* • *Internally Generated Fund (IGF) disbursement for Supervision, Monitoring and Enforcement Activities related to MSWM.* • *Environmental Health Officers (EHOs)/ Environmental Health Assistants (EHAs) and Waste Management Officers inspected or monitored critical areas (streets, selected drains, public spaces, and open spaces within communities) at least twice a month* • *Community monitoring team is satisfied with improvement in cleanliness of the community*
Objective 3: ***Improving Source Separation and Management of Bring-Back Centres in Target communities within the Odaw Basin (Households, and Institutions)***	• *All households in target communities each have 3 standardised receptacles for source separation.* • *EHSU sensitise households on source separation.* • *All households in target communities practise source separation* • *Increased volumes of clean segregated plastic recyclables bought by designated Bring-back Centres*

Overall, the RBF component is designed to complement other interventions in the SWMIP. The proposed RBF interventions will ultimately boost the achievement of the strategic goals and objectives of the SWMIP. The successful implementation of several key areas of the planned interventions proposed in the SWMIP would constitute critical conditions that should be present for the success of the proposed RBF interventions.

2.3 Rationale and Strategic Relevance of the Proposed RBF Scheme

The National Solid Waste Management Strategy for Ghana (June 2020) sets out 7 key pillars for dealing with the Solid Waste Challenges as follows:

i. *Strengthening of sector governance*
ii. *Increased private sector participation*
iii. *Optimisation of service delivery and infrastructure*
iv. *Creation of social action on Solid Waste Management*
v. *Effective waste recovery, re-use and recycling*
vi. *Ensuring effective sector M&E*
vii. *Establishment of sustainable sector financing mechanisms*

The proposed interventions in the Municipal Solid Waste Management Improvement Plan (SWMIP) for the Odaw Catchment is in line with the National Solid Waste Management Strategy. Furthermore, the proposed RBF schemes which are largely anchored on the proposed interventions in the SWMIP seek to address all the 7 key issues listed in the National strategy.

Specifically, the proposed RBF-driven interventions have a strong strategic relevance due to the following factors:

- The proposed RBF interventions could be a key platform for developing more effective approaches for future project design, project financing and institutional capacity building.

- The objectives of the proposed RBF scheme will deal with priority needs for inclusive and targeted effort to deal with pro-poor service delivery – especially within low-income neighbourhood in the target MMAs.

- The proposed RBF interventions will provide key opportunities for development and application of improved framework for MMAs to collaborate with informal service providers (ISPs) - who currently operate in a largely unregulated manner, as well as well-established formal private sector. (Oduro-Appiah et al 2019*)*.

- The RBF schemes could serve as key platform for developing innovative approaches and effective solutions to ensure sustained and scalable service delivery of MSW – especially to low-income areas who are largely responsible for polluting the Odaw basin.

- The poor state of sanitation and the desire to see sustained improvements in service delivery is an area of strong concern for the Government of Ghana. This is expressed in the desire of political leaders for a level of cleanliness for the capital, Accra, benchmarked against other African cities, as the cleanest city. The objectives of the SWMIP and the RBF interventions are therefore in line with government priorities.

Overall, the implementation of the SWMIP and the RBF component will be key in addressing an important national development issues and will therefore provide a compelling rationale for government funding support towards implementation. The implementation of proposed solutions is of strategic importance and will help achieve important sectoral and national development goals.

3.0 ANALYSIS AND ELABORATION OF PROPOSED RBF SUPPORT AREAS

3.1 Overview

This Section is a presentation of the three proposed RBF- based proposed components under the MSWIP. The components cover the following intervention areas:

Box 2: Intervention Areas

Objective 1: *Improving Primary Waste Collection in Low-Income Communities Within the Odaw Catchment*
Objective 2: *Improving Cleanliness of Communities in MMAs Within the Odaw Basin*
Objective 3: *Improving Source Separation and Management of Bring-Back Centres in communities within the Odaw Basin (Households, Schools, and other Institutions)*

The details of each RBF Component are presented in a structured format:

a) *Introduction and Problem Statement*
b) *Context to the Project Design*
c) *Definition of RBF Instruments - Key Results and Indicators*
d) *Conditions Precedent for success and key Assumptions*
e) *Implementation Arrangements*
f) *Specific Activities and Key Actors*
g) *Assessment of Risk Factors*
h) *Financing - Required Investments and Subsidies*
i) *Performance Verification Mechanisms*
j) *Contracting and Payment arrangement (Trigger, and Schedule)*
k) *Sustainability Measures*

3.2 Improving Primary Waste Collection in LICs Within the Odaw Catchment

3.2.1 Introduction and Problem Statement

The total waste generated in the 17 municipalities within the Odaw River Catchment is estimated at 2,914.39 tons per day, at an average generation rate per capita of 0.7kg. Currently, the Municipal Solid Waste collection system captures only 2127.50 tons daily (73%), leaving approximately 27% of the waste uncollected. The uncollected waste ends up in vacant lands, drains, open spaces and the Odaw river. By practice, all the municipalities have zoned and assigned Formal Service Providers (FSPs) to collect solid waste from all communities across their jurisdiction. However, there is an observed insufficient and irregular waste collection in most low-income communities within the catchment. Even within the existing cross-subsidy fee fixing arrangement, most FSPs are unable to ensure cost recovery for collection services to low-income communities.

Problems such as lack of appropriate equipment, accessibility, service charges not viable, inability to pay for services (as per the current arrangement), and the challenges with fees collection account for the inadequate services by the FSPs in most low-income communities. Consequently, Informal Service Providers (ISPs) have taken up waste collection in areas where there are either evidence of poor performance by FSPs, or unserved by FSPs, especially in low-income communities. The current MSWMS recognise the role of the ISPs but have not formally integrated them, even though ISPs collect more than 50% of the MSW generated within the Odaw River Catchment. Hence, the potential of the Informal Service Providers to support MSW collection, especially in low-income communities have not been fully harnessed.

3.2.2 Context of the RBF

The RBF framework for improving waste collection is set as a complementary approach that will support the implementation of the innovations for improving waste collection and transportation in the Odaw River Catchment, as captured in the Solid Waste Management Improvement Plan (SWMIP). This RBF arrangement specifically targets improvements in the waste collection services of three low-income communities (Nima, Akweteyman and Alogboshie), within two municipalities (Ayawaso East and Okaikwei North) within the project areas in Phase 1 of the implementation. The RBF arrangement will focus on door-to-door waste collection services from households and institutions from the target communities. This RBF will adopt innovative approaches *using ISPs* to improve waste collection coverage, waste capture, quality of services, and cost recovery in low-income communities. ISPs will be incentivised to improve collection services to LICs, provided the required capacity support and integrated into the MSW collection system by MMAs.

Under this component of the RBF, instruments such as Output-Based Disbursement, mix of subsidies/ incentives and Performance-Based Contracts will be adopted for use based on the different Actors involved in the implementation of the key outputs.

3.2.3 Definition of key results and their measurement

Globally, improvement in waste collection in MSWM is measured based on waste collection coverage, waste capture and the quality of the collection services – all of these will be considered under this RBF.

(i) ***Informal Service Providers integrated into the MSWM system by MMAs:*** This result area is focused on all the processes required to: identify all ISPs operating within the target MAs; organising, registering, and providing them with the needed technical assistance to support their integration into the MSW collection services in the MMAs.

(ii) Improved waste collection coverage: This result area constitutes the percentage of households/institutions with access to reliable collection service. This result is expected to be achieved through the identification and signing up of households and institutions to respective service providers within a specific service zone.

(iii) Improved waste capture: This result area defines the percentage of the total MSW generated by households/institutions that is collected through the MSW collection system. This result is expected to be achieved through the waste collection activities of the informal service providers assigned to specific zones in the target communities.

(iv) Improved quality of waste collection services: This result area is focused on the regularity of the collection, the effectiveness of the collection and transportation, and the health and safety of collection workers. This result is expected to be achieved through the monitoring of the collection services by MMAs to ensure compliance.

Based on the above, the key outputs, indicators to be measured under this RBF, and the means of verification is shown in the table below.

Table 2: Results Targets, Key Objectives, and Means of Verification

Target Results (Outputs)	Objectively Verifiable Indicators (OVI)	Means of Verification (MOV)
(i) Informal Service Providers integrated into the MSWM system by MMAs	a. Number of ISPs identified, registered, and formed into cooperatives b. Number of ISPs cooperatives trained and assigned to defined service zones c. Number of ISPs licensed to operate in target service zones/ communities	a. User Surveys b. Service Provider logbooks a. Project Activity reports
(ii) Improved Waste Collection coverage (to 90%)	a. Proportion of households/ institutions with collection services b. MSW service user database established	b. User surveys c. ESICApp Reports d. Service Provider logbooks e. Data base on users in place
(iii) Improved Waste Capture increased (to 90%)	a. Percentage of households/ institutions who are served during a collection event b. Volume of waste collected from households/ institutions	a. User surveys/ scorecards b. Service Provider logbooks c. ESICApp report d. Spot Check
(iv) Improved Quality of Waste Collection Services	a. Number of times waste is collected for households/ institutions b. Volume of waste received at transfer stations/ disposal points c. Number of ISPs with properly covered waste during transportation d. Number of ISPs in required safety wears	a. User surveys/ scorecards b. Service Provider logbooks c. ESICApp report d. Spot checks

3.2.4 Key Requirements and Preparatory Activities

This section captures the key requirements and preparatory activities that must be done prior to implementing this specific RBF. It is worthy to note that most these elements are proposed activities in the Action Plan that must be implemented before the RBF is started. These key requirements and preparatory activities include:

- The target MAs will undertake mapping of the target communities (where applicable the entire municipality) to identify existing communal container sites, illegal refuse points, and dumpsites. This will help in planning for the decommissioning of the various sites. Based on this MAs will undertake the removal of all refuse collection points and illegal dumpsites within the target communities.

- The target MAs will undertake baseline surveys to establish all households and institutions within the target communities. This baseline information will be used to plan the assignment of ISPs for waste collection in target communities. This will also be used for target setting for the cooperatives. The ISP cooperatives will be provided with the equipment and logistics to support the waste collection improvements targeted under this project.

- The current flow analysis of waste shows that 95% of all the MSW collected ends up on semi-controlled landfills and dumpsites which are already stretched beyond their capacity. By the end of phase 1, waste transfer stations, facilities for material recovery and disposal must be developed to support the proposed source separation of waste and improved recycling in the phase 2 of the project.

To sustain the results under this RBF arrangement, cost recovery is crucial to the design and implementation of the RBF. The following key assumptions have been made about the waste collection improvements in the proposed target communities and municipalities.

- As a result of improvement in collections services, the service charges to be paid to service providers will increase over time to cost recovery levels. Even though the 'willingness to pay survey' showed that households are willing to pay for improvement in collection services, it will be important to conduct further education for users to understand and accept the need to pay for the improved services.

- It is expected that in the Phase 2 (2024) of the GARID project implementation, the introduction of source separation of municipal solid waste and increase in recycling rates will reduce collection and transportation cost. The value of the recyclable materials to be separated and collected may accrue gains to ISPs, and thus the RBF can be withdrawn.

3.2.5 Arrangement for Implementing Improvements

Under this component of the RBF, the design solution will focus on primary collection (door-to-door services). The RBF arrangement will lead to four specific outputs: *i) informal service providers integrated into MSWM; ii) improved waste coverage; iii) improved waste capture; and iv) improved quality of waste collection*. Informal service providers have different operational arrangements which influence how users pay for their services – *ISP subscribers pay as and when served*. It is expected that the RBF design would not disrupt the existing operational arrangements. The proposed design solution takes cognisance of these peculiarities in defining the RBF arrangements under this component.

Output 1 – Informal Service Providers integrated into the MSWM system:
MMAs will be responsible for implementing specific activities that will ensure the integration of ISPs in the MSWM system. Here, MMAs are expected to identify all ISPs operating within the target communities and undertake processes to register and organise them into a cooperative, to operate within these low-income communities. Further details of the formation of the cooperatives are described in Box 1. The specific activities to be implemented under this output are also described.

Table 3: Specific activities and key actors (Informal Service Providers)

Key Steps/ Initiatives	Start Time	Main Actor(s)
Identify ISPs operating within the jurisdictions of all 17 MMAs and engage ISPs on arrangements for MSW collection improvements for target low-income communities	2021	MMAs, ISPs, MSWR
Register and organise ISPs into cooperatives to provide collection services to low-income communities	2021	MMAs, MSWR
Train the ISP cooperatives on requirements, service standards and operational areas and set targets on their operations	2021	MMAs, MSWR
Provide tricycles to ISP cooperatives to use for the collection services to target low-income communities in the target MAs.	2021	MMAs, MSWR

Under this RBF, MMAs would be given performance-based disbursement towards undertaking the activities specific to the output described above. Due to the fiscal limitations of MMAs, the RBF will make advance disbursement of up to 60% of the cost of undertaking the activities to enable MMAs to the begin implementation. Upon achieving the results of each activity, the MMA will receive the remaining funds (40%) for the activity.

Box 3: The Formation of ISP-Cooperatives for LICs

Formation and Operation:

- MMAs will identify and register interested ISPs and organise them into a cooperative that would operate within the target municipalities.
- The basic inclusionary criteria for joining the cooperative will be experience in informal waste collection within the municipality.
- Cooperatives will be formed at MMA level and members within the cooperative will be drawn to operate within the target community (including other areas they operate within the MMA).
- The ISP-Cooperative will be formed with a minimum of 5 ISPs and a maximum of 50 ISPs and will be open to both ISPs with tricycles and those who do not have tricycles.

Management and Supervision:

- The ISP-cooperative will be managed by a Management Service Provider (MSPs to be recruited by the PIU), with oversight from the MMAs.
- The ISP-cooperative after its formation will sign a Memorandum of Understanding with the MMA towards the improvement in collection services in the target communities.
- Each cooperative to select leaders from among its members to steer affairs of the group and act as the representatives of the cooperative.
- MMA to support the cooperative to acquire an office space to establish a secretariat which will be used to coordinate all their activities.

Capacity Support and Logistics:

- Under this RBF, the ISPs will be provided with new tricycles for waste collection, within a "work and pay arrangement which will be facilitated by the MSPs.
- MSPs will provide technical support and training to Cooperatives (service standards, occupational safety, environmental standards, bookkeeping etc.)
- Cooperatives to conduct periodic meetings to discuss plans, targets, challenges, and share ideas on their operations. This platform will also be used for capacity building for the ISPs.

Cost Recovery Arrangement:

- The ISPs will make weekly payments to the MSPs towards full cost and ownership of the tricycle within an 18-month operational period.
- The ISP-cooperative will undertake processes to open a bank account that will be used to conduct transactions and receive payments from members of the cooperatives.
- The MSP and the Cooperative leaders will both be signatories to the account of the cooperative until the repayments towards cost recovery of the tricycles is complete.

Output 2 – Improved waste collection coverage:

This output is towards ensuring that all households and institutions in target communities are provided access (signed onto) to waste collection services. The MMAs will be responsible for achieving the target for Output 2, which is to increase collection coverage in communities to 90%. The keys steps to be implemented is shown below.

Table 4: Specific activities and key actors.

Key Steps/ Initiatives	Start Time	Main Actor(s)
Identify all households/ institutions without collection services in target communities and register them onto a collection service	2021	MMAs
Engage all stakeholders, including communities to discuss the MSW collection improvement arrangements	2021	MMAs, MSWR, ISPs, Community
Set realistic collection targets for ISP cooperatives assigned to target communities	2021	MMAs, MSWR

Plan for the collection of source-separated waste in target communities in Phase 2	2024	MMAs, MSWR

MMAs would undertake the above processes to establish a strong foundation for the waste collection improvements in the 3 target communities. Again, the RBF will make provisions for advance disbursement (60%) to MMAs to undertake each of the activities under this output. Upon achieving the results, the MMA will receive the remaining funds (40%).

Output 3 – Improved waste capture:

This output is towards ensuring that all the waste generated in the target low-income communities are captured through the appropriate municipal collection services. The target for Output 3 is to increase waste capture to 90% by end of Phase 1 (2021 - 2023) of the GARID Project implementation. Under this RBF the ISP cooperatives will be responsible for achieving the output. The GARID project will select an appropriate entity with requisite knowledge in MSWM and ISPs, to provide technical backstopping to the cooperatives towards achieving efficiency and cost recovery. This innovative tripartite model is further explained in Box 2. The keys steps for the rollout of these initiatives have been described.

Table 5: Specific activities and key actors (Informal Service Providers)

Key Steps/ Initiatives	Start Time	Main Actor(s)
MMAs to sign memorandum of understanding with ISP cooperatives for waste collection in target communities	2022	MMAs, ISPs
ISPs to undertake door-to-door collection of waste in target low-income communities	2022	ISPs
ISPs to undertake door-to-door collection of source-separated waste from households/ institutions	2024	ISPs

MMAs will be responsible for ensuring waste capture target is achieved. MMAs will supervise the activities of the ISP-cooperatives to ensure the achievement of the output. Under this RBF, the ISPs will be given incentives to encourage them to increase waste collection in target LICs. First, ISP cooperatives will be provided with tricycles for the waste collection services. Secondly, incentives will be given towards payments for the cost of disposal by ISPs (this is further explained under the cost estimates). Progressively, waste collection rates must increase to 90% by the end of phase 1 (2021-2023).

Box 4: The Management Service Provider Model

<u>Recruitment of the Management Service Provider (MSP):</u>

- PIU-MSWR to recruit MSPs through a Management Service Agreement to provide management, technical and administrative services to the ISP cooperatives.
- The MSP may be a limited liability company, partnership, or an individual, with the requisite knowledge of the MSWM system and the context of Informal Service Providers.
- The agreement will establish a tripartite relationship between the MMAs, ISP cooperatives and the MSP.
- Under this RBF arrangement two MSPs will be recruited to manage four ISP cooperatives to be establish under the RBF.

<u>Roles and Responsibilities of the MSP:</u>

- MSPs will provide technical backstopping to cooperatives through capacity building on service standards, occupational safety, environmental standards, bookkeeping etc.
- MSPs to manage the arrangement for the repayment for the cost of the tricycles that will be provided to the ISP-cooperatives.
- MSPs to have a "work and pay" arrangement with the ISPs to recover full cost of the tricycle and transfer full ownership to the ISPs within the cooperative.
- MSPs will work with MMAs to collaboratively support the cooperatives in their provision of collection services in the target communities.

<u>Cost Recovery and Sustainability Mechanisms:</u>

- MSPs are expected to achieve full cost recovery within the phase one (2021 – 2023) of the project implementation (maximum 18 months).
- MSPs are expected to be joint signatories to the account of the ISP-cooperatives which will be used to receive the repayment for the tricycles received by ISPs.
- MSPs are expected to reinvest the cost recovered from the cooperatives towards the expansion of the cooperative or the formation of new cooperatives in new MMAs.

Output 4 – Improved quality of waste collection:

This output is towards ensuring the quality of waste collection services in the target LICs. The target for output 4 is to ensure regularity in the collection of waste from households and institutions, and ensure waste is safely transported to designated facilities (transfer stations, material recovery points, and final disposal points). MMAs, with support from the management services provider will be charged to implement processes to ensure the Output 4 is achieved.

Table 6: Specific activities and key actors.

Key Steps/ Initiatives	Start Time	Main Actor(s)
MMAs/ Services provider to track the proportion of households who receive services on weekly basis	2022	MMAs
MMAs/ Service provider to monitor the volumes of waste received at transfer station	2022	MMAs
MMAs/ Service provider to monitor whether public health and safety standards are being followed by ISPs	2022	MMAs
MMAs to monitor the volumes of recyclables received at composting plants and bring-back centres	2024	MMAs

The disbursements related to this output would be tied to the cost of the processes towards monitoring the quality of waste collection services in the 3 target communities. The incentive payments would be paid on quarterly basis. However, 60% of the cost of monitoring would be paid at the beginning of the quarter to support the monitoring activities of the MMAs. However, at the end of the quarter the remainder of the payment (40%) will be paid to the MMAs if all performance criteria are met. It is expected that by the end of phase 1, the quality of waste collection services would be improved and sustained.

3.2.6 Contracting and Payment arrangement (Trigger, and Schedule)

Contracting:

The contracting arrangement under this RBF will state specific rules of engagement under this RBF. Three main agreements will be designed and signed with appropriate actors.

1) ***PIU-MSWR/ MLGRD and MMAs:*** PIU-MSWR, and the MLGRD will sign a Memorandum of Understanding with the target MMAs. MMAs will commit to achieving the relevant targets assigned to it and provide the needed enabling environment to support the activities of all other actors, especially the ISPs.
2) ***PIU-MSWR/ MMAs and Management Service Provider:*** PIU-MSWR and MMAs will sign a 'management services agreement' with a service provider to take the management and administrative functions as well as providing technical backstopping for ISP cooperatives to be formed under the project.
3) ***MMAs/ Management Service Provider and ISPs Cooperative:*** The MMAs and the Service Provider will also sign a memorandum of understanding with the ISP Cooperatives, which form the basis of their operations towards the implementation of collection improvements in the target communities.

The various agreements will indicate the clear roles and targets for the various actors of the RBF under this component. It will also show the operational arrangements between the tripartite actors (MMAs, Management Services Providers and the ISP cooperatives).

Payment Arrangement (Trigger, and Schedule)

Table 7: Key Results, Triggers for Payment and Payment Schedule

Key Results	Trigger	Schedule
Output 1 – Informal service providers integrated into MSWM in target MMAs	PIU receives activity report from the IVA on the complete list of ISPs identified and organised into cooperatives.	Based on the activities
Output 2 – Improved waste collection coverage	PIU receives report from IVA on completion of baseline surveys for each target community to key initiative under Output 2 of the RBF	By the end of the 1st Year
Output 3 – Improved waste capture	PIU receives reports from MMAs on quarterly basis on waste capture. MMAs compiles the reports and submit to PIU. IVA conducts verification.	Quarterly
Output 4 – Improved quality of waste collection services	MSPs submit quarterly tracking reports to MMAs. IVAs conducts verification on the quality of collection services.	Quarterly

3.2.7 Performance Verification mechanisms

Performance verification under this RBF component will be in two-folds. Under the first form of verification, an Independent Technical Verification Agent (ITVA) will be appointed by the PIU-MSWR to provide technical verification in the target communities. The ITVA could be an individual or firm. ITVA would validate the MSW collection services, based on a review of technical scorecards and random on-site verification of the operations of the ISP cooperatives. This will also cover the quality of waste collection services: frequency of collection, proper transportation, and effective disposal.

In the second verification, an Independent Financial Verification Agent (IFVA) (an individual or firm) will be assigned to target municipalities to undertake financial verification of the performance-based disbursements. Also, the IFVA will undertake financial verification of payments made by the ISP cooperatives to the MSPs and the incentive payments to the designated disposal/ transfer facilities. The financial verification will be done to ensure value for money for the disbursement made for specific activities and track the cost recovery mechanisms put in place under this RBF design.

In both verifications, the independent verifiers will provide feedback on the verification process to the PIU-MSWR to establish whether funds transfer should be made to the MMAs or Service Providers.

3.2.8 Financing

The RBF arrangement seeks to pay for results which can drive the waste collection improvements that are expected under the GARID project by the end of the phase one (2021 - 2023). In line with ensuring financial sustainability, the financing arrangements considers the elements of cost recovery and makes considerations for the withdrawal of the RBF payments towards collection improvements in the target communities by the end of phase one (2023).

This financing arrangements also captures sustainability elements which is geared towards incremental scale-up of the collection improvement initiatives into other communities and municipalities in Phase 2 (2024 – 2026) of the project implementation. The pricing of the RBF outputs has been done in the frame of the assumptions made in this report, and the prevailing cost of services within the Odaw River Catchment.

<u>Cost Analysis and Projections of Targeted Results:</u>

Output 1 – Informal Service Providers integrated into the MSWM system

This will constitute the cost of the processes for integrating informal service providers into the MSWM system and providing technical support to ISPs. The detailed breakdown of the cost estimates is presented in the table below.

Table 8:Detailed breakdown of Cost Estimate for Output 1 (Informal Service Provider)

Key Project Activities/ Initiatives	Cost Estimates	
	Total Budget ($)	**Total Budget (GHC)**
Identify ISPs operating within the jurisdictions of the 4 MMAs and engage ISPs on arrangements for MSW collection improvements for low-income communities (2021)	10,000.00	58,000.00
Register and organise ISPs into cooperatives to provide collection services to target low-income communities (2021)	10,000.00	58,000.00
Train the ISPs on requirements, service standards and operational areas and provide them with license to operate (2021)	20,000.00	116,000.00
Provide the 4 ISP cooperatives with 90 No. tricycles (aboboyaa) for waste collection services (2021)	200,000.00	1,160,000.00
Total Cost	**240,000.00**	**1,392,000.00**

Output 2 – Improved waste coverage

This will constitute the cost of engaging all relevant stakeholders – service providers, communities; process of integrating informal service providers; providing technical support towards registering households onto a collection service. The Table below presents the breakdown of the cost estimates.

Table 9: Cost Estimate for Output 2.

Key Steps/ Initiatives	Cost Estimates	
	Total Budget ($)	**Total Budget (GHC)**
Identify all households/ institutions without collection services in target communities and assign ISPs to provide services (2021)	10,000.00	58,000.00
Map out current service zones, unserved/ underserved areas in target MMAs and undertake needs assessments (2021)	20,000.00	116,000.00
Engage all stakeholders, including communities to discuss the MSW collection improvement arrangements (2021)	20,000.00	116,000.00
Plan for the collection of source-separated waste in target communities from Phase 2 (2024)	5,000.00	29,000.00
Total Cost	**55,000.00**	**319,000.00**

Output 3 – Improved waste capture

The total number of households from the target communities is estimated to be 61,925 in the four communities adopted for phase one of the implementation. The projected number of households based on the 2010 Population and Housing Census data for the respective MMAs have been shown in the table below. The collection improvements will be targeted to these households in the four project communities in Ayawaso East, Okaikwei North and Ablekuma Central municipalities.

Box Breakdown of Households in Target Communities

Municipality	Name of Community	Projected No. of Households
Ayawso East Municipal	Nima	24205
Okaikwei North Municipal	Akweteyman	16551
Okaikwei North Municipal	Alogboshie	646
Ablekuma Central Municipa1	Old Fadama	20523
Total		**61925**

The collection coverage is largely poor in most low-income communities. It is estimated that close to 50% of households in low-income communities are without improved collection services. On the average, an ISP is likely to gain GHC 200.00 upon collecting a full tricycle of MSW (Oduro-Appiah *et al*, 2020). Further analysis reveals that 40% (GHC 80.00) of the revenue is spent on operation and maintenance, 15% (GHC 30.00) on cost of disposal, and the remaining 45% (GHC 90.00) as turnover for the service delivered. It is estimated that an ISP collects about 1.2 tonnes of MSW from 100 households when the tricycle becomes full, in single collection event (Oduro-Appiah *et al*, 2020).

On the average GHC 30.00 is paid by ISPs as cost of disposal. Based on the above, the estimated 61,925 households in the target project communities would generate an estimated 743.1 tonnes on a weekly basis (assumed that each household's waste will be collected once every week). It is estimated that the cost of disposal for the four target communities each week will be GHC 22,293.00. The incentive payments to be covered under this RBF will be used to defray the cost of disposal for the ISPs. Thus, for the first year of the operations of the cooperatives, cost of disposal will be covered under the project.

It is expected that as waste collection services improve in the target communities, households will be willing to pay more for improved services. Thus, this will lower the burden of the cost of delivering the collection service. The incentive payments will be received by transfer stations and disposal sites directly from the PIU in the second year (2022). The incentive is designed to be withdrawn by the second year, because of increases in service charges and improved cost recovery due to households paying for improved collection services.

Table 10:Cost Estimate for Output 3 (Informal Service Providers)

Cost Items	**Cost Estimates**	
	Total Budget ($)	**Total Budget (GHC)**
Target No. of Households (2022)	*61,925*	*61,925*
Incentive Payment per week (2022)	3,843.62	22,293.00
Incentive Payment per month (2022)	15,374.48	89,172.00
Total Cost (2022)	**184,493.79**	**1,070,064.00**

Output 4 – Improved quality of waste collection services

This will constitute the cost of the monitoring activities towards ensuring improvement in the quality of waste collection services. This cost will encompass activities relating to monitoring of waste collection activities of service providers, monitoring transportation of waste, monitoring of collection of recyclable waste and its transportation, and the compliance with the health and safety requirements for waste collection workers.

It is estimated that USD 57,500.00 will be required to monitor and track the quality of the waste collection services being implemented under this project. In the first year, the RBF arrangement will pay for the full cost of the monitoring and tracking the operations of the ISP by the MMAs. In addition to this, the project will pay for tracking devices to be installed on tricycles for waste collection to enhance monitoring of ISPs.

Table 11:Cost Estimate for Output 4.

Cost Item	Total Budget ($)	Total Budget (GHC)
Cost of monitoring improved quality of collection services ($)	24,000.00	139,200.00
Introduce tracking device on all tricycles for the ISPs to monitor services ($)	13,500.00	78,300.00
Quarterly Rewards for sustained improvement waste collection by ISPs ($)	20,000.00	116,000.00
Total Cost	**57,500.00**	**333,500.00**

3.2.9 Sustainability Measures

- Representatives of the community should be included in the institutional framework established for implementing the RBF. The role of the community in local priority setting is essential to ensure that the results-based planning is responsive to the local needs and demands of the beneficiaries. Local participation is crucial for the entire planning cycle, setting of objectives, determining the results, agreeing on payment.

- The element of cost recovery should be established as a crucial requirement for the implementation of the RBF. The outcomes of separation at source and increased recycling rates are relevant factors for reducing cost of collection. However, the MSWR and MMAs must ensure that the factor of reduction in cost because of separation at source and recycling must be transferable to ensure that the user benefits from such reduction. This will provide a supportive environment for efficient waste collection.

3.2.10 Risks

Table 12:Potential risks and mitigation measures (Waste Collection)

Potential Risks	Mitigation Measures
Risks relating to willingness to pay and cost reduction	Continuous education on cost recovery, and the potential of source separation and recycling to reduce cost of collection.
Non-performance of actors under the RBF scheme or collusion of key actors.	Community actors would play a role in customer satisfaction surveys, beneficiary assessments etc. and provide support in verifying the outputs of ISPs.
Lapses in behaviour change and ownership of initiatives implemented under the RBF Scheme	Continuous community engagement in the entire cycle of implementation and including communal benefits in RBF arrangement relating to cleanliness of communities due to quality of collection services.
Delays in RBF payments	Payment arrangements agreed upon in performance contracts and MoU with service providers should be followed accordingly.

3.3 Improving Cleanliness of Communities in MMAs Within the Odaw Basin

3.3.1 Introduction and Problem Statement

The results of the Anti-Littering Surveys, Thematic Mapping Activities, and hydrological and drainage system Survey (prepared for the GARID Project), showed that majority of the solid waste found in MMAs (on streets, open spaces, public spaces and drains) within the Odaw Basin, are caused by the following:

- the daily human practices, and daily disposal of MSW by the inhabitants of the densely populated settlements and small-scale businesses along various primary and secondary drains that feed the Odaw river.
- the relatively low MSW collection coverage within low-income communities in the catchment and the incidence of illegal and unapproved refuse sites
- the deliberate discharge of MSW into drains by ISPs and the seemingly and wanton anti-environmental behaviour of littering (in public spaces)
- significant number of refuse site are also sited along secondary drains on major roads.
- poor management of refuse/communal containers and bins (along streets)
- inefficiencies in the prevailing MSW collection system

Most of the underlying causes have been adequately dealt with in the Solid Waste Management Improvement Plan. However, one issue, which seemed central to resolving the problems listed, is the role of MMAs in ensuring that streets, public spaces, open spaces, and drains are clean. The results of the assessment of the governance aspect of the MSWM system (prepared for the GARID project) showed that MMAs were performing poorly in supervising service providers to deliver on their obligations under the various service contracts, and in enforcing byelaws related to littering and solid waste management. MMAs, on their part, attribute this level of performance to the lack of capacity (financial resources and logistics) of EHSUs and Waste Management Departments (WMDs) to carry out their constitutionally mandated duties. Although the strategy document made proposals towards addressing some of these issues, an RBF mechanism is required to facilitate or catalyse MMAs' work towards ensuring cleanliness within the Odaw Catchment.

3.3.2 Context of the RBF

MMAs are mandated to ensure cleanliness of the entire Municipality, hence this RBF will be aimed at driving MMA-wide results. The RBF Instruments will be aimed at ensuring cleanliness of the participating MMAs. Participating MMAs will, however, be allowed to target their activities and internal strategies to priority areas or communities.

The nature of the RBF will require the full participation of all relevant MMA officers (particularly officers from the Environmental Health and Sanitation Units and Waste Management Departments). Other Key Actors include an Independent Verification Agent, Coaches and Project Communities represented by the Community Support Teams (CSTs).

Box 5: Formation of Community Support Teams

Community Support Teams (CST)

Community Support Team is a 5-member team constituted by the respective MMAs (in consultation with the PIUs of MLGRD and MSWR) to support MSWM Improvement Activities in GARID Project Communities.

NB: An already existing and vibrant WASH Team in a community could be adopted as the project's CST. Project Managers should avoid creating parallel groups in project communities.

Composition of CST

The proposed composition of the CST is as follows:

- Assembly Person (or Unit Committee Chairperson)
- A Traditional Leader (recommended by the paramountcy or local council of chiefs)
- An Apolitical Youth Leader (recommended by existing youth groups)
- A Religious Leader (recommended by local council of churches or Islamic groups)
- A Representative of Residents Association(s) - (or a representative of a broad-based CBO or an opinion leader)

Functions of a CSTs

- Lead Community Mobilisation Activities
- Lead Community Clean-up Activities
- Support Sensitisation and Other Behavioural Change Communication Activities
- Monitor and Report Performance of FSPs and ISPs
- Provide Monthly Reports (Video and Photo Evidence) of MSWM Issues
- Support Monthly Monitoring and Review activities of PSUs and PIUs.

Funding

- Generally, the membership and work of the CST is purely voluntary, however, the activities of CSTs will be financed as follows:
- the activities of the CSTs will be financed indirectly through project activities that will be implemented at the community level. The GARID PIU must encourage all contractors/ consultants working in project communities to collaborate with the CSTs.
- Allowances will be paid to CST members participating in Joint Monthly Monitoring Activities with PIUs and PSUs.

Two RBF instruments will be considered for the purposes of ensuring the cleanliness of the municipality (i.e., streets, drains, public and open spaces). The proposed instruments are as follows:

- *Output-Based Disbursement (MMA Officials – MEHOs and EHAs)* – GARID will reimburse 4 pilot MMAs (Okaikwe North, Ayawaso East, Ablekuma Central Municipalities, and Accra Metropolitan Assembly) based on their performance in delivering the following: effective supervision and monitoring activities of service providers; enforcement of By-laws; and increased allocation and disbursement of IGFs for solid waste management.

- *Prize Based Challenge - (MMAs)* – GARID will provide funding for an Annual Award Scheme aimed at recognising and awarding *"the Cleanest MMA", 2nd Cleanest MMA", "3rd Cleanest MMA", "the Most Improved MMA" and the "Most Innovative MMA".*

3.3.3 Definition of Key Results and their Measurement

The Key Results areas measured in terms of two categories of 'outputs':

(a) Improvement in the cleanliness of drains, streets, public spaces, and open spaces.
(b) Sustaining the cleanliness of drains, streets, public spaces, and open spaces throughout the year.

Under the first output category, the RBF is aimed at ensuring that: ***All the streets, drains, public spaces, and open spaces under the jurisdiction of all participating MMAs are clean (are without litter):*** This result is expected to be achieved largely through the monitoring and supervision of the activities of service providers; enforcement of by-laws, and improvements in the allocation of resources (IGF) for supervision, monitoring and law enforcement activities related to MSWM. All participating MMAs are expected to ensure that:

- All major streets in the participating MMA are clean (are without litter)
- All drains in the participating MMA are Clean (are without litter)
- All open spaces and refuse points are clean (are without litter)
- All public spaces (Markets and Lorry Parks) are clean (are without litter)
- Solid Waste Management related offenders are arraigned before a law court, prosecuted, and fined
- IGF disbursements for MSWM supervision, monitoring and law enforcement activities related to MSWM is increased
- Critical areas (streets, selected drains, public spaces, and open spaces within communities) inspected by EHOs/EHAs and Waste Management Officers at least twice a month.

Under the second output category, the RBF is aimed at ensuring that: ***The cleanliness of streets, drains, public and open spaces under the jurisdiction of MMAs is maintained throughout the year:*** This is supposed to reflect the performance of the MMAs over a 12-month period. The results, which will determine the winners, will simply be the aggregate of the quarterly scores (of the criteria mentioned in "i") for each of the participating MMA. The IVAs will be tasked to submit scorecards quarterly. This is to give MMAs an indication about their performance and encourage them to work towards a higher score.

The key result areas, indicators and means of verification for the RBF for cleanliness are shown in Table 17.

Table 13:Results, Targets, Key objectives and Means of Verification

KEY RESULTS (OUTPUTS)		OVI	MOV
i.	All major streets in the municipality are clean (are without litter)	a. Number/Length (km) of Streets with litter or without litter	a. Spot Checks b. Drone Photographs c. CST Report
ii.	All drains in the MMA are Clean (are without litter)	a. Number/Length (km) of Drains found with litter or without litter	a. Spot Checks b. Drone Photographs c. CST Report
iii.	All open spaces and refuse points are clean (are without litter)	a. Number of Open Spaces found with Litter	a. Spot Check b. Drone Photographs c. ESICapp Report d. CST Reports
iv.	All public spaces (Markets and Lorry Parks) clean (are without litter)	a. Number of Markets/Lorry Parks Clean (without litter and well managed refuse points) or Dirty (with litter and poorly managed refuse points) b. Number of Refuse Sites/Skip Container Sites with Litter (overflowing refuse)	a. Spot Check b. Drone Photographs c. CST Reports
v.	Solid Waste Management Byelaws are being enforced.	a. Number of MSW related offences taken to court b. Number of Offenders punished c. Number of Offenders cautioned	a. Court Records
vi.	IGF disbursement for Supervision, Monitoring and Enforcement Activities related to MSWM.	a. Proportion of IGF used for SWM Governance related activities	a. Financial Statement of MMAs
vii.	Critical areas (Streets, selected drains, public spaces, and open spaces within communities) inspected or monitored by EHOs/ EHAs and Waste Management Officers at least twice every month	a. Number of times the critical areas (streets, selected drains, public spaces, and open spaces within communities) were visited by EHOs/EHAs in a month	a. Spot Checks b. Inspection Reports (ESICapp Report)

3.3.4 Preparatory Activities

The proposed RBF Instruments will be successfully implemented, and the expected results achieved, if the following preparatory and complementary activities are implemented:

- *<u>All illegal refuse sites are evacuated and capped:</u>* It is necessary that all existing container sites, illegal refuse sites and decommissioned sites) are cleared, rehabilitated, and capped.
- *<u>All major streets have installed with dustbins:</u>* All major streets in the municipality must have specialised waste bins installed at reasonable intervals to reduce littering and encourage source separation.
- *<u>Existing Contract for Cleaning of Streets, drains, Public and Open spaces</u>*: The MMAs should have in place an existing contract or arrangement for cleaning major streets, drains, public spaces (lorry parks and markets) and open spaces.

- *Existing Byelaws and punitive sanctions:* All beneficiary MMAs are expected have gazzeted byelaws, with sanctions that could deter infractions.
- *Behavioural change Education and Sensitisation Campaign:* There must be a continuous anti-littering sensitisation and education in the participating MMAs.
- *Updated Thematic Refuse Maps:* All participating MMAs should have updated their thematic refuse maps. These maps must show refuse points (both legal and illegal) and all the hotspots of littering in the MMA.
- *Constitute and Inaugurate CSTs in project communities:* All participating MMAs should constitute and inaugurate CSTs in their respective project communities.

3.3.5 Arrangement for Implementing Improvements

The Proposed RBF Strategy for litter management will be piloted in 4 MMAs (Okaikwe North, Ayawaso East, Ablekuma Central Municipalities, and Accra Metropolitan Assembly) within the first phase (2021-2024) of project implementation. The Cleanest City Award, on the other hand, will be implemented between 2024 -2026. All 17 MMAs within the Odaw Basin will participate in the Award Scheme. The schedule of implementation for the two strategies under this objective are shown in Table 18 and 19 below:

Table 14: Proposed activities and key actors (Litter Management).

No.	Proposed Activities	2021/22	2022/23	2023/24	Key Actors
1	Identify and discuss all the critical areas assessment (streets, open spaces, public spaces, drains) with MMA Officials				IVA & MMAs
2	Discuss the KPIs with all service Providers and MMA Officials (MEHO/ EHAs)				IVA & MMAs
3	Conduct of Routine Inspection, Monitoring and Supervision Activities (including prosecutions) – with CSTs				MMAs
4	Monitor and Assess Performance (Quarterly)				IVA
5	Draft Assessment Reports (Quarterly)				IVA
6	Trigger Payments to MMAs (based on the recommendation of the IVA & PMU)				IVA
7	Share and Discuss Assessment Reports (particularly the recommendations) with MMAs -				Coaches
8	MMAs are also required to engage with their staff and service providers to discuss the issues in the IVA's Report (SPs).				MMAs& SPs

Table 15: Proposed activities and key actors (Cleanest City Award).

No.	Proposed Activities	2024	2025	2026	Key Actors
1	Constitute and Inaugurate Cleanest City Award Committee (CCAC) – with representation from CONIWAS, MLGRD, MSWR, MESTI, GJA, GIE, Greater Accra Regional Coordinating Council (represented by REHO) & Accra School of Hygiene.				PIUs of MLGRD & MSWR
2	Engage MMAs to Discuss Cleanliness Assessment Criteria				MMAs, PIUs of MLGRD & MSWR and CCAC
3	Sign MOU on Cleanest City Award				MSWR, MLGRD & MMAs
4	Launch Cleanest City Award				
5	Cleanest City Report (declaring the winners)				PIUs of MLGRD & MSWR (represented by CCAC)
6	Reward MMAs (at a well-publicised event)				PMU/PIU
7	Engage with MMAs to discuss the outcome of the Competition				PMU/PIUS (represented by Coaches)

3.3.6 Contracting and Payment arrangement

Contracting:

Two main agreements will be prepared and signed:

i. ***MSWR-MLGRD-MMAs (and a subsidiary one between MMAs and their Officials):*** A tripartite performance-based agreement will be signed by MSWR, MLGRD, and MMAs. MMAs will also be required to sign a subsidiary “performance agreement” with its Officials. The KPIs will cover their assigned roles in relation to the cleanliness of streets, open spaces, public spaces, and drains. Performance agreements signed with MMAs should also have well defined KPIs.

ii. **MSWR-MLGRD-MMAs:** A memorandum of understanding will be signed by the MSWR, MLGRD, and participating MMAs on the “cleanest MMA (City) Award”. The MoU will include the agreed assessment criteria, the verification process, and the categories of prizes. The MOU will also include the guidelines for the use of the Prize money.

Payment Arrangement (Trigger and Schedule)

Table 16: Payment arrangement (Trigger and Schedule)

Payment	Targets	Trigger	Schedule
Payment to MMAs (for Monitoring, Supervision and Enforcement of Bye-laws)	1. All major streets in the municipality are clean (are without litter) 2. All drains in the MMA are Clean (are without litter) 3. All open spaces and refuse points are clean (are without litter) 4. All public spaces (Markets and Lorry Parks) clean (are without litter) 5. Solid Waste Management related offenders are arraigned before a law court, prosecuted and fined 6. MMAs have allocated IGFs for Solid Waste Management Governance 7. EHOs/EHAs and Waste Management Officers supervised and inspected critical sites (streets, selected drains, and open spaces within communities) at least once every month.	IVA's report on Performance of MMAs confirming achievement of the set targets. Payment is triggered when an MMA meets at least 5 out of 7 targets. The 5 areas should always include target 7.	Quarterly
Payment to MMAs (for the Cleanest MMA)	1. MMAs have the cleanest Streets, Drains, Public Spaces and Open Spaces throughout the year.	An Aggregate Result and Report (to be compiled by the CCAC) showing the winners for the following categories of the Awards: • *Cleanest MMA (the MMA with the highest scores)* • *2nd Cleanest MMA (the MMA with the second highest score)* • *3rd Cleanest MMA (the MMA with the third highest score)* • *Most Improved MMA – (the MMA with the highest improvement in scores – using the previous year as base year)* • *Most Innovative MMA (an MMA that implemented an intervention – either by making use of new technology or devised a new MSWM management approach or community mobilisation approach that significantly contributed towards improving MSWM.*	Annually

3.3.7 Performance Verification mechanisms

In the first year, Independent Verification Agents (preferably an Audit or M&E Firm) will be engaged to verify performance and claims. The IVA will use qualitative assessment tools in assessing cleanliness. Prior to the assessment, the IVA will group each of the identified critical areas for the purposes of sampling. The categorisation and sampling of the critical areas for assessment should be done such that the participating MMAs will not be able pre-empt and target their clean-up activities. The process of verification, its regularity and responsible actors for the stated results areas are shown in the table 20:

Table 17: Performance Verification Mechanisms (Cleanliness)

No.	Results	Process	Regularity	Actors
1.	All major streets in the municipality are clean (are without litter)	IVA will conduct unannounced spot checks on sampled streets, review drone photos and CST Reports	Quarterly	IVA
2.	All drains in the MMA are Clean (are without litter)	IVA will conduct unannounced spot checks on sampled drains	Quarterly	IVA
3.	All open spaces and refuse points are clean (are without litter)	IVA will conduct unannounced spot checks on sampled open spaces, review drone photos and CST Reports	Quarterly	IVA
4.	All public spaces (Markets and Lorry Parks) clean (are without litter)	IVA will conduct unannounced spot checks in sampled markets and lorry parks and review of ESICapp Reports	Quarterly	IVA
5.	Solid Waste Management related offenders are arraigned before a law court, prosecuted, and fined	IVA will review MMA & Court records on MSW related prosecutions	Quarterly	IVA
6.	MMAs have allocated IGFs for Solid Waste Management Governance	IVA will review MMA's financial reports	Yearly	IVA

<u>General Reporting and Feedback System:</u>

Quarterly Assessment (for Litter Management Activities)

- The IVA will draft and submit an assessment report to PMU (through the PIUs). The Assessment reports will include CST reports (which are usually in the form of videos and photos)
- After payment is triggered (depending on the recommendations in the IVA's report), a brief performance report (based on the recommendations from IVA) will be prepared for each participating MMA.
- Coaches (who will be recruited by the PMU) will engage with the MMAs on their low points, high points, and strategies.

Annual Assessments (for Cleanest City Award Scheme)

- The Cleanest city Award Committee (which will be constituted by the PMU) will issue a report (based on the quarterly assessment reports submitted by the IVAs) declaring winners of "the Cleanest MMA Awards".
- The coaches will then subsequently meet with all the participating MMAs to discuss the outcome of the competition and the performance of MMAs. They will also work with MMAs to re-strategize for the next assessment period.

3.3.8 Financing

The RBF Scheme is designed to incentivize MMAs and its officials to implement activities that will ultimately lead to a clean Accra. The cost of the RBF strategies is shown in tables 21 and 22.

Table 18:Payment to the 4 Participating MMAs (for Monitoring, Supervision and Enforcement)

No	ITEMS	2021/2022	2022/2023	2023/2024
1	**Total Payment (SWM Governance)**	86,200	86,200	86,200
2	***Support for CSTs**	4140	4140	4140
	Total	**90,340**	**90,340**	**90,340**

*NB: US$86,400 per year is the estimated annual expenditure on monitoring, supervision, and enforcement related activities (for 4 MMAs) under the SWMIP. *Support for CST Monitoring Activities in 4 MMAs*

Table 19:Payment to Awardees (MMAs for Winning one of the Cleanest City A wards)

No.	ITEMS	2024	2025	2026
1	Total Payment (Cleanest MMA Awards)	250,000	275,000	275,000
2	Award *Management Cost	75,000	62,500	62,500
	Total Cost	**325,000**	**337,500**	**337,500**

Cost of Launch & Award Events, Engagements with 17 MMAs, the Activities of the CCAC etc.

Table 20:Categories of Awards and Cash Prizes

AWARD CATEGORIES	AMOUNT
Cleanest MMA	$100,000
2nd Cleanest MMA	$75,000
3rd Cleanest MMA	$50,000
Most Innovative MMA	$25,000
Most Improved MMA (starting 2025)	$25,000

Table 21: Funds Transfer

Transfer Type	Source	Conduit	Incentivised Agent
Payment to MAs (for Monitoring, Supervision and Law Enforcement)	GARID-PMU	PIU (MSWR)	MMAs (EHOs/ EHAs & Waste Management Officers)
Payment to MMA (i.e. Cleanest MMA Award Winners)	GARID-PMU	PIU (MLGRD) or PIU (MSWR)	MMA
Payment to CSTs (for participating in Monitoring Activities and Providing Reports to IVAs)	GARID-PMU	PIU (MLGRD) or PIU (MSWR)	CSTs in Akweteman, Alogboshie, Nima & Old Fadama

3.3.9 Sustainability Measures

The following cost recovery/sustainability measures will be implemented:

- Participating MMAs are required to increase their allocations and disbursements for MSWM related supervision, monitoring and law enforcement activities.
- It is expected that MLGRD and MSWR will take-up the total cost of the award scheme post project implementation.

3.3.10 Risks

Table 22: Potential risks and mitigation measures

POTENTIAL RISKS	MITIGATION MEASURES
Citizens/Residents of MMAs continue to litter streets, drains, public and open spaces	• Continuous Anti-Littering Campaigns and sensitisation activities • Sustained enforcement of byelaws
Government of Ghana continues to use a centralised approach in the procurement of and payment for the services of Solid Waste Management Service Providers	• Advocate for a more decentralised contracting system for MSWM
MMA are unable to supervise the works of service providers.	• MSWR & MLGRD should engage and sensitise service providers on the role of the MMAs
The poor work ethics of EHOs/EHAs and Waste Management Officers	• Engage with MCEs & MCDs of participating MMAs to sign KPIs with MEHOs & EHAs. • MMAs should reward hardworking EHOs, EHAs (with Promotions and Cash Prizes)
The Leadership of MMAs misallocating funds intended for incentivising MEHOs and EHAs	• Funds should be transferred directly to the EHSU for operational activities • Cash-prices won should be spent according to the Award Guidelines. • Cash-prize disbursements at the MMA should be audited.
Managers of Public Spaces (i.e., Markets, Lorry Parks, etc.) are unable to manage solid waste properly.	• MMAs should set KPI for managers of these public spaces • MMAs should routinely monitor the operations and management of the public spaces • MMAs should strictly enforce all non-performance and remedies clauses in the contracts of SPs.
Risk of IVA-MMA Collusion	• IVAs should be tasked to submit geo-referenced photo-evidence of their assessments. • IVA assessments should capture the reports from the CSTs • CCAC should conduct field visits prior to finalising reports on the winners of the awards

3.4 Improving Source Separation and Management of Bring-Back Centres within the Odaw Basin (Households, Schools, and other Institutions)

3.4.1 Introduction and Key Challenges

The waste characterisation study conducted in the Odaw Catchment revealed organics (biodegradables) forms 51.59% of waste generated with plastics 16.69%, paper 3.62%, metals 1.55% etc. A KAP study conducted within the same area on SWM revealed that 34% of households practice waste separation (mainly plastics) and sell or give out freely to waste pickers or itinerant waste buyers. Separating waste at source has been considered as a sure way of diverting large quantities of waste (recyclables) from landfills which will subsequently maintain the design life of landfills. It has also been established to drive recycling by creating access to clean valuable recyclables. The current annual recovery rate of recyclables from the landfill sites is 22.5% out of which 18% is recycled. Source separation has the potential to improve the current situation.

Diversion of waste especially recyclables from landfills will also aid in mainstreaming recycling in the MSWM system. Source separation will ensure the value of recyclables are improved thus reducing cost of recycling. Increasing recycling rate will subsequently reduce street litter and crude dumping as people become aware of the value of 'waste'. The Bring-back centres will serve as ready market for recyclables especially plastic recyclables. This will help to sustain the activities of Informal Waste Pickers and Itinerant Buyers and create jobs at the centres, especially for women involved in recycling value-chain.

Findings from the KAP study showed that more than half (59.5%) of households surveyed did not have adequate storage receptacles that aid source separation even with knowledge and willingness to practice. Source separation has not been efficient because there has not been a strong focus to support households to practise it. Again, the current collection equipment used by Service Providers does not support collection of source-separated waste. Thus, even in cases where source separation is practiced, waste collectors mix them at collection points. Currently sorting is mainly conducted on landfills and dumpsites by waste pickers. Their operations are highly informal and are challenged with space.

3.4.2 Context of the RBF

The RBF framework is set as a strategic mechanism to facilitate successful implementation of interventions in the Solid Waste Management Improvement Plan (SWMIP). The RBF will focus on improving source separation at points of generation and management of Bring-back Centres. The RBF will focus on outputs related to the provision of fit-for-purpose storage receptacles to households for source separation and the management of Bring-back Centres to support recycling of plastics. Targeted areas for implementation will focus more on middle to high income communities within the MMAs, that is Okaikwei North and Ayawaso East Municipal Assembly. The Institutions within selected communities within implementing MMAs (ONMA and AEMA) will also be encouraged to practise source separation. The households and institutions will be expected to separate their waste into three streams: Recyclables (plastics, bottles, and metals), Organic waste (biodegradables) and All others (papers, miscellaneous, diapers etc.). This is based on findings from the waste characterisation and the KAP surveys conducted in the 17 MMAs.

The PIU, MMAs, managers of Bring-back centres, Cooperatives of Informal Waste Pickers (if they are available and interested) and Independent Verification Agents (IVAs) will be the main actors to be involved in this arrangement. The RBF instrument to be used in these arrangements will be Performance-Based Transfers, Performance-Based Contracts, and incentives. The PMU will enter contract with the MMAs (EHSU) for the roll out of the source separation and another contract with the MMAs and Bring-back Centres for the management of the Bring-back.

3.4.3 Definition of key results and their measurement

The RBF will focus on four (4) key results across the strategic areas of implementation. They are:

- All households in target communities have fit-for-purpose storage receptacles for source separation. The key indicator is the number of households that have received storage receptacles and signed Household Source Separation agreement forms to participate in source separation.
- All households in target communities sensitised on the appropriate source separation practices.
- At least 90% of households in target communities practise source separation. The key indicator is the number of households in target communities practising source separation.
- Increased volumes of clean segregated recyclables bought by designated Bring-back Centres. Clean recyclables under this context are recyclables that would require at least one-level washing before processing.

Table 23: Key results and verification indicators

Key Results	Objectively Verifiable Indicators	Means of Verification
i. *All households in target communities have fit-for-purpose storage receptacles for source separation*	a. Number of households that have been provided with fit-for-purpose storage receptacles for source separation b. Number of household source separation agreement forms signed by households in target communities	a. Report (Activity report) b. Spot checks c. Inspection Reports of EHAs (ESICApp) d. Household source separation agreement forms
ii. *All households in the target communities sensitised by EHSU (of implementing MMA) on source separation*	a. Number of households who are educated and monitored (monthly) to practise source separation b. Number of agreed sensitisation programmes implemented	a. Activity report b. Inspection Reports of EHAs (ESICApp)
iii. *90% of households in target communities practise source separation*	a. Number of household source separation agreement forms signed by households in target communities b. Number of households that have signed the source separation agreement forms and are practicing source separation	a. Monitoring reports b. Spot checks c. Inspection Reports of EHAs (ESICApp)
iv. *Increased volumes of clean segregated recyclables purchased by designated Bring-back Centres*	a. Volumes of recyclables handled at the Bring-back Centres	a. Records at Bring-back Centres

3.4.4 Preparatory Activities

Successful implementation of this RBF requires that certain conditions exist prior to implementation. Majority of these activities have been scheduled to be implemented under the improvement plan. These conditions have been outlined below:

Behavioural Change Education

A behaviour change campaign on source separation needs to be undertaken in all target communities. This should focus on the targeted streams of waste; recyclables (plastics, metals, and glass), biodegradables and all others. It is important therefore to ensure awareness creation on source separation is effective and well accepted by the households in target communities. This should not be a one-time activity but done periodically.

Procurement and Distribution of Fit-for-purpose Receptacles

The required number of fit-for-purpose storage receptacles to support source separation by households must be procured and distributed prior to commencement of source separation. Fit-for-purpose storage bins should be procured because the distribution will be across different houses, households, and occupancy types.

Bring-Back Centres

Constructing Bring-back centres will ensure efficient implementation of source separation. The Bring-back centres should be constructed and fully operational (adequately managed) to serve as ready market for recyclables before this RBF is rolled out. Staff composition at the Bring-back Centres should be majority females and the construction should cater for their needs such as washrooms and changing rooms. Either the cooperative or association of Informal Waste Pickers (IWPs) or Intermediate buyers can be considered for the management of the Bring-backs Centres.

3.4.5 Arrangement for Implementing Improvements

This component of the RBF will improve the value of plastic recyclables bought by Bring-back Centres. This is expected to produce four (4) outputs namely (i) All households in target communities have received fit-for-purpose storage receptacles for source separation, (ii) All households in target communities are sensitised on the appropriate source separation practices, (iii) Source separation is practiced by at least 90% households in target communities and (iv) Increased volumes of clean segregated recyclables bought by designated Bring-back Centres.

Under this RBF, Performance-Based Transfers, Performance-Based Contracts and Incentives will be used. It is expected that over the implementation period, the distribution of fit-for-purpose storage receptacles will incentivise source separation at the household level within targeted communities. EHSU (of implementing MMAs) will conduct sensitisation campaigns on source separation and monitor the practise in the target communities. The PMU will have a contract with the implementing MMAs for specific outputs related to source separation. The Bring-back Centres will be expected to buy clean recyclables generated by households and institutions within target communities. There will be a contract between the PMU and MMAs and the Bring-back Centres to meet targeted volumes of clean recyclables.

Specific Activities and Key Actors – RBF Approach

Receptacles distributed to households:
This output will ensure that all households within target communities have access to fit-for-purpose storage receptacles to support source separation of waste. The MMAs will be mainly responsible for distributing these receptacles to the households in the target communities. The distribution will take into account the type of house, space for keeping the storage receptacle or type of occupancy. Storage receptacles should fit and be able to support the household to effectively practise source separation. In target communities where FSPs operate, implementing MMAs can collaborate with the respective FSPs to distribute the procured receptacles to households. The receptacles will be provided for free, and this is expected to serve as an incentive to households to practise source separation. Upon receipt of the receptacles, households will be required to sign Source Separation Household Agreement Forms as evidence of receiving the receptacles and to engage in source separation.

Households sensitised on source separation by EHSU:
The implementing MMAs through their EHSUs are to embark on periodic sensitisation campaigns on source separation in the target communities. A 100% sensitisation campaign coverage is expected to be achieved in target communities.

Source separation practised by households:
This output is geared towards increasing the value of recyclables. Under this RBF, EHOs as part of their routine inspections monitor households to separate waste into the three (3) streams; recyclables, organic waste (biodegradables), and all others. This monitoring on source separation will be incorporated into the regular monitoring activities (such as premises inspection) of EHOs to ensure sustainability at the point of generation. Households will have the opportunity to sell (or give out freely) their recyclables to registered IWPs or Itinerant Buyers operating within the communities.
Key steps that will be implemented towards the achievement of Output (i) to (iii) are shown below

Table 24: Key steps to achieve output (i) to (iii)

Key steps/Initiatives	Start Time	Key Actors
• Provide (at no cost) all households in target communities fit-for-purpose receptacles for storage of recyclables, biodegradable waste, and all other waste as an incentive towards MSW separation at source	2024	MSWR/ PMU MMAs
• Sensitisation campaign on source separation in target communities	2024	PMU, MMAs
• Encourage institutions to purchase fit-for-purpose storage receptacles outright or on credit towards planned payment within a 6-month period (under the project)	2024	MSWR/ PMU MMAs

Increased volumes of clean segregated plastic recyclables bought by designated Bring-back Centres:

Source separation will improve and increase the volumes of clean recyclables at points of generation within target communities. The Bring-back Centres will serve as ready markets for the recyclables which hitherto would have been mixed with other waste and sent to the landfill sites for Informal Waste Pickers to sort. This will also be advantageous to key stakeholders in the recycling value chain. IWPs will have access to already sorted recyclables contributing to a reduction in risk in health and safety which has been identified as a high-risk issue on landfill sites. Intermediate buyers or recycling companies also do not have to travel to landfill sites to purchase recyclables.

The RBF will support the Bring-back Centres to purchase the expected high volumes of recyclables. The RBF will not be used to distort market prices of recyclables. The recyclables will be purchased at going market rates. Bring-back Centres will be given targeted volumes of clean recyclables which they will be expected to have purchased over a period.

The key activity that would be required to support the roll out of this output is:

Key Activity

- Engage and support the organization of Informal Waste Pickers into cooperatives to assume responsibility for further segregation of recyclables at Bring-back centres.

Start time

- 2024

Key Actors

- MSWR
- Waste Pickers
- Intermediate buyers
- Recycling Companies

This activity is captured as part of interventions under recycling, treatment, and disposal of MSW within the Catchment in the SWMIP.

The construction of bring-backs centres is vital to the achievement of this output. As indicated as part of the preparatory activities, it must be constructed and well-resourced to operate. A Public-Private Partnership (PPP) could be explored as an approach to fund the construction of the Bring-back Centres. There are already existing intermediate buyers of recyclables operating within the 17 MMAs.

Given their experience in the purchase and sale of recyclables and their business relationships with recycling companies, 2 interested intermediate buyers can be engaged and trained to manage the Bring-back Centres. They could also be considered as partners in this venture. In addition, in resourcing the Bring-back Centres, a conscious effort should be made to ensure that majority of the staff are females. This could even be considered as a requirement for the Bring-back Centres to be eligible to part-take in the RBF.

3.4.6 Contracting and Payment arrangement (Trigger, and Schedule)

Contracting

The contractual arrangements that will be employed under this RBF will involve the PMU, MMAs, and Bring-back Centres. The nature of the contracts will be:

PMU-MMAs:

PMU will have contract with MMAs to distribute fit-for-purpose storage receptacles to households in target communities for source separation. The MMAs will undertake this with the support of FSPs in areas where they operate. Sensitisation campaigns on source separation and monitoring the practise of source separation will be done by the EHSU of the MMAs.

PMUs-MMAs-Bring-back Centres:

There will be a tripartite contract between the PMU, MMAs and Bring-back Centres to trigger the RBF based on the performance of the Bring-back Centre. The performance of the Bring-back Centres under this context will be measured by the volume of recyclables bought/accumulated.

PMU-IVAs:

IVAs will be employed by PMU for verification activities throughout the implementation period of this RBF. The IVA to undertake this will preferably be a Local M&E or Accounting Firm. Given that 2 MMAs are proposed for this RBF implementation, 1 IVA can be employed to undertake verification activities.

The key results and their corresponding trigger activities or processes and schedule for undertaking them are tabulated below:

Table 25: Contracting and Payment arrangement

Key Results	Trigger	Schedule
All households in target communities have fit-for-purpose storage receptacles for source separation	• PMU receives activity report from the IVA on the distribution of fit-for-purpose storage receptacles in the target communities. • Household source separation agreement forms on signed as confirmation of receipt.	After formal report is submitted on distribution of receptacles.
Households sensitised on source separation by EHSU	• PMU receives report from IVAs confirming that all households within target communities have been sensitised • PMU receives reviews of Community Sensitisation reports from IVAs	Quarterly
90% of households in target communities actively practise source separation	• Monitoring reports from IVAs showing households that received the fit-for-purpose storage receptacles are actively practising source separation	Quarterly
Increased volumes of clean segregated recyclables bought by designated Bring-back centres	• IVAs report on volumes of recyclables bought by Bring-back Centres and the value of plastic recyclables at Bring-back centres	Quarterly

3.4.7 Performance Verification Mechanisms

The PMU will employ the services of an Independent Verification Agent (IVA) to assess and validate the results/outputs. There will be validation based on technical scorecards and the process will involve review of reports and random field visits/spot checks. The IVA to undertake this will preferably be a Local M&E or Accounting Firm. The key actors, processes, and regularity of conducting verification of results/outputs are shown in Table 29.

Table 26: Performance verification mechanisms (Source separation)

Key Results	Process	Regularity	Actors
All households in target communities have fit-for-purpose storage receptacles for source separation	• IVAs will check reports on distribution of fit-for-purpose storage receptacles to households within target community • IVAs will confirm from households (household surveys).	Once after distribution	IVA, EHO
Households sensitised on source separation by EHSU	• IVAs conduct random spot checks on households and institutions to assess their practice of source separation	Quarterly	IVA, EHOs
90% of households in target communities actively practise source separation	• IVAs will conduct spot checks on households that have received the fit-for-purpose storage receptacles for source separation. • IVAs will enquire from Bring-back Centres the quality/value of recyclables received from households and institutions	Quarterly	IVA
Increased volumes of clean segregated recyclables bought by designated Bring-back Centres	• IVAs will check records on volumes of clean recyclables bought by Bring-back Centres.	Quarterly after implementation	IVAs, Bring-back Centres

<u>General Reporting and Feedback Process</u>

- The EHSU will draft all related activity reports and share with PMU through their respective MMAs
- The IVA will draft their reports based on their findings
- Citizens or Community stakeholder engagement report (where applicable or available) will be reviewed by IVA
- Final performance (sensitisation, supervision, and monitoring) of MMAs will be determined by comparing all available reports
- Payment is triggered based on performance of the MMAs and Bring-back Centres
- Performance reports containing recommendations for improvement in implementation is shared with MMAs to support planning

3.4.8 Financing

The RBF Scheme on source separation and management of Bring-back Centres is set up to provide subsidies to the 2 implementing MMAs and management of the Bring-back Centres to drive source separation and recycling (focus on recyclables) for improvements in MSWM.

Cost Analysis and Projections of Targeted Results

P.S: *Current rates and prices were used in these estimates and are susceptible to change with time.*

- *Average Cost of Recyclables =GH¢620 = US$106.90*
- *Price for fit-for-purpose receptacles (cost of distribution inclusive) = GH¢350 = US$60.34*
- *GH¢1=$5.8*

Table 27:Receptacles distributed to households

Payment	Funder	Year 2
Targeted number of households		7867
Payment for procurement and distribution fit-for-purpose receptacles (PMU) in USD	PMU	474,694.78

GH¢1=$5.8 *Price for 3 waste receptacles is $60.34*

Table 28:Payment for sensitization on source separation by EHSU

Item	Phase I			Phase II		
				Year 4	Year 5	Year 6
Total payment for sensitization	-	-	-	10,000	10,000	10,000

Table 29:Payment for monitoring on source separation by EHSU

Item	Phase I			Phase II		
				Year 4	Year 5	Year 6
Total Payment for Monitoring	-	-	-	10,000	10,000	10,000

Table 30: Increased volumes of clean segregated recyclables bought by Bring-back Centres

Year of Implementation	Phase I			Phase II		
				Year 4	Year 5	Year 6
Projected volume of recyclables (ton/year)	-	-	-	903.75	903.75	903.75
Projected recovery rate (%)	-	-	-	50%	75%	90%
Cost of recyclables (plastic, metals, glass) (US$)	-	-	-	96,610.63	96,610.63	96,610.63
Contribution by PMU (US$)	-	-	-	96,610.63	96,610.63	96,610.63

Average price/ton of recyclables (plastics, glass, metal) = $106.90

Table 31: Funds Transfer

Payment	Conduit	Recipient
Payment to MMAs (EHSU)	GARID-PMU	MMAs (EHSU)
Payment to Bring-back Centres	MMAs	Bring-back Centres
Payment to IVA	GARID-PMU	IVAs

Table 32: Funds Transfer

Payment	Conduit	Recipient
Payment to MMAs (EHSU)	GARID-PMU	MMAs (EHSU)
Payment to Bring-back Centres	MMAs	Bring-back Centres
Payment to IVA	GARID-PMU	IVAs

3.4.9 Sustainability Measures

These measures will be put in place to ensure the practice of source separation is successful.

- The Bring-back Centres should be professionally run as a profit-making venture. The financial and technical operations should be regularly audited.
- Monitoring of Bring Back Centres should be incorporated into the routine inspection activities of EHSU
- Make Bring Back Centres first point of sale or drop off for plastics recyclables.

3.4.10 Risks

Table 33: Risks and Mitigation Measures (Source Separation)

Risk	Mitigation Measures
Using receptacles for other purposes	The Household Source Separation agreement form should include a clause that forbids householders to use receptacles for other purposes aside what they are intended. Householders should be informed that flouting this obligation attracts a fine. EHSU of implementing MMAs will follow-up and monitor adherence to the agreement as part of their routine House-to-house.
Poor management of Bring-back Centres	MMAs should have guidelines to ensure effective management of Bring-back Centres. EHSU should monitor the technical operations to ensure compliance to management of accumulated recyclables and Occupational Health and Safety practices.
Poor source separation	Apart from the periodic project sensitization, EHSU should routinely sensitise households on source separation as part of their monitoring activities. This is a behaviour change activity as so effective and constant monitoring will be needed especially during the initial stages of implementing the RBF.
Low/Decreasing demand for recycled products	Advocate for use of recycled products
IWPs and Itinerant buyers sending the recyclables to places other the Bring-back Centres	A working agreement between the Cooperative/Association of IWPs and Bring-back Centres should be established for Bring-back Centres to be the first point sale of recyclables. This will be based on the IWPs being given official access to recyclables within the implementing MMAs.

4.0 IMPLEMENTATION ASPECTS AND RECOMMENDATIONS

4.1 Institutional Arrangements and Stakeholder Roles

The implementation of the RBF Scheme will be handled within the institutional framework defined for the implementation of the Component 2 of the GARID Project. Institutional arrangements should be adequate in serving both the SWMIP and the RBF Scheme. Institutional arrangements and flow of funds are important factors during project implementation and must be presented in a manner that can easily be understood by all key stakeholders – the MMAs, the service providers, the beneficiaries, and the independent verification agents. The discussions before project implementation must ensure that agreed institutional arrangements and flow of funds for the RBF Projects must be kept simple – considering the capacity of MMAs and service providers.

Figure 6 is a depiction of the various stakeholders and their roles. We recommend that as much as possible the institutional arrangement should avoid the creation of new or parallel structures. Where additional staff are required, they could be recruited under the Technical Assistance package. For example, the PMU might require additional staff to meet additional requirements for handling the SWMIP and the RBF. Also, Independent Verification Agent (IVA) and technical support personnel for MMAs (coaches) will be required. The implementation strategy should be driven by the quest to ensure inclusivity, gender and safeguard considerations, stakeholder buy-in and consensus, behaviour change, improved access and quality of service, and cost recovery along the journey of achieving the RBF targets.

In this document, the priority results have been defined for each of the RBF objectives. At the inception stage of implementing the RBF Schemes, the respective service providers will be required to prepare a result-based action plan outlining the strategies to be adopted to achieve the agreed RBF outputs. This will lead to an engagement between the MSWR and the respective service providers to agree on the resource requirement for implementing the strategy. Based on this, a formal agreement will be signed between MSWR/MMAs and the respective service providers, highlighting the expected results, requirements, verification process, incentive levels and possible sanctions.

The National Level Coordination Team will be responsible for ensuring the mainstreaming of the management of the RBF implementation into the broader picture of SWMIP. The National Level Coordination Team comprises

- Project Implementation Unit (PIU) to be set-up within the Ministry to provide oversight and general coordination of implementation of the strategy.

- Project Management Unit (PMU) which is constituted as a technical body to support the Ministry in the implementation of the strategy.

4.2 Phasing of RBF Support and Selection of Beneficiary Communities

The RBF scheme is designed as a special input to strengthen the process of achieving remarkable improvements in of MSWM in the entire Odaw River Catchment. The following recommendations are made regarding Phasing of Implementation and Selection of participating MMAs:

➢ *Participating MMAs*

Bearing in mind the overall goal of the GARID Project to reducing littering and pollution of the Odaw Basin, it is recommended that all the 17 MMAs in the Odaw Basin should ultimately participate in the proposed RBF Scheme implementation.

➢ *Selection of Beneficiary Communities and Phasing of Implementation*

Given that RBF in solid waste management in Ghana is new, it is proposed that the RBF Scheme for '"improving primary waste collection" should be implemented in the three GARID upgrading communities (Aloboshie, Akweteyman, and Nima), while four MMAs are selected to implement the RBF Scheme for "improving cleanliness of target communities" as the first phase for the roll-out of the RBF Scheme. Based on progress, lessons learnt and resource availability, additional MMAs and communities can be enrolled. This will provide every MMA and MSWR the learning opportunity on RBF implementation. The RBF Scheme on "improving source separation and management of bring-back-centres" alongside the second phases of the other schemes. .

4.3 Monitoring and Evaluation

The independent verification exercise is considered an integral part of monitoring of the RBF implementation. Aside the verification process, it is important to ensure the availability of an adequate M&E system for the RBF implementation – and this should be incorporated into the processes for monitoring and evaluation of the overall strategy. Activities to be undertaken before the implementation of proposed RBF interventions include assessment of existing capacity within GARID project, the Sector Ministry and MMAs to monitor, evaluate and validate the results of the RBF project implementation.

The scope of M&E should include:

Given the novelty of the RBF concept in MSWM in Ghana, it is likely that M&E systems related to the planned RBF programmes may still require strengthening of different aspects, such as programme arrangements and institutional capacity to enhance implementation. The M&E systems for RBF implementation should be mainstreamed into the M&E system for the implementation of the entire SWMIP. If required Disbursement Linked Indicators (DLIs) related to M&E could be defined as part of required indicators for overall capacity building.

4.4 Independent Verification of Results

A System for Verification of Results is Core to RBF Implementation

The driving factor of an RBF Scheme is the incentive packages that are paid upon achievement of pre-agreed targets. Therefore, verification of results to justify payments to service provider is considered particularly important aspect of any RBF Scheme implementation. A transparent verification system that is acceptable to all stakeholders should be set-up at the inception stage of the implementation of the RBF Scheme. The primary objective of the verification process should be to ensure that a credible and independent mechanism is in place for monitoring, measuring, and verifying the achievement of the indicators.

Clearly Defined Disbursement Linked Indicators is Key

The fundamental principle is that during project implementation, the Project will be able to demonstrate the achievement of key outcomes that have been achieved. The agreed final set of DLIs will ensure that only carefully defined and realistic DLIs, which really measure successful achievements of project targets are agreed. This RBF design has provided clearly defined DLIs (triggers) for each of the 3 RBF Objectives. The details include means of verification that will ensure that the process of implementation generates the needed information to justify release of subsidies.

Before implementation of RBF-based interventions starts, an updated DLI Verification Protocol should be developed. The verification protocol should clearly indicate:

- Clear definition of the DLI and how it will be measured.
- Objective, detailed definition of what is required to consider the DLI as achieved.
- Indication of whether disbursements associated with the DLI will be scalable.
- Definition of the data sources that will be used to measure the DLI’s achievement, including reporting frequency.
- Baseline data and expected timing of DLI achievement clearly established based on comparable data sources.
- Name of the specific stakeholder that will be responsible for providing relevant data and for verifying achievement of the DLI.
- Indication of the independence of the verification agency/party

The complete verification protocol will be an integral part of the monitoring and reporting arrangements for the RBF projects.

Independent Verification Agents

In line with general best practice related to RBF Projects, it is recommended the verification of DLIs should be conducted independently of Project stakeholders at all levels (including the MMAs, Service providers and beneficiaries). To this end verification could be carried out by selected parties not directly involved in the Project - such as non-governmental organizations, representatives of civil society, audit firms and private Consultants.

The following recommendations are made with regards to selection and operation of the Verification Agents for RBF interventions.

- For the proposed RBF Project, it is recommended that verification agents could be private consultants (individual or firms) selected through the National Procurement Process. Selected Agents would work directly within the MMAs and report directly to the MSWR/PMU.

- The GARID Project Management Team should lead the development of a TOR for the recruitment of Verification Agents. The TOR should clearly define the scope of the verification exercise and terms for the engagement of verification agents. Some suggestions have been made under the specific schemes.

- The selection of independent verification agents is important in any RBF. The recruitment and training of IVAs would aim at ensuring adequate number of trained Agents to handle the verification. The selection should be done through a competitive selection process in line with National Procurement Requirements.

- The number of Agents at any time should reflect the level of ongoing Project activities Given the number of MMAs involved, each independent verification agent engaged should be assigned three or four MMAs to handle.

- Joint meetings should be organised for the newly selected independent verifiers to design, review and agree on specific indicators or benchmarks, schedule for verification and methodology for the conduct of the verification.

- All key stakeholders, including MMAs and service providers, should be trained on the verification tools and methodology to set the foundation for acceptance of the verification recommendations.

- Wherever possible, a citizens' feedback system should be incorporated into the verification system. However, the feedback from the citizens should always be verified.

4.5 Capacity Building Support for Implementation

Field assessments clearly established that generally, capacity of MMAs and Service providers are low. The introduction of an RBF Scheme would only increase their willingness but not their capacity – unless it is supplemented by technical assistance. Hence in additional to planned RBF interventions, complementary support through Technical Assistance or additional funding for capacity building would be needed to ensure that municipalities achieve their targets.

Capacity Assessment and Appropriate Training

Detailed capacity assessment for RBF implementation did not fall within the scope of the current Assignment. However, the expectation is that the process towards development of the RBF project will include capacity building interventions. Further analysis of identified risks will lead to a better understanding of capacity constraints to achieving the specified results and based on that appropriate training programmes will be designed to enhance the capacity of various Actors on the Project. Training and sensitisation activities proposed in the SWMIP for sub-national actor would deliberately include issues on the RBF and its implementation. An important element of capacity building will involve the interventions aimed at behavioural and institutional changes that are required to achieve results and manage associated risks. Such actions include introduction of new initiatives like wastes segregation, how to enforce laws on littering, and introduction of new fees.

MMA Support arrangements for Implementation

Again, within each municipality the project should appoint a committed and dedicated staff who will serve as Coordinator. The staff should be selected based not only on their rank but also by how much they are able to serve as a champion – serving as real advocate to the top hierarchy of MMA management and facilitating communication with staff within the MMA and at the beneficiary level. The MMAs' staff will require additional support on financing and technical assistance to help them successfully coordinate and manage interventions. The scope of support includes initial planning for the roll-out of the RBF (on review of targets, definition of activities, implementation timelines, budgeting, and internal monitoring etc). During implementation, support would be required on performance monitoring, and design of contractual arrangements.

Providing Technical Assistance to MMAs to implement RBF

The required TA support is expected to be delivered by specially designated Technical Support Staff (Coaches) who are recruited by and report to the Project Management Unit. Depending on the scope of capacity building support requirements a decision may be taken to package all identified capacity needs to be funded through a dedicated technical assistance package to support the RBF components. The TA can be provided as an integral part of an RBF operation i.e., DLIs can be elaborated, and the TA package can be packaged as a fourth component to complement the 3 Objectives already identified. The TA could also be packaged as a separate stand-alone investment to be implemented under the SWMIP.

It is recommended that the TA requirements should consider the fielding of dedicated technical experts to serve as coaches to provide technical assistance to the MMAs in areas like planning, revenue issues, M&E and other operational issues related to RBF implementation. The coaches will also support the MMAs to strike the right balance between the implementation of the RBF Scheme and the other interventions in the SWMIP.

4.6 Sector Learning and Application of Lessons Learned

With the weak history of achievements in the SWM, the evidence-base of what works in the sub-sector, relative to other sectors like health is rather weak. Hence there is inadequate knowledge on what factors and strategies contribute to successful project delivery, scaling up and financial sustainability. The relative lack of evidence in the solid waste management in Ghana implies that innovative approaches like the RBF can allow for innovation and local development of knowledge to further build the evidence base of what works in improving access and learning outcomes.

Hence the inclusion of rigorous evaluation of RBF interventions and the adoption of a research/learning approach in the planned RBF scheme are strongly recommended to develop knowledge to fill the current gaps in the evidence base. It would also offer MMAs and service providers the opportunity to learn and improve on their implementation approaches and strategies.

We recommend that during implementation, the GARID Project Management commits to resourcing learning components with the following in mind:

- Dedicated funding should be set aside to support areas such as:
  - *Process documentation of Project experiences*
  - *Inclusion of specific research components in project implementation and reporting*
  - *Development of analytical Case studies of successful elements*
  - *Structured analysis of outcomes of monitoring and evaluation*

- The process for learning and sharing should be incorporated into the project delivery framework and objective under the SWMIP. However, facilitation of learning should be deliberate in capturing issues on RBF.

- Project implementation should include setting up of community engagement and communication structures from the community level to the ministry that drive provision of feedback on progress/success or otherwise.

- Lastly the technical assistance package for recruitment of MMA Coaches should also be used to drive the RBF learning agenda at the MMA level.

4.7 Implementation of the RBF Concept Document

The RBF document is considered a guiding document that will facilitate the implementation of the proposed RBF Schemes. However, the MSWR may decide to make further adjustments to some aspects to make them more aligned to GARID project implementation strategy, while maintaining critical considerations under an RBF (payment of incentives to service providers based on achievement of agreed results, appropriate verification of performance before payments, etc.).

Before implementing the RBF Schemes, sector dialogue involving a wider scope of stakeholders from the National and MMA levels, and proposed service providers is recommended to disseminate the RBF proposal and receive feedback on the following, among others:

- Definition of the RBF Scheme.
- RBF objectives, strategic relevance, and rationale.
- Proposed results to be achieved under each of the scheme.
- The general design of the RBF Components.
- Phasing of implementation and the Selection of participating communities.
- Framework for Verification and M&E
- Required capacity building and Technical Assistance Support
- Institutional arrangements for implementation.
- Proposed expenditures, nature of activities and implementation arrangements.
- The risks to achieving the RBF Program's objectives and results.

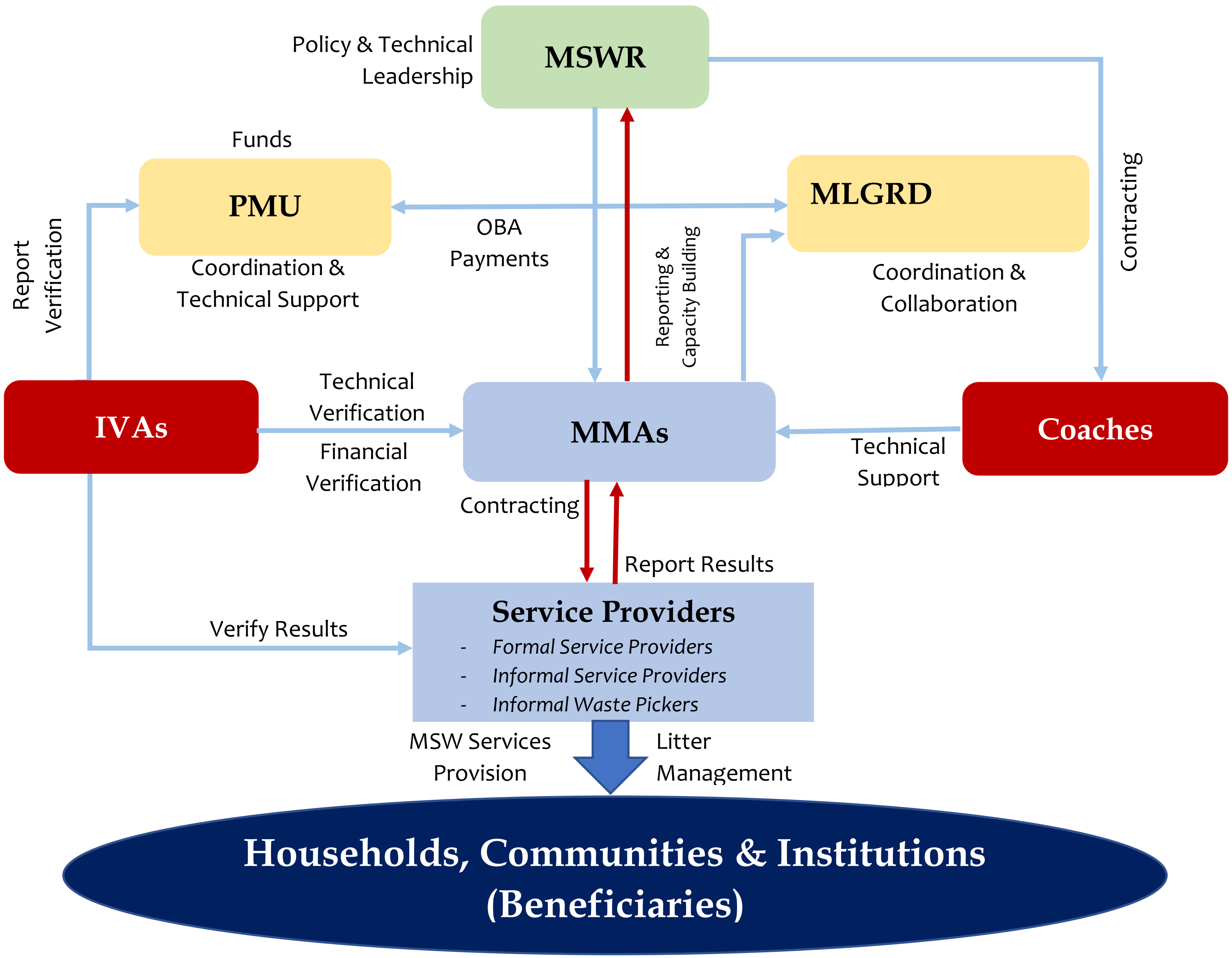

Figure 4: Institutional Structure for RBF Implementation

5.0 FINANCING REQUIREMENTS AND DISBURSEMENT

5.1 Introduction

This section of the report presents the summary of the cost estimates for the entire RBF Programme. It captures the detailed breakdown of the budget for the period (2021 – 2026) of the RBF implementation for each of the RBF Objectives. The indicative year-on-year expenditure is also presented to show the total cost of RBF payments per year. This section also captures the total cost of the technical assistance and capacity building component of the RBF programme. It is worthy to note that the RBF implementation has been split into Phase one (2021 – 2023) and Phase two (2024 – 2026).

Table 34: Detailed Cost Estimates for RBF Programme Interventions

Thematic Areas	Cost Items	Phase One			Phase Two		
		Year 1 - 2021	Year 2 - 2022	Year 3 - 2023	Year 4 - 2024	Year 5 - 2025	Year 6 - 2026
Improving Primary Waste Collection in Low-income Communities within the Odaw Catchment	*Informal Service Providers integrated*						
	Identify ISPs operating within the jurisdictions of the 4 MMAs and engage ISPs on arrangements for MSW collection improvements for low-income communities (USD)	10,000.00	0.00	0.00	0.00	0.00	0.00
	Register and organise ISPs into cooperatives to provide collection services to target low-income communities (USD)	10,000.00	0.00	0.00	0.00	0.00	0.00
	Train the ISPs on requirements, service standards and operational areas and provide them with license to operate	20,000.00	0.00	0.00	0.00	0.00	0.00
	Provide the 4 ISP cooperatives with 90 No. tricycles (aboboyaa) for waste collection services	200,000.00	0.00	0.00	0.00	0.00	0.00
	RBF Payable (USD)	***240,000.00***	***0.00***	***0.00***	***0.00***	***0.00***	***0.00***
	Sub-Total RBF by Years (GHC)	***1,392,000.00***	***0.00***	***0.00***	***0.00***	***0.00***	***0.00***

	Improved waste coverage						
	Identify all households/ institutions without collection services in target communities and assign ISPs to provide services (USD)	10,000.00	0.00	0.00	0.00	0.00	0.00
	Map out current service zones, unserved/ underserved areas in target MMAs and undertake needs assessments (USD)	20,000.00	0.00	0.00	0.00	0.00	0.00
	Engage all stakeholders, including communities to discuss the MSW collection improvement arrangements (USD)	20,000.00	0.00	0.00	0.00	0.00	0.00
	Plan for the collection of source-separated waste in target communities from Phase 2 (2024) (USD)	0.00	0.00	0.00	5,000.00	0.00	0.00
	RBF Payable (USD)	***50,000.00***	***0.00***	***0.00***	***5,000.00***	***0.00***	***0.00***
	Sub-Total RBF by Years (GHC)	***290,000.00***	***0.00***	***0.00***	***29,000.00***	***0.00***	***0.00***
	Improved waste capture - Informal Service Providers						
	Total Actual Cost (USD)	0.00	184,493.79	0	0	0.00	0
	RBF Payable (USD)	***0.00***	***184,493.79***	***0.00***	***0.00***	***0.00***	***0.00***
	Sub-Total RBF by Years (GHC)	***0.00***	***1,070,063.98***	***0.00***	***0.00***	***0.00***	***0.00***
	Improved quality of waste collection services						
	Cost of monitoring improved quality of collection services ($)	0.00	24,000.00	0.00	0.00	0.00	0.00
	Introduce tracking device on all tricycles for the ISPs to monitor services ($)	13,500.00	0.00	0.00	0.00	0.00	0.00
	Quarterly Rewards for sustained improvement waste collection by ISPs ($)	0.00	20,000.00	0.00	0.00	0.00	0.00
	RBF Payable (USD)	***13,500.00***	***44,000.00***	***0.00***	***0.00***	***0.00***	***0.00***
	Sub-Total RBF by Years (GHC)	***78,300.00***	***255,200.00***	***0.00***	***0.00***	***0.00***	***0.00***

Improving Cleanliness of Communities in MMAs within the Odaw Basin	***Payment to MMAs (for Monitoring, Supervision and Law Enforcement)***						
	Total Payment (SWM Governance) (USD)	86,200.00	86,200.00	86,200.00	0.00	0.00	0.00
	Support for CSTs	4,140.00	4,140.00	4,140.00	0.00	0.00	0.00
	RBF Payable (USD)	***90,340.00***	***90,340.00***	***90,340.00***	***0.00***	***0.00***	***0.00***
	Sub-Total RBF by Years (GHC)	***523,972.00***	***523,972.00***	***523,972.00***	***0.00***	***0.00***	***0.00***
	Payment to MAs (for winning one of the Cleanest city Awards)						
	Total Payment (Cleanest MMA Awards)	0.00	0.00	0.00	250,000.00	275,000.00	275,000.00
	Award Management Cost	0.00	0.00	0.00	75,000.00	62,500.00	62,500.00
	RBF Payable (USD)	***0.00***	***0.00***	***0.00***	***325,000.00***	***337,500.00***	***337,500.00***
	Sub-Total RBF by Years (GHC)	***0.00***	***0.00***	***0.00***	***1,885,000.00***	***1,957,500.00***	***1,957,500.00***
Improving source separation and management of bring-back centres in communities within the Odaw basin (Households, Schools, & other Institutions)	***Fit-for-purpose storage receptacles distributed***						
	Targeted number of households	0.00	0.00	0.00	7867	0.00	0.00
	Payment for procurement and distribution Waste receptacles	0.00	0.00	0.00	474,694.78	0.00	0.00
	Households sensitised on source separation by EHSU						
	Total payment on sensitization	0.00	0.00	0.00	10,000.00	10,000.00	10,000.00
	Source separation practised by households						
	Total Payment on Monitoring by EHSU	0.00	0.00	0.00	10,000.00	10,000.00	10,000.00
	Increased volumes of clean segregated recyclables bought by bring-back centres						
	Payment to Bring-back Centres	0.00	0.00	0.00	96,610.63	96,610.63	96,610.63
	RBF Payable (USD)	***0.00***	***0.00***	***0.00***	***591,305.41***	***116,610.63***	***116,610.63***
	Sub-Total RBF by Years	***0.00***	***0.00***	***0.00***	***3,429,571.38***	***676,341.65***	***676,341.65***
Overall Total RBF by Years (USD)		**393,840.00**	**318,833.79**	**90,340.00**	**921,305.41**	**454,110.63**	**454,110.63**
Overall Total RBF by Years (GHC)		**2,284,272.00**	**1,849,235.98**	**523,972.00**	**5,343,571.38**	**2,633,841.65**	**2,633,841.65**

GHC 1 = $ 5.8

Table 35:Summary of Cost Estimates Based on RBF Objectives and Technical Assistance and Capacity Building Component

No.	Results/Output	Total Budget ($)	Total Budget (GHC)
1	**Improving Primary Collection in Low-Income Communities**		
1.1	Informal Service Providers integrated	240,000.00	1,392,000.00
1.2	Improved waste coverage	55,000.00	319,000.00
1.3	Improved waste capture	184,493.79	1,070,063.98
1.4	Improved quality of waste collection services	57,500.00	333,500.00
	Sub-total	***536,993.79***	***3,114,563.98***
2	**Improving Cleanliness of Communities in MMAs within the Odaw Basin**		
2.1	Payment to MMAs (for Monitoring, Supervision and Law Enforcement)	271,020.00	1,571,916.00
2.2	Payment to MAs (for Winning one of the Cleanest City Awards)	1,000,000.00	5,800,000.00
	Sub-total	***1,271,020.00***	***7,371,916.00***
3	**Improving Source Separation and Management of Bring-Back Centres in communities within the Odaw Basin**		
3.1	Fit-for-purpose storage receptacles distributed	474,694.78	2,753,229.72
3.2	Households sensitised on source separation by EHSU	30,000.00	174,000.00
3.3	Source separation practised by households	30,000.00	174,000.00
3.4	Increased volumes of clean segregated recyclables bought by bring-back Centres	289,831.89	1,681,024.96
	Sub-total	***824,526.67***	***4,782,254.69***
4	**Technical support for RBF proposals**		
4.1	Initial Engagement on RBF (2 Days) (USD)	3,200.00	18,560.00
4.2	Training on RBF Action Plan (1 Day) (USD)	1,600.00	9,280.00
4.3	Engagement of IVA (5 IVAs) (USD)	300,000.00	1,740,000.00
4.4	Engagement of Coaches (5 Coaches) (USD)	450,000.00	2,610,000.00
4.5	Training for MMA Staff on WS (1 day) (USD)	6,800.00	39,440.00
	Sub-total	***761,600.00***	***4,417,280.00***
	Total	**3,394,140.46**	**19,686,014.67**

GHC 1 = $ 5.8

Table 36:Detailed Technical Assistance and Capacity Building Budget by Year

Cost Items	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Initial Engagement on RBF (2 Days) (USD)	3,200.00	0.00	0.00	0.00	0.00	0.00
Training on RBF Action Plan (1 Day) (USD)	1,600.00	0.00	0.00	0.00	0.00	0.00
Engagement of IVA (5 IVAs) (USD)	0.00	60,000.00	60,000.00	60,000.00	60,000.00	60,000.00
Engagement of Coaches (5 Coaches) (USD)	0.00	90,000.00	90,000.00	90,000.00	90,000.00	90,000.00
Training for MMA Staff on WS (1 day) (USD)	0.00	6,800.00	0.00	0.00	0.00	0.00
Total RBF by Years (GHC)	**27,840.00**	**909,440.00**	**870,000.00**	**870,000.00**	**870,000.00**	**870,000.00**
Overall Total	**GHC**	**4,417,280.00**				
	USD	**761,600.00**				

GHC 1 = $ 5.8

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