

**MOTTO**: Holding hands, building Bridges and saving lives

Decision No: 000076/A/MINAT/SG/DAP/SDLP/ SONG/BA/DTPB P.O Box:16 Menji, South West Region Tel: (237) 676198551 Email:brivcoisud@yahoo.com NIU: M101618306392F



**CEO of BRIVCOISUD LEKUNZE OLIVER at the Yaoundé waste management Forum on the invitation of the Minister of Housing and Urban Development**.



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Workshop on governance with City Mayor of Bafoussam. May 7<sup>th</sup> 2025.



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# TECHNICAL PROPOSAL FOR WASTE MANAGEMENT IN CAMEROONIAN CITIES 2025



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Bright Vision Community Initiative for Sustainable Development (BRIVCOISUD) is Non-governmental organization acting in the best interest of harmony between communities in the domains of Health, Education, Agriculture, Human rights, Environment, Climate change, Community development, Youth empowerment and gender base violence.

# TECHNICAL PROPOSAL FOR WASTE MANAGEMENT IN CAMEROONIAN CITIES 1.Introduction

The rapid urbanisation in Cameroon, particularly in major cities like Yaoundé, Douala and Bafoussam, has led to a significant increase in municipal solid waste (MSW) generation. Current waste management practices, public-private through partnerships (PPP) and dumping predominantly relying on open and rudimentary landfilling, pose severe environmental and public health risks, including land degradation, water contamination, air pollution, and the spread of diseases. Currently, less than half of the daily MSW generated in these cities is collected and transported to landfills. To these pressing challenges and address promote sustainable waste management, this proposal by Bright



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Vision Community Initiative for Sustainable Development (BRIVCOISUD) outlines the

implementation of an 'integrated municipal solid waste management approach', improving urban waste collection and enabling Waste-to-Energy (WtE) conversion utilising modern incineration technology. The goal of this system is to improve waste collection and significantly reduce the volume of landfilled waste, generate electricity for on-site use and feed into the national grid.

# 2. Objectives of this proposal

The objectives of this proposal are to i) significantly reduce open dumping by diverting a substantial portion of urban MSW from uncontrolled dumpsites, mitigating severe environmental and health hazards; ii) generate electricity from the MSW; and iii) improve public health through minimization of the environmental pollution and disease vectors associated with inadequate waste management.

# 3. Proposed system overview

The proposed integrated municipal solid waste management system for Cameroonian cities will comprise the following key components:

# 3.1. Improving MSW collection and pre-processing

Currently, the main private urban waste collection company, Hygiène et Salubrité du Cameroun (HYSACAM) does not have adequate resources (financial,

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material and human) to effectively manage waste in Cameroonian cities. While increasing financing will highly improve waste management in the cities, a sustainable solution would be to create a National (NAWM) Agency for Waste Management with operational units managed by Decentralized Territorial Collectivities (DTC). The agency will coordinate the development and implementation of an urban waste management strategy. It will mobilize more efficiently financial, technical, infrastructural, and human resources, PPP in national waste enable management. and Furthermore, it will oversee the creation of DTC waste management units (at the level of city councils or subdivisional councils). The DTC waste management units will be directly charged with urban waste management either solely or in partnership with private companies, The NAWM will coordinate the e.g. HYSACAM. participation of other local and international actors, such as non-governmental organisations (NGOs) in delivering their urban waste services at the DTCs. The DTC waste management units will be provided with technology (such as WtE incinerators), materials (truck fleet, etc), human and other relevant resources to manage urban properly established, these DTC waste If waste. management units will improve waste collection in the cities.

The initiatives being undertaken by BRIVCOISUD include organizing monthly public awareness campaigns

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on urban waste management and promoting a circular economy. Our organisation champions circularity in urban waste management, i.e. placing emphasis on reducing, reusing, recycling and promoting the use of Waste-to-energy technologies such as anaerobic digestion and incineration. It also advocates for the change of policies to improve waste management in the country.

# 3.2. Incineration technology

Landfilling is still the main form of MSW disposal in Cameroonian cities. The landfills are many and poorly managed, rendering them a public health and environmental threat. This includes air pollution to the neighboring

inhabitants and the informal recyclers or waste pickers. To properly manage this waste, modern incineration technology should be utilised. The merit of this system is the possibility of handling heterogeneous waste, often collected in Cameroonian cities. It converts waste to energy, in this case, to electricity using steam produced from waste incineration to run electricity generators. The choice technology is the WtE moving grate incinerator (MGI). It is a proven and adaptable technology for handling mixed waste. Large-scale municipal solid waste incinerators have a daily capacity of up to 2500 tons. This means that for a city like Yaounde, one or two large incinerators would effectively treat the waste each day. A 2500-ton-gapacity incinerator6can5generate.between 1,250 https://brivcoisud.org https://brivcoisud.or



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MWh to 1500MWh of electricity per day. Feed-in tariffs can generate income for the waste management entities.

Some of the electricity produced will be used on-site to operate the incineration system and process the products from the process, such as carbon dioxide, water vapour, nitrogen, oxygen, oxides of sulphur, oxides of nitrogen, carbon monoxide, particulate matter, metals, bottom ash, glass, ceramics and other unburnt materials. A typical incineration system for MSW is shown in figure 1.

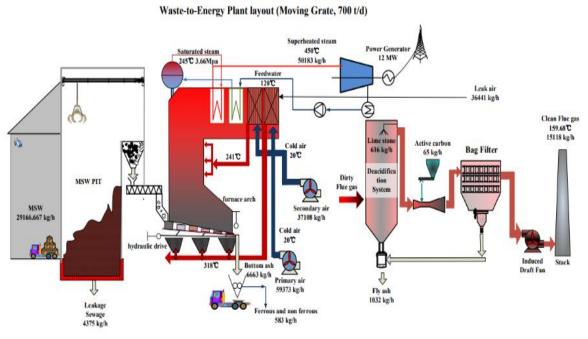


Figure 1. Moving grate WtE incineration system

Findings by BRIVCOISUD show that companies such as Martin GmbH and Veolia can supply this incineration technology.

# Economic and financial considerations



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A detailed cost-benefit analysis is still to be conducted. This will consider capital investment, operational expenses, revenue from electricity sales (to the grid and/or on-site and to be negotiated with Eneo), avoided costs of managing open dumps, and potential revenue from recovered materials. Exploration of various funding models, including government investment, publicprivate partnerships (PPP), international development financing, and private sector investment.

## 4. Conclusion

This proposal by BRIVCOISUD, based on implementing an integrated municipal solid waste management approach for Cameroonian cities, offers a significant opportunity to move away from unsustainable waste management practices, generate electricity, improve public health, and contribute to environmental sustainability. This initiative will provide a long-term solution for urban waste management challenges in the cities while supporting Cameroon's development goals.



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