

Section II: Schedule of Requirements

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Terms of Reference

For a Provision of Costed Feasibility Models and Action Plan for Implementing Composting and Recycling Options for Primary Waste Collection in Monrovia, Paynesville, and surrounding townships.

Background

In Liberia, waste collection and waste management services fall within the mandate of cities. Municipal solid waste collected in Monrovia, Paynesville and neighboring townships is currently transferred to the Whein Town landfill, located in Paynesville. This is Liberia's only sanitary landfill and was constructed in 2011 under the World Bank's Emergency Monrovia Urban Sanitation (EMUS) project. The EMUS project was financed by the Liberia Reconstruction Trust Fund (LRTF), the Ebola Recovery and Reconstruction Trust Fund (ERRTF), the International Development Agency (IDA) and the Government of Liberia with majority funding from the European Union (EU) and made significant progress in establishing an effective waste collection and disposal system for Monrovia and surrounding townships.

In parallel, the Cities Alliance (UNOPS) is implementing EU-financed projects on Primary Waste Collection and Waste to Energy Alternatives for Greater Monrovia. Together, these two projects aim to support Liberia's Nationally Disclosed Contribution (NDC) to the United Nations Framework Convention on Climate Change by improving the Primary Waste Collection System as well as providing viable alternatives such as waste recycling, composting and Waste-to-Energy alternatives.

These two projects seek to work directly with Community Based Enterprises (CBE's) to ensure that Solid Waste Management in Liberia is viewed as a value chain from the household to the landfill site. This project builds up on the experiences of the Improved Primary Waste Collection in Poor Communities project, funded by the Bill and Melinda Gates Foundation, which established and trained CBEs and Community Management Teams (CMTs). The IMPAC project demonstrated that the CBE model is a successful model for Primary Solid Waste Collection and one which would benefit Monrovia, Paynesville, and surrounding townships in their mandate of waste collection.

The overarching idea is to contribute to GHG emission reduction through the diversification of the Primary Waste Collection value chain. The objective is to do so via a two-fold approach:

- To invest in interventions for rapid employment creation and support to basic social services, that are geared towards Climate Change Adaptation and Mitigation; and
- To strive to translate this into longer-term gains through employment creation, enhanced capacity for service delivery and local economic development

Solid waste management (SWM) has been identified as one of the highest priorities of the national and local governments. It is important that the support provided is aimed at offering durable solutions for improvement of SWM including prolonging the longevity of the landfill and linking it to livelihoods and employment creation. To support this aim, there is a need to acquire the services of a Consultancy Firm to develop a Feasibility Study and Action Plan to diversify the Primary Waste Collection for Monrovia, Paynesville, and surrounding townships. The focus of both the Feasibility and Action Plan should be on implementing costed business models with Community-Based Enterprises (CBEs) and Small and Medium Enterprises (SMEs).

Using a market-led approach, the consultancy work is to identify and analyze needs and emerging opportunities to diversify the market of Primary Waste Collection with the highest potential for employment creation for the poor (especially youth and women) through CBE's and SME's. Doing so will support their entry into viable markets and expand commercial activity on Primary Waste Collection. The Feasibility Study needs to identify and support appropriate market linkages within the Municipal Solid Waste Management sector that will allow to:

- Foster commercially viable activities related to the collection and processing of waste;
- Strengthen capacity of relevant CBE's and SME's actors;
- Expand access to financial services and support business development service (BDS) that focus on waste processing;
- Develop stronger enabling environment to foster growth of micro (CBE's), small, and medium enterprises (SME's)

Therefore, Cities Alliance (UNOPS) is procuring a Feasibility Study and Action Plan to:

- Support livelihoods opportunities and improve access to markets for CBE's and SME's in the municipal solid waste sector;
- Identify constraints and opportunities to the solid waste market system, in particular, recycling, reusing, and composting;
- Design interventions that would enhance the functioning of the chain, including public-private-partnerships (PPP) and enhancing the private sector's role in local development and employment creation with consideration to gender and diversity sensitivity.

This study will benefit from other two exercises currently underway. The first one is the data collection and baseline study currently covering Waste Collection in the same geographic scope – and which will include an assessment of waste generation, composition, and carbon emission of the area; an assessment of current primary and secondary waste collection operations, a financial analysis of the current primary and secondary waste collection operations, and the review of institutional and regulatory arrangement of Solid Waste Management in urban Liberia. The second is regards a feasibility study and action plan to strengthen and geographically expand the CBE system in Monrovia, Paynesville, and surrounding townships.

Objectives

The aim of the study is to examine the existing municipal solid waste management cycle and value chain Monrovia, Paynesville and surrounding townships and identify entry points to create additional livelihoods and self-employment opportunities (in particular targeting women and youth) through the processing of waste (e.g. recycling, reusing of waste in products, composting and bio-gas production from waste etc). The final products of the study are:

Transfer of knowledge will be carried out through de-briefing and a validation workshop for the final Action Plan, with participation of relevant stakeholders, in which the contractor will participate and facilitate the knowledge transfer discussion, present the findings of the feasibility study, and recommend an Action Plan that should then get the clearance during the validation workshop. The organization of the workshop will be supported by Cities Alliance Liberia Country Programme (UNOPS)

The deliverables will be considered acceptable after clearance and acceptance by the Technical Committee of this project. The Contractor will be working in close coordination with the relevant experts of the Cities Alliance Liberia Country Programme and headquarters (in Brussels), representatives from the host government and project stakeholders.

Geographic scope

The geographic scope of the study are Monrovia, Paynesville, New Georgia, Garwolon, West Point, Brewerville, Virginia, Congo Town, Johnsonville, Dixville, Caldwell, New Kru Town, Barnersville, Gardnersville and the Township of Cheesemanburg.

Scope

The scope of work is designed to address the objectives described above. The scope of work has three key components, namely:

1. Feasibility Study. This should include:

a) Value Chain Analysis to identify existing business operations and functions around municipal solid waste; chain operators and their linkages, as well as the chain supporters within the value chain. Solid waste cycle and value chain maps need to be developed as the core of analysis. This includes (1) Presenting the micro, meso and macro level of the cycle and value chain, (2) sequencing the production and marketing functions related to solid waste currently performed; (3) assessing the vertical business links between operation.

b) Broad assessment quantifying and describing the municipal solid Waste volumes: to attach numbers to the basic chain map (for example, numbers of actors, volume of produce and the market shares of segments in the solid waste chain) in order to make the map for decision making and planning. Such as assessment will be important to help identify specific opportunities for employment creation for specific groups, such as women and youth within areas of recycling, reusing and composting waste. The political and institutional and legal framework conditions around solid waste enabling or hindering chain development should be addressed in this part of the analysis. The analysis should include (a) number of existing and potential operators (differentiating size of enterprises); (b) market share and number of potential employees for each category of operators (gender disaggregated); (c) prices paid at each chain link between stages, (d) shares of product flow of the different sub-chains/distribution channels of solid waste; (e) market share of the value chain defined as percentage of the sales value in the overall market. The assessment should zoom in on the basic value chain map to generate thematic chain maps on recycling; reuse and composting.

c) Economic analysis of solid waste value chains to assess value chain performance in terms of economic efficiency. This includes determining the value added along the stages of the value chain, the cost of production and, to the extent possible, the income of operators. In addition to that, this part of the analysis should investigate the transaction costs, such as the cost of doing business related to solid waste, collecting information and enforcing contracts. The economic performance of a value chain should be benchmarked-i.e. the value of important parameters to be those of competing chains in other countries in the region.

d) Market research on solid waste related goods and services: This part of the assessment should investigate the growth potential on goods and services around solid waste and identify market opportunities and formulate an upgrading and objectives action in line with demand condition specific for women and youth.

Key steps and questions:

- a) Demand analysis of the municipal solid waste value chain:
 - Demand of final consumers of waste products
 - Demand of industrial customers and exporters
- b) Demand trend analysis:
 - Recent trend demand over time (in terms of value, volume, variety)
- c) Growth potential:
 - Positive/potential growth trend of the municipal solid waste value chain and unmet market demand;
 - Scope for expanding productions and value-addition through processing or product improvement of municipal solid waste;
 - Competitive advantage of the solid waste value chain (unique product/local specialty, low cost of production);
 - Share of poor people, women and youth that can be employed in the solid waste value chain;
 - Low entry barriers for small-scale and poor entrepreneurs (low start-up cost, not requiring major capital investment, using low-tech skills);
 - Covering locations where poor population live;

- Offering chances for women;
- Significance for the rural economy.

d) The conditions of market access:

- Existing distribution channels (e.g. industry, export, or end consumer markets);
- Power of market participants (e.g. monopolies);
- Infrastructure of roads and market places (e.g. storage facilities);
- Products standards (e.g. laws/regulations on product safety);
- Tax and tariff regimes (e.g. customs tariffs on inputs);
- Service offers facilitating market access (e.g. financial and information services).

e) Products profiles of products from solid waste-e.g. recycled/reused products:

- Availability in the market (domestic and/or imported);
- Processed by the Liberian industry for the domestic and/or export market;
- Possible new products having a market potential in Liberia.

f) Market access requirement :

- Types of products around municipal solid waste in demand;
- Market size and trends (e.g. volumes traded, consumption of different consumer groups);
- Product prices (e.g. max and minimum prices, price trends, fluctuations, price range);
- Requirements of buyers in terms of quality, price, volume, and reliability.

g) The competitors and performance:

- Competing producers and value chains (e.g. imports, supplies from other regions);
- Performance of competing market participants (e.g. quality, price)
- Competitive advantages of competitors (e.g. market distance)
- Competing products (e.g. products currently used);

h) SWOT analysis on the solid waste market regime, including, amongst others, and provide :

- processing capacities and technology;
- Physical infrastructure;
- Logistics/transport/recycling and compositing facilities in processing and trade;
- Technical barriers to process solid waste products;
- Marketing services;
- Policy and regulatory impediments, administrative requirements.

e) **Recommendations and Entry Point of Intervention** to facilitate upgrading of municipal solid waste value chain targeting the women and youth, based on the information of the value chain analysis. In particular on recycling, it is crucial to understand how to enhance the level of recycling and resource recovery based on local market demand for recyclables, the factors affecting local market demand, and the availability of competitive materials (including imported recyclables from industrialized countries); how to enable key agencies to better understand how to upgrade the status, income, productivity, and working conditions of waste pickers and others involved in recycling on the picker-to-buyer-to-end-user network and the factors affecting pricing and profits in recycling; and how to enable key agencies to develop policies, institutional changes, and financial incentives which would support improved and increased recovery of recyclables, and improved and increased market demand for recyclables.

2. Action Plan – based on the findings of the Value Chain Analysis, and the recommendations presented, a costed action plan for vertical expansion of the CBE system into composting and recycling should be presented. This Action Plan should be based on the viable option concerning project funds availability for its implementation – which will be made available to the consultant(s). The Action Plan should include the costing of micro-loans and grants to CBEs, capacity building necessary to strengthen the CBEs and the CMTs, and where sorting stations for CBEs should be located. The Action Plan and its steps should be mutually agreed with stakeholders on project implementation, especially local and national authorities; multilateral agencies, civil society stakeholders, community representation, and private sector.

The Action Plan should be simple, concrete, and easily understandable by all stakeholders involved. It should be made of the following:

- Executive Summary
- Background of the project
- Methodology of the Action Plan, including stakeholder consultation
- Explanation of each milestone of the Action Plan, including responsible institution, costing, and date of delivery;
- A simplified version of the Action Plan presented as in a table format, so stakeholders and project implementation team can keep track of progress.

Reports:

The consultants are expected to produce the following reports during the study:

1. **Inception Report**: Within 15 days, the consultant shall produce an inception report outlining methodologies to be used in the Value Chain Analysis and the Action Plan. It should contain an initial plan for content of these reports, milestones, and dates of field work.
2. **Feasibility Study**: Within 45 days, the consultants shall produce Value Chain Analysis as outlined in the Inception Report.
3. **Action Plan**: The Action Plan should be submitted within 90 days. The consultants will then run a workshop with stakeholders to agree on, prioritize and sign off on the Action Plan.

Minimum Requirements

- The study manager must have a bachelor's degree in economics, development, livelihoods and private sector development, social development, sociology/anthropology, gender in development or any related field. A master's degree is a plus.
- The study manager must have at least 8 years of work experience in analysis of market, in particular value chain analysis; community and business network relationships; industrial processing; assessing industrial markets and pricing policies. Experience in/with private sector is an asset.

Conditions of the Study:

The Consultant/firm shall use the Cities Alliance office as its base and be in close contact with the local and national stakeholders in order to maximize technology transfer and training to counterpart staff and other stakeholders. There is an expectation that results of the project will be shared with the Technical Working Group of Solid Waste Management established by Cities Alliance, and other partners as necessary (and vetted by the Technical Working Group) to ensure ownership of the final products.

Local consultants participating in the study shall work at the Cities Alliance office while the study is on-going. All other local consultants participating in data collection and analysis, under the guidance of the Consultancy Lead, shall attend regular meetings (e.g., weekly) for purposes of direction and monitoring, but will work on a day-to-day basis in the field.

The study shall have a clear approach, i.e., the methods and approaches shall lead to comparable data and the evaluation of background conditions and shall enable understanding of the similarities and differences among the cities and townships.

The outputs for each city/township shall be reported in the same format, for ready comparison of data and findings.

The process used for data generation and analysis shall be replicable, and simple spreadsheets for data management and analysis shall be developed.

Costing conducted during the study shall clearly outline all costing factors used in a manner which readily enables comparison of costs and updating, including unit prices, percentage increases for benefits and administrative overhead, consumption rates for consumables and unit prices, interest rates, insurances, duties, economic life, downtime and productivity assumptions. As appropriate, the basis for calculating costs of civil works shall be provided in terms of local costs for time and materials, as well as any foreign exchange requirements. Also, costs for imported equipment shall be provided in terms of international quotations plus factors applied for costs attributable to shipping, portage, registration, duties and sales tax.