

Waste Management Practices in the Urban Spheres of Cameroon: Communal Waste Collection and Evacuation (CWCE) in Yaoundé III

^[1] Lekeaka Vitalise

^[1] PhD Researcher, University of Yaoundé I (UYI)
Corresponding Author Email: ^[1] lekevita@gmail.com

Abstract— The greatest challenge to waste management in Cameroon’s cities has been the collection and evacuation of solid waste from the interior areas especially, ghettos to the public waste deposit sites where the state’s agencies further disposes of it. The hurdle is partly exacerbated by poor road access and limited priority by state’s institutions over waste management leading to socio-environmental consequences such as health nuisance, insalubrity and floods. This paper analyses the contribution of a local waste management strategy termed “Communal Waste Collection and Evacuation” (CWCE) and the difficulties impeding its expansion in the Yaoundé III community. The study adopts an analytical method relying on primary and secondary sources. From field observations and oral discussions, it was revealed that though the CWCE option was facilitated by social capital, guided by the social solidarity theory, the strategy suffered financial and technical lapses. Despite the shortcomings, the method appears to have a high value that extends from simple waste management to the inclusion and integration of commoners, representing a bottom-up approach to sustainable urbanization. The CWCE strategy thus enables policymakers to easily execute projects at the grassroots and facilitate the achievement of other Sustainable Development Goals (SDGs). This paper suggests that local initiatives in managing waste in urban spheres are urgent to mitigate spillover effects like climate change. The study serves as an entry point to the local agenda 21, targeting the role of local authorities and local initiatives in promoting socially and environmentally stable communities.

Keywords: communal waste collection and evacuation, urban spheres, waste management practices, Yaoundé III.

I. INTRODUCTION

Many studies have expressed interest in waste management difficulties in cities as the global demographic index discloses an alarming increase in the urban population, especially in Africa and Asia, and waste generation without proportionate measures to coordinate the transition. From the observation of the International Solid Waste Association (ISWA), wastes are materials that have no further use for production and of which the user intends to dispose of it. The approaches to waste management (WM) vary from one environment to the other based on resource availability and the environmental impact. Some of the most preferred options include; reduce, reuse, and recycle (the three “Rs”). Other strategies include; dumping, burial, burning, etc. Scholars like Catia & Reza opted for recycling in European communities due to the increasing cost of waste collection and transportation. Elsheekh and others argue that integrated waste management programs are very necessary to meet up with the post-2015 sustainable development objectives. Navarro and Vincenzo remarked that the challenge to WM is more severe in developing and transition countries than in the developed world. Perhaps due to the differentials in income and technological levels. Generally, developing economies such as those of Africa, Latin America, and part of Asia are said to apply the most unsustainable methods such as on-site burning and open dumping which hardly respect national or international regulations on WM. Consequently, the spillover impacts on health and the environment are multiple; ranging

from pollution to contamination and depletion of the ozone layer. Hence, sustainable WM strategies should take into consideration the socioeconomic and political effects that can be measured under cost and benefits factors.

In industrialized economies such as those of Europe and North America, waste management options place a high priority on human health and the maximum conservation of energy that is much needed for industrial pursuits. In Asian countries like Japan, the option to adopt in managing waste considers the acute scarcity of land owing to population boom in the region. And in Africa, low income and technology level influence the waste management methods in favor of local, cheap, and affordable options. According to sustainable development procedures prescribed by the UN, solutions to global problems should be adopted around the harmony of three core elements: economic growth, social inclusion, and environmental protection. Parrot and Ngnikam have extensively analyzed solid waste management (SWM) practices in Cameroon’s cities. However, the broad implication of local initiatives and social inclusion remains insufficient in the analyses [3]. Even though some literature generalized and discredited the WM strategies in third-world countries to be archaic, limited, and unsustainable, a closer look at the practices in Yaoundé III will reveal the contrary; Considering, the physical elements and the governance features that could qualify the strategy as sustainable under the Integrated Solid Waste Management (ISWM) framework. This paper thus contributes to the expansion of scholarship on waste management in developing economies reaping from

the analysis of Yaoundé III.

II. OBJECTIVES OF STUDY

The purpose of this paper is to examine using the case of Yaoundé III, the local strategy employed in managing waste that involves communal cleaning and collection of solid waste from roads and water streams in the interior of the neighborhood. The waste is then transported using local means and disposed of at public waste deposit sites where the government agencies in charge of hygiene and sanitation finally dispose of it. The research intends to analyze and inform by drawing the attention of policymakers to a local initiative that appears to be very practical, affordable, and responsive to the immediate needs of urban communities suffering from waste hazards due to poor public policy and the lack of road access to permit wastes collection and evacuation from the neighborhood. This method was categorically named “Communal Waste Collection and Evacuation” (CWCE), strongly facilitated by the existence of social capital and the use of local equipment. As earlier argued by Parrot and others in the study of WM options in Yaoundé and Douala [3], the CWCE strategy lacks financial and technical resources which impedes its evolution. Hence, it is the objective of the study to propose a policy reformation in favor of innovating and equipping the local institutions coordinating this practice. The paper suggests a problem-solving approach to other social, economic, and political difficulties in urban governance. An obvious question at this point will be to find out what made the CWCE option ideal? More light could be shaded on this puzzle by adventuring into the cost of the WM system and the crosscutting benefits to the community, the state, and the globe. A well-outline methodology will guide such investigation.

III. METHODOLOGY

This paper is focused on analyzing the CWCE practice as a means of managing waste in Cameroon’s urban spaces. The study is intended to establish a nexus between the cost and benefits of the chosen WM option and the impacts on the environment. The methodology adopted to realize this purpose is split into two broad sections. The first section analyzes the cost of CWCE as a concept vigorously motivated by social capital that facilitates its application and is supported by the social solidarity theory. The second part examines the benefits of the WM option on the immediate community of Yaoundé III and the state at large (policymakers), making use of semi-structured questions guide, oral discussions, and published documents.

The questions guide numbered six open interrogations, abstracted into three main ideas: the first opinion addresses concern with the waste type, source of production, quantity generated, and frequency. The second idea dwells on the most preferred waste management option based on resource availability and practicability. The opinion considers factors

such as road access, the topography of the area, social strata, and the dominant population structure. Analyzing these elements justifies our choice of the WM strategy, considering the cost of its application. The third concern targets the benefits and shortcomings of the CWCE option as well as its sustainability. The questions guide enables the adoption of a chronological sequence in obtaining and interpreting information while maintaining a logical argument in the study.

About oral interviews, the credibility of informants was based on academic, professional, and administrative links to urbanization, local development, and waste management. The informants thus included; local authorities (quarter heads), community elites, municipal authorities, academicians (researchers), and policymakers. Emerging from local government institutions, social service agencies, NGOs and the Ministry of Housing and Urban Development. The oral interviews were subdivided into focused groups and in-person discussions. The focused group discussion involved a gathering of at least two informants who argue profoundly in order to arrive at a succinct conclusion as the method enables many opinions to erupt on the same subject. The in-person interview is a face-to-face discussion on a friendly basis that allow the researcher to pose as many questions as possible to the informant and receive clear answers. The method leads to clarity as the informant accords all her attention to the researcher, permitting the researcher to demand explanations and re-explanations as much as possible. From this basis, the researcher could easily adapt and interpret concepts and figures to support the research hypothesis.

IV. THE CONCEPT OF COMMUNAL WASTE COLLECTION AND EVACUATION (CWCE)

Communalism or communitarianism in Africa was extracted from the African culture of society and humanity. The concept was further popularized through the philosophical doctrines of Julius Kabarege Nyerere and Desmond Tutu: *Ujamaa* and *Ubuntu*, referring to solidarity, togetherness, equality, communal ownership, and participation. Chaffi Bakari expresses communal tendencies in the conception of community development to mean a process through which a community brings about changes for itself and by itself. The chosen WM strategy in Yaoundé III was facilitated by social capital that acts as a natural resource in the community. Guided by the social solidarity theory, social capital was manifested through the common social status of inhabitants, easy communication means, shared access to social amenities like water, common environmental and health challenges such as floods, malaria, and typhoid emanating from waste hazards. The social solidarity theory earlier developed by Emile Durheim and later by Ferdinand Tonnies to keep the unity of European communities in the wake of the Industrial Revolution opposes any form of isolation and favors communal participation in all aspects of

the people’s life. The social solidarity theory of Durkheim as argued by Gofman stands in direct opposition to the social isolation model of Rehan Masoom and the individualism theory of Schuyler Bishop. The main postulations in these theories are instrumental in widening the understanding of the CWCE practice as a concept though, not without limitations



Figure 1 : Photos showing the cleaning and collection phases of the CWCE practice in Yaoundé III.



Figure 2 : Photos displaying the use of local equipment in the evacuation of waste to the public deposit sites.

From the above theoretical setting, the WM strategy in Yaoundé III (CWCE) involves an all-inclusive, unanimous, and voluntary engagement of the community members directly and indirectly. Direct participation includes physical involvement in cleaning, collection, and evacuation of waste from the neighborhood where it is accumulated to the public waste deposit points as shown in figures 1 and 2 above. The activity employs the use of local equipment such as spades, cutlasses, rakes gloves, bags, and wheelbarrows for transportation. Other members such as quarter heads and community elites are indirectly engaged in the provision of moral, financial, and technical assistance that facilitates the functioning of the waste management system.

The findings of this study reveal that the CWCE option was effective and affordable to the population of Yaoundé III for varied considerations as indicated in figure 3 above. First, the WM practice made use of social capital which was a natural resource in the community-driven through good neighborliness, easy communication, shared social amenities, and solidarity of purpose. These natural assets animated the WM strategy as common challenges like floods arising from waste hazards could easily be identified and tackled. It equally creates a sense of inclusion and belonging in the community which is a positive factor in local development agenda.

The proximity of the garbage collection zones to the public waste deposit area renders the practice less expensive to run. The waste pickers do not need to pay for transportation to evacuate the waste out of the community. They employ the use of local vessels like bags and wheelbarrows as shown on figure 2 above. The cost of waste transportation has earlier been evoked by Catia & Reza to be a serious setback to WM in the European communities [5]. The strategy waived the issue of poor road access which has been impeding public hygiene agencies from reaching the interior areas to evacuate solid waste.

Considering that low technological advancement has been a major hindrance to some WM methods in developing countries, especially the final disposal stage, the CWCE strategy remains suitable for not demanding very high-tech knowledge and energy supply in its execution. A tendency earlier analyzed by Navarro and Vincenzo in the review of waste mismanagement in developing and transition economies [7]. Contrary to the cost involved in other strategies, CWCE option requires very few resources as displayed in figure 1 above to generate a wild range of benefits for the community.

The existence of local associations in the Yaoundé III community equally facilitates the application of the CWCE strategy as the execution of activities is done easily by simply communicating through the local associations. There exist youth groups and community development organizations such as the Solidarity Network for Environment and Leadership (SNEL), *Association des Volontaires pour l’Assainissement, la Sensibilisation des Population du Cameroun (AVASPOC)*, *Association des Residences du Quartier Ngoa-Ekélé (ARQUANGE)*, and *les Bénéficiaires du Project Filet Sociaux (BPFS)* with interests in environmental projects. Therefore, CWCE easily finds acceptance in the Yaoundé III area.

The CWCE option further appears to be very reliable as it does not include administrative bottlenecks. The activity is cordially coordinated by community members voluntarily. In the ladder of execution, the quarter heads, community elites, and local group leaders play a supervisory role, providing local working equipment, and little financial motivation that enables participants to purchase protective wears like gloves and energy drinks, and even food during work sessions.

V. RESEARCH FINDINGS

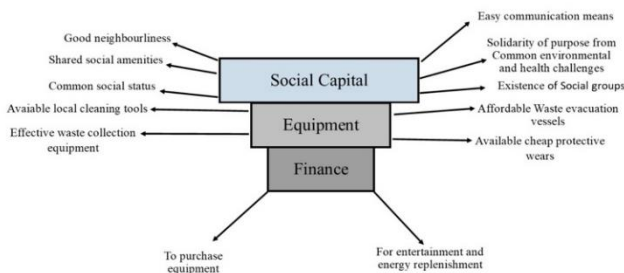


Figure 3: Pyramid adapted from oral information and field observation showing the cost of executing CWCE practice in Yaoundé III.

Though the local equipment and financial motivations were not adequate to advance the WM strategy further, this paper reveals highly positive impacts of the practice on the community particularly and the state in general.

The Yaoundé III community is dominantly occupied by slump dwellers with a similar social status (the underprivileged). Inhabitants reside in open environments with little or no enclosures and have low-income levels and standard of living. These characteristics expose the inhabitants to similar environmental and health challenges such as floods, malaria, and typhoid contamination thus enhancing a stronger bond of solidarity among the community dwellers as they unite efforts to overcome environmental and social mishaps. Such solidarity was revealed to be the most practical instrument in the functioning of the CWCE strategy in the urban space of Yaoundé.



Fig 5: Photos showing the results of uncontrollable dumping in Yaoundé III.

CWCE helps reduce the commonness of waste dumped on vacant lands and discharged into water streams as a result of excess accumulation in the interior of the neighborhoods. Most of the solid waste evacuated through the CWCE are plastic objects as shown in figure 5 above that hardly decay and constitute a danger to the immediate environment and the ozone layer generally. Hence, the evacuation of these waste objects mitigates the prevalence of climate change in the city and the globe in general. Moreover, I observed that when the waste pickers are inhabitants of the community, their communal participation in waste collection psychologically discourages them from uncontrollable waste dumping since they will be the same people to collect the waste. The community strategy enforces the attainment of SDG-13 as indicated in Fig 4 above.

From field observation and oral information, proper execution of CWCE guarantees the possibility of reclaiming useable lands from open dumping. The failure of the state's hygiene and sanitation agencies to reach the interior of ghetto areas and evacuate waste culminates in the transformation of vacant lands to dump sites as displayed in fig 5 above. The health and environmental consequences are obvious; malaria infection from mosquitoes, water contamination leading to typhoid, bad air quality from waste decomposition, and poor city sanitation in general. From this finding, CWCE practice proves to be instrumental in achieving the SDG goal relating to good health and wellbeing as displayed in fig 4.

To the policymakers, the WM option enables a bottom-up and inclusive approach that is an asset in sustainable urbanization. Through the local WM strategy, other local development projects could easily be unlocked, and policies easily applicable to the grassroots given that the people are already united in common objectives. The strategy enforces the integration and decentralization policies of the state in modern urban governance and as well achieving the SDG-10. See fig 4 above.

The CWCE policy also serves as a source of green job provision to the population that is engaged in the local waste management practice. This result can be improved upon by the policymakers to eradicate the problem of unemployment and poverty that constitutes some of the mishaps plaguing cities of developing economies like Cameroon. The employment benefit could in turn guarantee the sustainability of the WM system and influence the success of SDG-1, relating to poverty reduction as indicated in Fig 4 above.

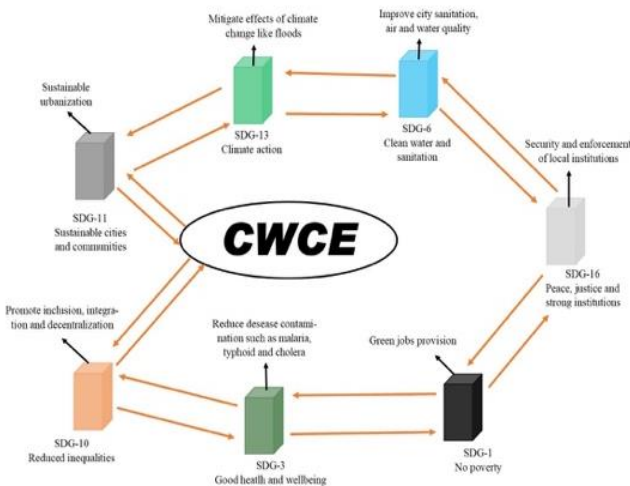


Fig 4: Diagram adapted from Primary and secondary data, displaying the cross-cutting benefits of CWCE strategy.

The security of the community is reinforced by the communal participation of the inhabitants in managing waste. Given that an informal market has developed to sell reusable products from waste such as speakers, car batteries, irons, and cables, waste pickers are obliged to peruse the neighborhoods in search of useable items. In the process, a bulk of them resorts to stealing and aggression on the population of the neighborhood. Oral information from local authorities affirms a very high rate of such a tendency in the Yaoundé III community. This phenomenon jeopardizes the security of locals which according to some community heads could be mitigated by promoting the communal participation of inhabitants in the collection and evacuation of wastes from the neighborhood. The CWCE practice thus reinforces security and peace as well as the local institutions (SDG-16) by preventing unidentified persons (mobile waste pickers) from getting access into the neighborhood under the pretext of picking waste. See fig 4 above.

Though, research findings revealed that the CWCE strategy was a very practical measure for managing waste in the Yaoundé III community, it is important to outline the financial and technical hurdles to its smooth application. Lack of finance to purchase advanced equipment compelled participants to resort to the use of local crude tools such as rusted cutlasses, spades, hoes, and rakes. Lack of quality protective wears and transportation equipment such as nose covers, hand gloves, rain boots, raincoats, trucks and tricycles expose waste collectors to the risk of physical injuries and disease contamination which could even lead to death in the long run. Given the position of Yaoundé III in a slum, most of the wastes accumulated in gutters and marshlands necessitates the use of advanced equipment which was inadequate. However, the cross-cutting benefits of the CWCE strategy and its contribution to global waste management goal for sustainability cannot be overstated. It goes a long way to mitigate the impacts of hazardous waste on the environment and integrates the circle in achieving many sustainable development goals as displayed in Fig 2 above.

VI. CONCLUSION/DISCUSSIONS

The main focus of this paper has been to investigate and prove that the CWCE strategy represents a sustainable option in the context of waste management considering the cost involved and the benefits generated. As earlier remarked, WM is one of the major issues plaguing cities in the contemporary era. The sheer impacts appear to be tremendous on less economically viable countries like Cameroon that lack the financial and technical know-how to navigate the spillover effects of urbanization. Consequently, leading to systemic social and environmental mishaps, stretching from poor community health to climate changes with far-reaching impacts. At a time when the sustainable development agenda is midway of its mandate, global thinkers should already be pondering if it will achieve the set objectives by 2030. It is therefore time to start considering other energies that have not been fully utilized in the early days of the 2015 resolution. The government of Cameroon has not remained indifferent to the urge to meet up with the 2030 dateline. Many administrative and legislative reforms are on the way in favor of decentralized and local development though the results are yet to be applauded. Considering the global move towards sustainable development, it is incumbent to confer more priorities on local development initiatives such as the CWCE which is rightly situated in the Local Agenda 21, relating to the promotion of socially and environmentally sound communities.

The paper has analyzed the effectiveness of CWCE as a strategy adopted for managing waste in Cameroon's urban spaces. With an outlook of the Yaoundé III community, this study established a link between the waste management option and its cross-cutting impacts on the immediate

environment and the globe. Drawing from primary and secondary data, the research findings affirm that the CWCE practice was much preferable in dealing with solid waste hazards in the Yaoundé III area. The applicability of such a WM method was facilitated by social solidarity that reigned in the community and the availability of local equipment. The study opines that although the WM policy appears to be ideal in mitigating environmental mishaps arising from waste mismanagement, financial and technical constraints limited its evolution. However, the paper prospects that the CWCE practice could be improved upon if state institutions innovate the policy through financial and technical assistance. In like manner, state agencies concerned with hygiene and sanitation should take serious responsibility in the final disposal of the waste collected from the interior zones to the public waste deposit sites. If not, the glories of the WM option will be reversed as the waste could be scattered across the city and even flushed back into the community from where it was evacuated. The success of the CWCE system thus lies in a chain where the community initiates the act and the government finalizes it. This practice represents an entry point into a modern development paradigm with multiplied impacts on the achievement of other SDGs as earlier indicated in Fig 2 above. Further research could capitalize on the role of state agencies in the management of waste in public waste deposit sites which guarantees the continuation of the CWCE strategy.

REFERENCES

- [1] F. M. Z. Selhausen, "Growing Cities : Urbanization in Africa", *The History of African Development*, Wageningen University, pp. 1-4, 2021.
- [2] S. Obanan, Urbanization Trends with Philippine Context, *Academic Letters*, <https://doi.org/10.20935/AL657>, pp. 1-3, 2021.
- [3] L. Parrot, J. Sotamenou, B. K. Dia, "Municipal solid Waste in Africa : Strategies and livelihoods in Yaoundé, Cameroon", *ELSEVIER*, p. 3, July 2008.
- [4] T. Cannon, Global Waste management outlook; United Nations Environment Programme (UNEP), ISWA, pp. 2-7, 2015.
- [5] C. Cialani, R. Mortazavi, "The Cost of Urban Waste Management : An Empirical Analysis of Recycling Patterns in Italy", Vol. 2, pp. 5-6, April 2020.
- [6] K. Elsheekh, R.R. Kamel, D.M. Elsherif, A.M. Shalaby, "Achieving sustainable development goals from the perspective of solid waste management plans", *Journal of Engineering and Applied Science*, <https://doi.org/10.1186/s44147-021-00009-9>, pp. 1-19, December 2021.
- [7] F. Navarro, T. Vincenzo, "Waste Mismanagement in Developing Countries: A Review of Global Issues", *International Journal of Environmental Research and Public Health*, pp. 2-21, March 2019.
- [8] T. Cannon, "Global Waste management outlook", United Nations Environment Programme (UNEP), ISWA, pp. 2-7, 2015.

- [9] A.H.I. Abukhalaf, "Bridging the Gap : U.S Waste Managemet System", Academic Letters, <https://doi.org/10.20935/AL1680>, pp. 1-3, July 2021.
- [10] E. Ngnikam, E. Tanawa, *les villes d'Afrique face a leur déchets*: Belfort-Montbéliard, pp. 11-58, 2006.
- [11] UN-HABITAT, "Solid Waste Management in World's Cities", United Nations Human Settlements Program, p. 21, 2010.
- [12] Rok, S. Kuhn, "20 years of Local Agenda 21", Cities Territories Governance (CITEGO), pp. 1-2, 2012.
- [13] O. Ogenga, "Mwalimu Julius Kambarage Nyerere's philosophy, Contribution, and legacies": *African Identities*, 13 (1), DOI: 10.1080/14725843.2014.961278, Published online, October 2014.
- [14] J. Mugumbate, A. Nyanguru, "Exploring Africa Philosophy : The Value of Ubuntu in Social Work", *African Journal of Social Work (AJSW)* Vol 3, No. 1, pp. 1-3, August 2013.
- [15] Bakari, "Social Capital in Community Development: a corner Stone in the right to participation and the Leave No One Behind", *Academia Letters*, pp. 1-5, January 2022.
- [16] Gofman, "Durkheim's Theory of social Solidarity and social Rules", *ResearchGate*, DOI: 10.57197811373918653, pp. 14-69, January 2014.
- [17] M. R. Masoom, *Social Isolation : A Conceptual Analysis*, ISSN 2321-5828 (online), pp. 2-3, November 2016.
- [18] P. S. Bishop, "The Theories of Individualism", Thesis submitted, University of South Florida, pp. 51-53, April 2007.
- [19] Interview with Nguéack Hervé., Chief of Service for Hygiene and Sanitation, Yaoundé III Municipality, Efoulan, 7 August 2021.
- [20] Interview with Pokam Mongoué Erick., Quarter head blog VII, 52 years, Olis Home, Ngoa-Ekélé, 28 November 2021.
- [21] Interview with Bouli Bernard., Notable and quarter head representative, blog III, 53 years, Neptune Station Ecole des Postes, Ngoa-Ekélé, 6 November 2021.
- [22] Interview with Nicaise Ngemba., Quarter Head blog II, 60 years, Ecole des Postes, Ngoa-Ekélé, 29 October 2021.
- [23] Interview with Souga Luc., Quarter head blog IV, 67 years, Monté Bonas, 26 November 2021.
- [24] Interview with Amougou Richard., Quarter Head for Obili IV, 58 years, Monté Bonas, 26 November 2021.
- [25] Interview with Zang Mani Omer Alain., Quarter head blog VI, 41 years, Bonamoussadi, Ngoa-Ekélé, 28 October 2021.
- [26] Interview with Tankeu Flobert., Chief of Division for Social Urban Development, Ministry of Housing and Urban Development (MINH DU), Kalafatas, 13 August 2021.
- [27] Interview with Assama Massolo Lisa., Assistant Chief of Service for Social promotion and Insertion in the urban zones, Ministry of Housing and Urban Development (MINH DU), Kalafatas, 5 July 2021.
- [28] Interview with Ndoup Oumarou., Chief of Service for Social Promotion and Insertion in the urban zones, Ministry of Housing and Urban Development (MINH DU), Kalafatas, 13 July 2021.
- [29] Interview with Boukar., Senior Youth and Action Counsellor, Division for Social Promotion and Insertion in the urban zones, Ministry of Housing and Urban Development (MINH DU), Kalafatas, 25 August 2021.
- [30] Interview with Mayor Ndeka Jean., Chief of Center for the Insertion of Youths with Difficulties in the urban areas, Komkana, 31 August 2021.
- [31] M. Mbah, A. Franz, "Revitalization and Branding of Rural Communities in Cameroon Using a circular Approach for Sustainable Development"- A Proposal for Batibo Community, Washington DC, pp. 1-3, June 2021.
- [32] Rok, S. Kuhn, "20 years of Local Agenda 21", *Cities Territories Governance (CITEGO)*, p. 1, 2012.

APPENDIX

THE UNIVERSITY OF YAOUNDE I

 POST GRADUATE SCHOOL FOR
 SOCIAL AND EDUCATIONAL
 SCIENCES

 DOCTORAL RESEARCH UNIT
 FOR SOCIAL SCIENCES

 DEPARTMENT OF HISTORY



UNIVERSITE DE YAOUNDE I

 CENTRE DE RECHERCHE ET DE
 FORMATION DOCTORALE EN
 SCIENCES HUMAINES, SOCIALES ET
 EDUCATIVES

 UNITE DE RECHERCHE ET DE
 FORMATION DOCTORALE EN
 SCIENCES HUMAINES ET SOCIALES

 DEPARTEMENT DE HISTOIRE

Research Title: Waste Management practices in the urban spheres of Cameroon: Communal Waste Collection and Evacuation (CWCE) in Yaoundé III.

The objective of the interview is to gain a deep understanding of the contribution of CWCE strategy to wastes management in the Yaoundé III area and its overall impacts, evaluated on the scale of cost and benefits. The method used is oral in-person and focused group discussions. Your identity or position will not be exposed if you do not consent. Moreover, you can withdraw from the interview at any time or decide not to answer any question that is not convenient to you. There are no benefits attached to this exercise except that it will bring development to the community. If you have any worries about the interview later, you can contact Dr Kaze Narcisse through +237 677825941 or via email: kazenarcisse@gmail.com.

Semi-structured questions guide

Name and surname: _____ Age _____
 Occupation _____ Tel/address _____

1. Do you know of the communal waste collection and evacuation (CWCE) strategy? And what is your impression about the practice ?
2. If you are a Community Leader or policy maker, how does CWCE personally impact or facilitate your role?
 2. What are the most common sources of waste generation and disposal in Yaoundé III?
 4. In your opinion what method (s) are ideal in managing waste in Yaoundé III and why?
5. What could be the impact of the waste management choice on the immediate community and the general environment?
6. Do you see the is need to improve the CWCE practice ? why do you think so?